

Levels of Parental Drinking in the Presence of Children: An Exploration of Attitudinal Correlates

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Abstract

Aims: This study aimed to examine perceived social norms, the effect of parental drinking on these norms, alcohol use in front of children, and how norms and consumption vary based on child age and gender of the parent.

Methods: A cross-sectional online panel survey was undertaken with $n = 1000$ Australian adults (including 670 parents) aged 18–59 years. The survey assessed: alcohol consumption in front of children; normative attitudes towards drinking in the presence of children; and perceived social norms.

Results: Overall, 33.9% of parents reported drinking a glass of alcohol each day or a couple of times a week, 18.2% reported getting slightly drunk and 7.8% indicated getting visibly drunk each day or a couple of times a week with their children present. In total, 37.5% reported drinking in front of their children at least weekly. Fathers were more likely to drink in front of children than mothers. Most parents deemed drinking small amounts of alcohol in front of children as acceptable but did not accept drunkenness. Respondents were less concerned about a father drinking one or two drinks in front of their children than a mother. Social expectations were not related to child age, but norms related to others' perceived behaviour were.

Conclusions: Many parents, particularly fathers consume alcohol in front of their children. There is a need to target health promotion strategies to adults and parents consuming in excess of health guidelines, and to the many parents who are consuming alcohol at higher levels in front of their children.

INTRODUCTION

Alcohol consumption is widely accepted in Australian society with an average of 10.6 L of pure alcohol being consumed per capita for those aged 15 years and over compared to the world average of 6.4 L (World Health Organization 2018). Laws and regulations prohibit alcohol consumption in a number of environmental contexts and there is a much higher price per drink in licenced venues than for off-premise alcohol. As a consequence, consumption often occurs within the Australian home (Australian Institute of Health and Welfare 2020). Little is known about whether this consumption occurs in front of children in Australia, and the factors that may influence this.

Children can be affected directly and indirectly by parents' or caregivers' drinking in their presence in a range of ways. For example, parents' alcohol use appears to be a strong determinant of children's alcohol-related knowledge (Kuntsche et al. 2016; Voogt et al. 2017) and adolescents' alcohol-related

expectancies (Smit et al. 2018). Two main mechanisms that children can be affected is through role modelling, which has been well documented to be linked to earlier initiation of alcohol (Peterson et al. 1994; Hawkins et al. 1997; Getz and Bray 2005; Ryan et al. 2010; Yap et al. 2017) and future drinking habits (Ryan et al. 2010), and poor supervision of children, potentially resulting in injury (Crandall et al. 2006) or ongoing maltreatment in serious circumstances (Laslett et al. 2012). Recent literature also suggests a relationship between children's observation of moderate-to-heavy parental alcohol consumption and alcohol-related behaviours and cognitions at key periods of development (Smit et al. 2020; Cook et al. 2021).

Evidence supports the link between parental consumption and adolescent consumption, and, while it is outside the scope of this paper, it is important to note that there is currently not a clear understanding of whether there is a level of consumption

Received: September 15, 2020. Revised: September 6, 2021. Editorial decision: September 23, 2021. Accepted: September 23, 2021

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(i.e. number of drinks in a session) that might be 'safe' in terms of minimally impacting adolescent consumption (Homel and Warren 2017). Currently the evidence is mixed; one UK study found mothers drinking at light or heavy levels increased the odds of children drinking (OR 1.6 and 1.8, respectively) compared with mothers who abstained (Kelly et al. 2016). In contrast, adolescents in the Netherlands were influenced if parents drank heavily at least once a week, but were not if parents drank less (Vermeulen-Smit et al. 2012). Another Dutch study found a linear relationship between increased parental and adolescent consumption (Spijkerman et al. 2007).

One Australian study did conclude that 'parental drinking (especially if it is frequent and heavy) does increase likelihood of early adolescent drinking' implying the potential existence of a 'safe' level of consumption among children, although the study did not determine whether the drinking occurred in the presence of children (Homel and Warren 2017, page 82, emphasis added). Currently, in the absence of an evidence-based limit, a cut-off has been set, where Australian parenting guidelines recommend that parents limit their alcohol use, particularly around children, and that parents should not get drunk, especially in front of their children (Ryan et al. 2011).

Although evidence is clear that parental drinking has impacts for both children and adolescents, evidence of relative impact of mothers' compared with fathers' drinking is mixed (Rossow et al. 2016). Yap et al. (2017) systematic review highlighted a range of modifiable parenting factors (including favourable alcohol attitudes, discipline and support) that had gender-specific associations with adolescent alcohol initiation. Mothers may play a key role in shaping early alcohol initiation, through being generally supportive and setting consistent behavioural boundaries. A meta-analysis highlighted the significant associations between both maternal discipline and support with delayed adolescent alcohol initiation, but no significant associations for paternal discipline and support (Yap et al. 2017). In a Swedish study, parental gender was the only significant sociodemographic predictor of attitude to alcohol use; fathers were more likely than mothers to have non-restrictive attitudes to adolescent consumption (Pettersson et al. 2009). This finding has been also been recently confirmed in a sample of Finnish parents (Raitasalo and Holmila 2017).

To date, few studies have documented perceptions of acceptable parental alcohol consumption (and by gender of the parent) in front of children, either in terms of what parents think others currently do (i.e. descriptive norms) or in terms of what they think social expectations are for this behaviour (i.e. injunctive norms as described by Cialdini et al. (1991)). Descriptive norms have been empirically demonstrated as influencing adolescent and young adult consumption (Kypri and Langley 2003; Neighbors et al. 2007; Haug et al. 2011), although findings with parents are less commonplace. There has been little work in Australia describing either descriptive or injunctive norms for parental drinking.

A Finnish study did identify an injunctive norm related to parental drinking, which indicated that 72% of the sample believed drinking in the presence of small children was unacceptable (Raitasalo et al. 2011). Additionally, 95% indicated that being drunk in the presