

Examining trends in the representation of young people and alcohol in Australian newspapers over twenty years (2000-2019)

International Journal of Drug Policy accepted for publication 05/09/2021,

(Published Vol. 99, January 2022, article 103461)

Amy Pennay^{1*}, Megan Cook¹, Sarah MacLean^{1,2}, Dan I. Lubman^{3,4}, Paul Dietze^{5,6}, Rachel Herring⁷, Gabriel Caluzzi¹, Rakhi Vashishtha^{1,8} and Michael Livingston^{1,5,9}

¹Centre for Alcohol Policy Research, La Trobe University, Bundoora, Victoria, Australia, 3083

²School of Allied Health, Human Services and Sport, La Trobe University, Bundoora, Victoria, Australia, 3083

³Monash Addiction Research Centre, Eastern Health Clinical School, Frankston, Australia

⁴Turning Point, Eastern Health, Richmond, Australia

⁵National Drug Research Institute, Curtin University, Australia

⁶Behaviours and Health Risks Program, Burnet Institute, Australia

⁷Drug and Alcohol Research Centre, School of Health and Education, Middlesex University, London, UK

⁸Health Services and System Research Program, Duke-NUS Medical School, Singapore, 169857

⁹Department of Clinical Neuroscience, Karolinska Institute, Sweden

*Corresponding author

CRedit author statement:

Amy Pennay: conceptualisation, methodology, data curation, formal analysis, writing – original draft, funding acquisition

Megan Cook: conceptualisation, data curation, formal analysis, writing – review and editing

Sarah MacLean: writing – review and editing, funding acquisition

Dan I Lubman: writing – review and editing, funding acquisition

Paul Dietze: writing – review and editing, funding acquisition

Rachel Herring: writing – review and editing, funding acquisition

Gabriel Caluzzi: writing – review and editing

Rakhi Vashishtha: writing – review and editing

Michael Livingston: methodology, formal analysis, writing – review and editing, funding acquisition

Examining trends in the representation of young people and alcohol in Australian newspapers over twenty years (2000-2019)

Abstract

Background: The news media can reflect and influence public opinion, as well as affect individual practice. In the context of significant changes in alcohol consumption among young people over the past twenty years, we examined Australian newspaper reporting of young people (under 18 years) and alcohol to assess whether there have been changes over time in the content and slant of articles that reflect or elucidate these trends.

Methods: Factiva was used to search newspaper articles from major Australian newspapers over a twenty year period (2000-2019). After screening, two researchers coded 2,415 newspaper articles across four key domains: article type, article theme, sources cited and topic slant (e.g. approving, disapproving tone). Change over time across the study period was assessed using joinpoint Poisson regression analyses.

Results: There was a significant increase in articles on young people and alcohol between 2000 and 2008, before a corresponding decrease to 2019. Policy or prevention strategies were the most common theme of articles (35.8%), followed by articles reporting on risks or harms associated with alcohol use for young people (18.1%). Researchers were the most common source reported (25.1%), followed by politicians (19.0%). Three quarters of articles (75.9%) had a socially disapproving topic slant, which increased significantly up until 2011, with a corresponding decrease thereafter.

Conclusion: Attention to, and problematisation of, young people and alcohol increased in the first decade of this millennium which may have acted to sustain or accelerate declining drinking trends. However, this dissipated back to baseline levels in the second decade, which may indicate a lag time in recognition of young people's drinking becoming less of a public health 'problem'.

Keywords: alcohol, young people, newspaper, Australia

Introduction

Alcohol consumption has been decreasing among young people (our preferred term, with a focus in this article on those aged below 18 years) in Australia since the early 2000s. Australia's National Drug Strategy Household Survey (NDSHS) and Australian Secondary School students' Alcohol and Drug (ASSAD) survey, which both collect data every three years (on alternate schedules), document this decline starting after 2001 and 2002, respectively (Australian Institute of Health and Welfare, 2020; Guerin & White, 2020). These trends are stark and continuing. According to the NDSHS, 31.8% of those aged 14-17 years reported never having consumed a drink in 2001, but this had increased to 72.5% in 2019. Over the same period, self-reported 'risky drinking' (more than four standard drinks) at least once in the past month decreased from 30.2% to 8.9% (Australian Institute of Health and Welfare, 2020).

In this article we explore the representation of young people and alcohol in Australian major newspapers over the period in which young people's alcohol consumption has been declining. In doing so, we examine whether there have been changes over time in the content and slant of articles on young people and alcohol that might reflect or elucidate these trends, and subsequently consider the ways in which newspaper reporting may have influenced young people's declining alcohol practices.

News media and alcohol

Drawing on media and communication analyses (e.g. Cross, 2007; Hodgetts & Chamberlain, 2014), as well as conceptual and framing studies on media and alcohol (Baillie, 1996; MacGregor & Thom, 2020), we envisage three ways in which the relationship between media reporting and declining young people's drinking may operate (and may do so simultaneously). First, the news media may reflect changing drinking practices and shifting social views on drinking that have a genesis in other social forces. Therefore, analysing media may be a useful way of understanding change over time in young people's drinking practices as well as public opinion on young people's drinking. Second, news media may directly shape public opinion and therefore analysing framing and content may provide clues about whether and how the news media has shaped public discourse on young people's drinking. Finally, in framing young people, their drinking, and its effects in particular ways, the news media may actively alter the way young people drink.

Understanding change over time: Analyses of news media can be a useful method of chronicling changes in the popularity of a practice, as well as public opinion and sentiment about health and social issues over time (Cook, Leggat, & Pennay, 2020; Hodgetts & Chamberlain, 2014). For example, mainstream media portrayal of different types of substance use, and the people who use substances, have been demonstrated to shift alongside different political or moral agendas and changing social

and political landscapes (Hughes, Lancaster, & Spicer, 2011; MacGregor & Thom, 2020). Examining constructions of substances such as alcohol in news reporting over time is therefore likely to be a good indication of the waxing and waning alcohol-related social anxieties of the general public (Pennay & MacLean, 2017).

Shaping public opinion: Beyond reflecting public sentiment, the news media can persuasively frame social issues and prioritise political agendas in particular ways, in turn influencing public opinion and advancing or stymying social and health policies. Studies have identified correlations between media attention to issues and the salience of those issues to the public and policy makers (Cross, 2007; Harwood, Witson, Fan, & Wagenaar, 2005). With regards to alcohol, the news media may act as an agent of public education about alcohol and its effects, but also may play an important role in agenda setting and legislative priorities on alcohol. It is therefore likely that the news media can and does shape attitudes and beliefs relating to alcohol (Baillie, 1996).

Influencing practice: In framing issues in particular ways, the news media may also directly and indirectly influence individual practice. For example, alcohol-related news coverage may exert influence by shaping broader norms about alcohol consumption, which may in turn influence social group or context-specific norms (Azar et al., 2014). Pennay and MacLean (2017) suggest that images of substances in mainstream media provide a symbolic framework within which substance use is framed and understood. This can influence how people use these substances and also how they feel about their consumption.

Previous newspaper analyses on alcohol

The most recent and comprehensive analysis of alcohol in Australian newspapers was undertaken by Azar et al. (2014), who performed a content analysis of a sample of alcohol-related newspaper articles (n=4,217) published in Australia from 2000 to 2011. The authors identified a doubling of alcohol-related stories in Australian newspapers between 2000 and 2011, suggesting alcohol consumption became an increasingly prominent issue over time. They identified an important shift from predominantly promotional stories in the early to mid-2000s, to articles framing alcohol negatively and focusing on restrictions towards the end of the period. This was matched by a shift from greater alcohol industry representation in earlier years towards greater representation of health advocates and politicians in the later years. Drawing on this research, scholars exploring the decline in young people's drinking have suggested that increased problematisation of alcohol in popular Australian media may have contributed to these declines (Kraus et al., 2020).

There have been smaller scale analyses of newspaper content from other countries, with a notable article by Nicholls (2011), who examined the content of seven daily national UK newspapers during two periods between 2008-2009. Nicholls (2011) identified that alcohol-related news stories strongly

emphasised negative outcomes such as violence, anti-social behaviour, drink driving and health risks (see also Myhre, Nichols Saphir, Flora, Ammann Howard, & McChesney Gonzalez, 2002), with public health perspectives playing a central role in the framing of these stories. Nicholls identified that, compared with a previous analysis (Hansen, 2003), there appeared to be fewer depictions of drinking in the UK as a 'normalised' or non-problematic everyday activity. Similarly, a content analysis of 15% of articles from five national US newspapers between 1985-1991 reported an increase over time in concern about health effects of alcohol, and an observable shift from clinical to public health focused articles (Lemmens, Vaeth, & Greenfield, 1999).

These previous analyses focused on media representation of alcohol use across populations, rather than by young people, and all rely on data that are at least a decade old. Interestingly, there has been relative inattention to the portrayal of young people and alcohol in newspapers, despite the commonplace problematisation of young people's drinking in public discourse more generally (Conroy & Measham, 2019). An earlier analysis of young people and 'binge drinking' articles from the New York Times and Washington Post (1978-1996) reported an increase over time in attention to young people's binge drinking (Yanovitzky & Stryker, 2001). A later analysis of newspapers in New Orleans (1994-2003) also showed clear increases in media coverage of underage drinking as a public health issue over time (Harwood et al., 2005). The authors of this analysis explored the framing of underage drinking in association with four related legislative policies and identified that intensive press coverage of alcohol bills during the legislative process was most often associated with defeated legislation, whereas little or no press coverage was associated with bills successfully passed into law.

Over the past ten years in Australia, several studies have focused on how alcohol-related news stories influence policy and community awareness. Fogarty and Chapman (2012) explored representations of alcohol advertising over a two year period (2008-2009), suggesting that the Australian news media paid relative inattention to regulatory issues around alcohol advertising at the time. Wolfaardt et al. (2018) explored the representation of Australian national health guidelines on safe drinking levels (1994-2014) and reported low levels of public health discussion of the guidelines in mainstream newspapers, which they suggested may have contributed to low public knowledge of these guidelines. Cook and Wilkinson (2019) argued that representation from industry sources far outweighing public health sources likely impacted public discourse and the subsequent relaxation of trading hours for licensed venues with live music in Victoria in 2015.

In sum, previous analyses of newspapers indicate increasing concern about, and problematisation of, alcohol over time regardless of the decade in which newspapers were analysed. They suggest increasing inclusion of public health representatives in alcohol-related newspaper articles over time, but also important representation from the alcohol industry in regulatory matters. Given that news media can both reflect and influence public opinion, as well as potentially shape regulatory contexts

and affect individual practice, the aim of our analysis was to investigate changes over time in Australian newspaper reporting of young people and alcohol over the period in which young people's alcohol consumption has been declining in Australia. In analysing these changes we consider whether the news media may have played a role in shaping public discourse and legislative priorities to potentially discourage alcohol consumption among young people in Australia, or conversely reflected changes that had already – or were already – occurring.

Methods

Newspaper search

Factiva was used to search relevant newspaper articles from major Australian newspapers over a twenty year period (1st January 2000 to 31st December 2019). This time frame was selected to capture the period of declining young people's drinking, which in Australia was reported to begin after 2001 (Australian Institute of Health and Welfare, 2020; Guerin & White, 2020).

We limited the search to Australian 'major newspapers' (a category in Factiva) to keep the search within a manageable scope while capturing the widest Australian readership. Market research estimates that approximately 15.9 million Australians (80% of the population aged 14 years and over) accessed mainstream newspaper media in an average 7-day period in 2017, and approximately 7 million (35% of the population aged 14 years and over) accessed printed copies (Roy Morgan Research, 2019). Major newspapers have the largest circulation rates in Australia (for current circulation rate by major Australian newspaper see: Roy Morgan Research, 2020).

Given the significant changes over the past twenty years in digital media (i.e. there were far fewer electronic newspaper articles in the early 2000s), we restricted our search to printed articles (as opposed to 'online articles only'). It is likely that many printed articles were also published online, particularly in later years. However, to account for a general decrease over time in the number of articles printed in newspapers, we undertook a generic search of all printed articles in Australian newspapers over the twenty year period containing the letter 'a' (Factiva required at least one letter to initiate a search), and used the total number of articles per year as a denominator in our analyses of change over time.

Our focus was on young people under the age of 18 given this is the age group where declines in drinking are most apparent in survey data (Australian Institute of Health and Welfare, 2020). We therefore excluded articles where it was clear the focus was on young adults. However, if an article reported on research findings for those aged 15-24 years, or the practices of a group of young people aged between 16-19, for example, we included the article as it involved people under the age of 18. If

an article used the term ‘young person’ or ‘youth’ but it was unclear the age of the person or people in the article, the article was included. We deliberately did not include the search terms ‘children’ or ‘kids’ as we were interested in the representation of conscious drinking among young people rather than accidental drinking or poisoning of young children.

The search terms we employed were: (alcohol or grog or booz*) AND (youth or young or adolescen* or teen*). This produced 55,461 articles over the twenty year period. We randomly selected 100 articles to assess whether this was an appropriate search strategy, and only 14% of those articles were relevant (i.e. the remaining 86% contained an incidental mention of a variation of the terms alcohol and young person without being about young people and alcohol). Following the approach of Azar et al. (2014), we then used the same search string but requiring at least 3 inclusions of the alcohol term and 3 of the young person term. This produced 13,457 articles. We randomly selected 100 articles and identified only 22% as relevant, with the same problem, that most articles included these terms incidentally without being about alcohol or young people.

Our final strategy was to search only the ‘headline and leading paragraph’ to make sure they included these terms, which produced 4,233 articles. We randomly selected 100 articles and identified 57% as relevant to young people and alcohol use so deemed this search strategy as the most appropriate. All three search strategies produced a similar graphical spread of articles by year, and a correlation analysis using Pearson’s r suggested that the three strategies were highly correlated in article count per year (a minimum correlation between search strategies of 0.82). We considered the third strategy, while potentially missing some relevant articles, to therefore be a proportionate subsample of articles on young people and alcohol.

These 4,233 articles were downloaded as PDF articles and an initial round of screening was undertaken, resulting in the removal of 1,682 (39.7%) irrelevant articles that were not focused on alcohol or young people. The remaining 2,551 articles were imported into NVivo12 (QSR International Pty Ltd, 2018) for coding. During the coding process, a further 136 articles were removed due to not being focused on alcohol or young people (see Figure 1 for full search tree).

Article coding

Two researchers (AP and MC) coded the articles. An initial round of inter-rater reliability testing of 259 articles (~10%) was undertaken across four codes – type of article, theme, source and topic slant – and a Cohen’s kappa of 0.960 across the four codes was obtained. The code with the lowest Cohen’s kappa was topic slant at 0.878. Above 0.81 is an indication of almost perfect agreement for categorical data as suggested by Cohen (McHugh, 2012). Following the coding structure developed by Azar et al. (2014) and Cook et al. (2020), each article was then coded once by either AP or MC across type of article (e.g. news, feature, editorial, etc.), theme (e.g. reporting a policy or prevention

initiative, a tragic incident, statistics or trends, etc.), sources quoted (e.g. law enforcement, young person, researcher, etc.), and topic slant – the way alcohol use among young people was reported (e.g. socially approving or disapproving of alcohol use for young people, neutral reporting of alcohol use for young people, or mixed approving/disapproving slant). Topic slant was assessed based on quotes from the source and/or the writing of the journalist. Where both approving and disapproving messages were apparent (even if one was more dominant than the other), the article was coded as ‘mixed’.

Analysis

Descriptive analyses were undertaken to identify the proportion of articles by code per year. Bivariate logistic regression analyses were undertaken to explore whether articles presenting a particular theme or source had a more approving or disapproving topic slant, presented as odds ratios (OR). Based on visual representation of the descriptive data which showed non-linear trends, we used joinpoint Poisson regression analyses to measure change over time. Using joinpoint Poisson regression models allowed us to model changing trends over time by explicitly estimating where trends change (i.e. ‘joinpoints’). Joinpoint iteratively fits more complex models (in our case up to 3 breaks in the trend) and selects the most parsimonious model that fits the data using a Monte Carlo Permutation method. Linear and non-linear trends are then estimated between each of the selected joinpoints, so the final model estimates trends for each relevant segment of the time period. Model output is most easily interpreted via figures; however, we also provide the full models in Supplementary Table 1. Analyses were undertaken in Stata Version 14 (StataCorp, 2015) and Joinpoint (National Cancer Institute, 2020).

Findings

Article location, timing and type

The 2,415 relevant articles were from daily and weekend newspapers (n=15) from Australia’s eight states and territories. This included two national papers (The Australian and the Australian Financial Review, 129 articles), and 13 major state and territory-based papers (The Sydney Morning Herald, The Sun-Herald, The Daily Telegraph, The Age, The Herald Sun, The Canberra Times, The West Australian, The Sunday Times, The Courier Mail, The Advertiser, The Sunday Mail, The Mercury and The Northern Territory News). The largest number of articles were from New South Wales (n=498) and Victoria (n=486), the two most populous states in Australia, and the two states with greatest circulation rates (Roy Morgan Research, 2020).

Table 1 displays the descriptive data, showing the number and percentage of articles by article type, theme, source and topic slant. News articles dominated the sample (73.7%), followed by features (11.9%), letter to the editor/opinion pieces (8.4%) and editorials (5.7%).

Figure 2 shows the number of articles focused on young people and alcohol per 10,000 articles printed in major Australian newspapers, per year. Articles increased from 2.7 articles per 10,000 articles in 2000 to 7.7 articles per 10,000 in 2008 (an annual increase of 14.1%; 95%CI: 6.8, 21.9; $p < 0.01$), before decreasing back to 3.0 articles per 10,000 in 2019 (an annual decrease after 2008 of 8.2%; 95%CI: -11.9, -4.4, $p < 0.01$).

There was no obvious pattern identified in the month of the year in which articles were published (Figure 3), with approximately 170-180 articles for each month in total over the twenty years, but slightly more in March and September (~250 articles) and then a big jump in November ($n=344$). It is in November that young people in Australia finish their final year of secondary school and often take a holiday with others who have finished school, known locally as ‘Schoolies’ or ‘Leavers’. Alcohol has commonly been a feature of Schoolies celebrations and there were 110 articles about Schoolies over the twenty years, accounting for this difference.

Article theme

The most common themes across all articles (Table 1) pertained to policy or prevention initiatives (35.8%), followed by articles reporting on alcohol being risky or harmful (e.g. research findings reporting a link between alcohol and a health problem, 18.1%), statistics or trends in consumption (e.g. survey research findings, 14.5%) and young people being ‘out of control’ (e.g. reporting on events where police were called to contain behaviour or deal with property damage allegedly caused by young people who had been drinking, 7.8%).

Figure 4 displays change over time in the four most common themes. It shows a non-significant increase over time in articles on policy or prevention initiatives and no change in articles reporting alcohol to be risky or harmful, and youth being ‘out of control’. There was a significant decrease in reporting on statistics and trends in consumption between 2000 and 2010 (-8.9% per year; 95%CI: -15.6, -1.6; $p < 0.01$) before a significant increase to 2019 (15.5% per year; 95%CI: 4.4, 27.8; $p < 0.01$). The only other significant change in theme was a decrease over the twenty year period in reporting on Schoolies (-4.1% per year; 95%CI: -8.0, -0.1; $p = 0.04$).

Given the strong focus on prevention and policy in the articles ($n=865$), we conducted a secondary analysis to determine which policies or prevention initiatives were reported most often. Many of these articles reported on policy and prevention generally (or a combination of policies, $n=263$), but of

those that targeted specific initiatives, the most common were parental or secondary supply (n=133), advertising regulations (n=117), the alcopops tax (n=86), licensed venue controls (n=59), treatment programs (n=52), raising the drinking age (n=46), lowering the blood alcohol concentration (BAC) to 0 for probationary driver's license holders (n=36), and media campaigns (n=23). Articles about advertising regulations increased significantly over time (5.8% per year; 95%CI: 0.4, 11.4; p=0.02) and articles about media campaigns decreased significantly over time (-15.3% per year; 95%CI: -29.1, 1.3; p=0.09). Articles about the federal 'alcopops tax' increased significantly up until 2008 (58.3% per year; 95%CI: 15.3, 117.4; p<0.01) before decreasing to 2019 (-31.2% per year; 95%CI: -38.8, -22.5; p<0.01). Articles about licensed venue controls increased significantly up until 2015 (14.2% per year; 95%CI: 5.7, 23.4; p<0.01) before a non-significant decrease to 2019.

We also conducted a secondary analysis of the 'trends and statistics in consumption' theme to assess whether there was any particular focus in reporting of statistics over time. We identified 66 articles focused on trends or statistics in consumption among girls/young women, but only 4 articles focused on boys/young men. Additionally, 15 articles reported on drinking among young people increasing, with 60 articles reporting on young people's drinking decreasing. The focus on girls/young women did not change significantly over time; however, articles reporting on decreases in drinking among young people increased over study period (20.7% per year; 95%CI: 12.4, 29.6; p<0.01).

Sources reported

There were 4,883 sources in total reported in the 2,415 articles (Table 1) with researchers or research findings reported most commonly (25.1%), followed by politicians or government personnel (19.0%), health experts such as doctors or psychologists (9.9%), health promotion organisations (e.g. Australian Drug Foundation, Cancer Council, 9.8%) and law enforcement representatives (e.g. police, judge or lawyer, 9.5%). Figure 5 shows change over time in five sources of interest. Representation from young people declined significantly over time (-4.3% per year; 95%CI: -7.5, -1.1; p<0.01), as did representation from law enforcement (-4.6% per year; 95%CI: -6.8, -2.4; p<0.01). Representation from alcohol industry increased significantly up to 2008 (14.8% per year; 95%CI: 1.4, 29.9; p=0.02) before decreasing to 2019 (-13.1% per year; 95%CI: -19.6, -6.0; p<0.01).

Topic slant

In total, more than three quarters of articles were socially disapproving of alcohol use for young people (75.9%), nearly a quarter reported on alcohol neutrally (22.4%), and very few reported social

approval of alcohol use, or a mix of disapproving and approving messages (1.6% combined; Table 1). Figure 6 shows change over time in topic slant, with a significant increase in socially disapproving articles up until 2011 (2.0% per year; 95%CI: 0.7, 3.3; $p < 0.01$) and a non-significant decreasing trend thereafter. This was matched by a decreasing trend of neutral reporting up to 2010 (-6.2% per year; 95%CI: -9.1, -3.1; $p < 0.01$) before an increasing non-significant trend of neutral reporting up to 2019. There was also a decrease in articles presenting mixed approving and disapproving messages over the twenty year period (-9.7% per year; 95%CI: -16.0 -2.9; $p = 0.01$).

Theme and source by topic slant

The findings of bivariate logistic regression analyses can be found in Supplementary Table 2. Articles that were more likely have a socially disapproving topic slant were those focused on alcohol being risky or harmful, young people being ‘out of control’ and articles reporting a tragic circumstance. Articles that were less likely to have a socially disapproving topic slant were those focused on statistics or trends in consumption, policy or prevention initiatives, Schoolies celebrations, reports of underage drinking, alcohol products targeting underage drinkers and articles coded as ‘other’.

Articles that were more likely to have a socially disapproving topic slant were those that cited health experts, law enforcement personnel, researchers and politicians, while those that cited young people were less likely to have a socially disapproving topic slant. Articles that cited the alcohol industry were less likely to be socially disapproving, although this finding was non-significant (Supplementary Table 2).

Discussion

Charting change over time in newspaper reporting on young people’s drinking

Our twenty year analysis identified an increase in the magnitude of reporting on young people and alcohol in the early 2000s up to a peak in 2008, before decreasing again to baseline levels by 2019. These findings align with the Australian media analyses presented by Azar et al. (2014), who focused on media reporting about alcohol more generally (rather than its use by young people) and observed an increase in reporting up to 2008-2009, before the beginning of a decrease until 2011 when their period of analysis ended. A recent analysis by Cook et al. (2020) on the representation of drinking during pregnancy in Australian newspapers over a period of 18 years also noted a peak in articles in 2007, all of which suggests a heightened interest around alcohol in Australian major newspapers around 2007-2009.

Previous analyses of newspaper articles have tended to show an increase over time in attention to alcohol as a public health problem, regardless of the decade in which the analysis was undertaken (Azar et al., 2014; Harwood et al., 2005; Lemmens et al., 1999; Myhre et al., 2002; Nicholls, 2011; Yanovitzky & Stryker, 2001). However, in our examination over a longer period of time – twenty years – we observed an increase to the middle of our analysis period, but less problematisation of young people and alcohol since around 2010. Our findings suggest that ‘something was brewing’ (Azar et al., 2014) around 2008 but in the years following, the quantity, theme and slant of young people’s drinking may indeed have been affected by declining consumption rates in the population – in other words, after a potential lag time, alcohol use among young people has become less ‘problematised’ in Australian newspaper media as young people’s drinking (in quantitative terms) has become less of a public health ‘problem’. Indeed, articles reporting on trends in the decrease in drinking among young people increased over the study period in line with national statistics (Australian Institute of Health and Welfare, 2020; Guerin & White, 2020). This suggests that if newspapers are a good indication of the waxing and waning of alcohol-related social anxieties (Pennay & MacLean, 2017), there was growing public concern about young people’s drinking in the first decade of the millennium, but decreasing concern over the past ten years.

Understanding how newspapers might shape public opinion on young people’s drinking

There was heightened policy interest on young people’s drinking in Australia in 2008 which is likely to account for the spike in reporting and increase in socially disapproving articles around this time. For example, the peak in articles in 2008 matches the timing of the release of a National Binge Drinking Strategy by the federal government (Prime Minister of Australia, 2008). This strategy aimed to ‘address the binge drinking epidemic among young Australians’ and invest \$53 million in community level initiatives to confront Australia’s ‘culture of binge drinking’ (Prime Minister of Australia, 2008). It is notable that there was a peak in alcohol industry representation at the same time (Figure 5), suggesting industry engaged in strategic media activities during this period to shift or counter the narrative from politicians and health experts. The rhetoric around young people’s alcohol consumption as an ‘epidemic’ was particularly noticeable around this time and may have also acted to shape public opinion on young people’s drinking, with 42 articles using the word epidemic in 2008-2009 (compared with 34 over the remaining 18 years).

Also around this time, the federal government placed an excise tax on pre-mixed ready to drink spirits referred to locally as ‘alcopops’, which led to a 70% increase in the price of these drinks (Mojica-Perez, Callinan, & Livingston, 2020). This tax specifically targeted young people as the most common consumers of these beverages. The proposed legislation was the subject of significant debate and received strong industry representation, and while legislation was enacted, industry arguments may have contributed to its relative unpopularity as a price policy (Tobin, Moodie, & Livingstone,

2011). After the tax was effectively legislated, media reporting on the topic declined. Another potential explanation for the increase and subsequent decrease in reporting around 2008-09 is the timing of the revised National Health and Medical Research Council (NHMRC) alcohol guidelines in 2009. Prior to the release of these guidelines there was considerable attention on the subject of alcohol related harms, and particularly harms related to the developing brain, with health experts strongly emphasising these concerns in scientific literature as well as in the media (Lubman, Yücel, & Hall, 2007). This may have effected the subsequent change from the 2001 guidelines that young people under the age of 18 should not exceed adult low-risk drinking guidelines (National Health and Medical Research Council, 2001), to the 2009 guidelines which stated ‘for young people aged 15–17 years, the safest option is to delay the initiation of drinking for as long as possible’ (National Health and Medical Research Council, 2009).

Aside from the peak in 2008, there are discernible ways in which newspaper reporting might have shaped legislative priorities and particular concerns about young people’s drinking in Australia at different times. Indeed, the policy or prevention theme accounted for more than one-third of all articles and increased steadily (though non-significantly) over time (Figure 4). For example, attention to licensed venue controls increased up until 2015 before declining. There was increasing concern related to alcohol-related violence in and around licensed venues - particularly in Sydney - up until 2014, at which point a ‘lock out’ law was established in the Kings Cross area (Hughes & Weedon-Newstead, 2018; Kypros & Livingston, 2020). As with the alcopops tax, this received significant industry attention and has remained a contentious policy (Lee, 2016), however, media reporting on the lock out law diminished following its effective legislation. A significant increase in attention to advertising regulations also occurred over the study period. While Fogarty and Chapman (2012) suggested that alcohol advertising had low newsworthiness as a stand-alone issue when they undertook their analysis in 2008-2009, it was the second most reported policy or prevention initiative in our analysis, and it appears that advertising has been more commonly reported in Australian newspapers over time. This may be related to increasing concerns about alcohol advertising on social media (e.g. Nicholls, 2012). These are just a snippet of the alcohol policies that were represented over time in our analysis, and support the notion that focused attention to policies can influence public discourse on a topic and associated legislative outcomes (Cook & Wilkinson, 2019; Cross, 2007; Harwood et al., 2005).

We identified a disproportionate amount of attention to girls/young women’s drinking relative to boys/young men, with no change over time in this trend. This over-representation does not reflect the fact that girls/young women in Australia drink at similar frequencies but less in terms of quantity than boys/young men (Australian Institute of Health and Welfare, 2020; Guerin & White, 2020). These findings concord with a UK study focused on young adults, which identified that in seven national newspapers (2012-2013), articles reporting on women’s ‘binge drinking’ were more frequent than

articles reporting on men's 'binge drinking', and presented women's drinking as more problematic (Patterson, Emslie, Mason, Fergie, & Hilton, 2016). Social anxiety about women's drinking is not a new phenomenon (MacGregor & Thom, 2020), and appears to regrettably persist in Australian newspapers, potentially influencing public opinion.

Similar to previous analyses (Nicholls, 2011), we identified that researchers or research findings were the most commonly reported sources across news articles (with no significant change identified over time). However, in contrast to previous analyses (Azar et al., 2014; Nicholls, 2011), we did not identify any change in representations from health experts and health promotion organisations over time, with around 10% of articles citing these sources over the study period. Health experts were more likely to be reported in articles with a socially disapproving tone, reinforcing suggestions that health experts and advocacy groups strategically engage with media to promote public health goals in relation to alcohol (Azar et al., 2014; Nicholls, 2011). We did observe a significant reduction in alcohol industry representation in articles after 2008, a trend also noted by Azar et al. (2014). It appears that the alcohol industry has become less prominent in Australian news media (specifically on young people and drinking in our case) over time. Whether this reflects strategies effected by the alcohol industry, or journalistic practices, we cannot be sure. We also observed a decrease in representation from law enforcement and young people over the past twenty years on this topic. Again, it is unclear whether this reflects less willingness from law enforcement and young people to report their views, or less interest from journalists in representing the views of these groups.

Understanding whether newspapers may have influenced declining drinking among young people

More than three quarters of articles over the twenty year period were identified as being socially disapproving of young people's drinking, suggesting that the framing of young people's drinking in Australian news media is disproportionately negative, rather than neutral. This is higher than the 53% identified by Azar et al. (2014), but that is likely due to our focus on people under the legal drinking age in Australia. Nearly one in five articles focused on the harms or risks of drinking to the young person, and one in ten focused on young people acting in anti-social ways (i.e. being 'out of control' while drinking). While the proportions of these themes did not change over time, their quantity did increase up to 2008. Such negative depictions alongside the socially disapproving framing that dominated these articles may have influenced how young people felt about alcohol consumption and therefore whether and how they consumed alcohol.

With regards to understanding how newspapers may have influenced declining drinking among young people in Australia, there are two hypothetical directions that might be expected: a) alcohol consumption among young people becomes less problematised as a reflection of population changes in young people's drinking practices; or b) alcohol consumption becomes more problematised over time which may have influenced declining drinking practices. Both of these hypothetical directions

were partially supported. We observed a significant increase in socially disapproving articles up until 2011, suggesting that young people's drinking was increasingly problematised in Australian major newspapers in the first decade of the millennium. Changes in young people's drinking may have been influenced by increasingly negative media coverage prior to the period of our analysis, and then sustained or propelled by increasing socially disapproving messages in the first decade of the millennium. However, in the second decade, there was a significant decrease in the magnitude of reporting and socially disapproving reporting, which may indicate less concern about young people's drinking as drinking rates declined.

Limitations

It is important to note that our analysis is subject to limitations that include both the search strategy and our analytical and interpretative frameworks. We limited our search to Australian major newspapers and representation of alcohol and young people in regional newspapers may be significantly different. We also limited our search to printed versions given our interest in exploring change over time, and 'online only' articles may have presented different types of content or slant. We attempted to focus on young people under the age of 18 but this was not always possible if newspapers only reported on 'youth' or 'young people', or age categories that stretched before and after this age. We were also unable to identify a perfect search strategy to identify every article on young people and alcohol, so limited our search to those articles where our key terms appeared in the headline or first paragraph. While this means we have not identified every article, we did run a correlation to ensure that our sample is at least a proportionate subsample of printed articles over time that mention young people and alcohol. Finally, as with any qualitative interpretation of article tone and topic, and our subsequent meaning-making practices with the aggregated data, our team's disciplinary background representing sociology, epidemiology, public health, psychology and psychiatry, have unavoidably influenced the analysis presented here. All authors provided feedback and debate on elements of our analysis and discussion in an effort to refine and strengthen our conclusions.

Conclusions

We identified increased reporting on young people and alcohol, with increasing social disapproval about young people and alcohol, in the first decade of this millennium, but a corresponding decrease in the second decade. This may indicate a lag time between drinking among young people becoming less of a public health 'problem' and media and public recognition of this. Previous analyses indicate a growing problematisation of alcohol over time in newspapers. In this respect, the decline in young people's drinking could have been precipitated by increasingly negative media coverage (alongside and reflecting co-occurring shifts in social norms and public discourse more broadly), and the increase in socially disapproving articles we observed in the first decade of our analysis may have acted to

sustain or accelerate the decline. However, the decrease in the last ten years of articles on young people and alcohol and the decrease in socially disapproving articles over the same period, indicates that attention to the ‘problem’ of youth drinking is dissipating, in line with the declining trends. Given the currency of these trends, this is fairly new territory for media analyses, so it will be interesting to chart this further alongside changes in future trends.

References

- Australian Institute of Health and Welfare. (2020). *National Drug Strategy Household Survey 2019. Drug Statistics series no. 32. PHE 270*. Canberra: AIHW.
- Azar, D., White, V., Bland, S., Livingston, M., Room, R., Chikritzhs, T., . . . Wakefield, M. (2014). 'Something's Brewing': the changing trends in alcohol coverage in Australian newspapers 2000–2011. *Alcohol and Alcoholism*, 49(3), 336-342.
- Baillie, R. (1996). Determining the effects of media portrayals of alcohol: Going beyond short term influence. *Alcohol and Alcoholism*, 31(3), 235–242.
- Conroy, D., & Measham, F. (2019). *Book Introduction: Young Adult Drinking Styles*. London: Palgrave Macmillan.
- Cook, M., Leggat, G., & Pennay, A. (2020). Change Over Time in Australian Newspaper Reporting of Drinking During Pregnancy: A Content Analysis (2000–2017). *Alcohol and Alcoholism*, 55(6), 690-697.
- Cook, M., & Wilkinson, C. (2019). How did live music become central to debates on how to regulate the Victorian night-time economy? A qualitative analysis of Victorian newspaper reporting since 2003. *Drugs: Education, Prevention and Policy*, 26(3), 265-272.
- Cross, S. (2007). Under a cloud: Morality, ambivalence and uncertainty in news discourse of cannabis law reform in Great Britain. In P. Manning (Ed.), *Drugs and Popular Culture: Drugs, Media and Identity in Contemporary Society*. Devon: Willan Publishing.
- Fogarty, A., & Chapman, S. (2012). Advocates, interest groups and Australian news coverage of alcohol advertising restrictions: content and framing analysis. *BMC Public Health*, 12, 727.
- Guerin, N., & White, V. (2020). *ASSAD 2017 Statistics & Trends: Trends in Substance Use Among Australian Secondary Students. Second Edition*. Victoria: Cancer Council Victoria.
- Hansen, A. (2003). *The portrayal of alcohol and alcohol consumption in television news and drama programmes*. London: Alcohol Concern.
- Harwood, E. M., Witson, J. C., Fan, D. P., & Wagenaar, A. C. (2005). Media advocacy and underage drinking policies: a study of Louisiana news media from 1994 through 2003. *Health Promotion Practice*, 6(3), 246–257.
- Hodgetts, D., & Chamberlain, K. (2014). Analyzing News Media. In U. Flick (Ed.), *The Sage Handbook of Qualitative Data Analysis*. London: Sage.
- Hughes, C., Lancaster, K., & Spicer, B. (2011). How do Australian news media depict illicit drug issues? An analysis of print media reporting across and between illicit drugs, 2003–2008. *International Journal of Drug Policy*, 22(4), 285-291.
- Hughes, C., & Weedon-Newstead, A. S. (2018). Investigating displacement effects as a result of the Sydney, NSW alcohol lockout legislation. *Drugs: Education, Prevention and Policy*, 25(5), 386-396.
- Kraus, L., Room, R., Livingston, M., Pennay, A., Holmes, J., & Torronen, J. (2020). Long waves of consumption or a unique social generation? Exploring recent declines in youth drinking. *Addiction Research & Theory*, 28(3), 183-193.
- Kypros, K., & Livingston, M. (2020). Incidence of assault in Sydney, Australia, throughout 5 years of alcohol trading hour restrictions: controlled before-and-after study. *Addiction*, 115(11), 2045-2054.

- Lee, M. (2016). Sydney's Lockout Laws: For and Against. *Current Issues in Criminal Justice*, 28(1), 117-121.
- Lemmens, P., Vaeth, P., & Greenfield, T. (1999). Coverage of Beverage Alcohol Issues in the Print Media in the United States, 1985-1991. *American Journal of Public Health*, 89(10), 1555-1560.
- Lubman, D. I., Yücel, M., & Hall, W. (2007). Substance use and the adolescent brain: A toxic combination? *Journal of Psychopharmacology*, 21(792-794).
- MacGregor, S., & Thom, B. (2020). *Risk and Substance Use*. London: Routledge.
- McHugh, M. L. (2012). Interrater reliability: the kappa statistic. *Biochemia Medica*, 22(3), 276-282.
- Mojica-Perez, Y., Callinan, S., & Livingston, M. (2020). Examining beverage-specific trends in youth drinking in Australia before and after the implementation of the alcopops tax. *Drug and Alcohol Review*, 39(3), 246-254.
- Myhre, S. L., Nichols Saphir, M., Flora, J. A., Ammann Howard, K., & McChesney Gonzalez, E. (2002). Alcohol Coverage in California Newspapers: Frequency, Prominence, and Framing. *Journal of Public Health Policy*, 23, 172–190.
- National Cancer Institute. (2020). Joinpoint Regression Program, Version 4.8.0.1. Calverton, Maryland: Statistical Research and Applications Branch, National Cancer Institute.
- National Health and Medical Research Council. (2001). *Australian alcohol guidelines: health risks and benefits*. Canberra: National Health and Medical Research Council.
- National Health and Medical Research Council. (2009). *Australian Guidelines to Reduce Health Risks from Drinking Alcohol*. Canberra: National Health and Medical Research Council.
- Nicholls, J. (2011). UK news reporting of alcohol: An analysis of television and newspaper coverage. *Drugs: Education, Prevention and Policy*, 18(3), 200-206.
- Nicholls, J. (2012). Everyday, Everywhere: Alcohol Marketing and Social Media - Current Trends. *Alcohol and Alcoholism*, 47(486-493).
- Patterson, C., Emslie, C., Mason, O., Fergie, G., & Hilton, S. (2016). Content analysis of UK newspaper and online news representations of women's and men's 'binge' drinking: a challenge for communicating evidence-based messages about single-episodic drinking? *British Medical Journal Open*, 6, e013124.
- Pennay, A., & MacLean, S. (2017). Images of Drugs in Popular Culture. In A. Ritter, T. King, & N. Lee (Eds.), *Drug Use in Australian Society. Second Edition*. Melbourne: Oxford University Press.
- Prime Minister of Australia. (2008). *National binge drinking strategy*. Canberra: Commonwealth Government of Australia, retrieved from: <https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id:%22media/pressrel/3FVP6%22;src1=sm1>. Accessed on 17th February 2021.
- QSR International Pty Ltd. (2018). NVivo (Version 12).
- Roy Morgan Research. (2019). *Newspaper Masthead Readership Grows to 15.9 million*. Melbourne: Roy Morgan Research, retrieved from: <http://www.roymorgan.com/findings/7496-australian-newspaper-print-readership-and-cross-platform-audiences-december-2017-201802080408>. Accessed on 17th February 2021.

- Roy Morgan Research. (2020). *Australian Newspaper Readership, 12 months to September 2020*. Melbourne: Roy Morgan Research, retrieved from: <http://www.roymorgan.com/industries/media/readership/newspaper-readership>. Accessed on 17th February 2021.
- StataCorp. (2015). *Stata Statistical Software: Release 14*. College Station, TX: StataCorp LP.
- Tobin, C., Moodie, R., & Livingstone, C. (2011). A review of public opinion towards alcohol controls in Australia. *BMC Public Health, 11*(58), 1-9.
- Wolfaardt, B., Brownbill, A., Afzal Mahmood, M., & Bowden, J. (2018). The Australian NHMRC guidelines for alcohol consumption and their portrayal in the print media: a content analysis of Australian newspapers. *Australian and New Zealand Journal of Public Health, 42*(1), 43-45.
- Yanovitzky, I., & Stryker, J. (2001). Mass media, social norms, and health promotion efforts: a longitudinal study of media effects on youth binge drinking. *Communication Research, 28*(2), 208–239.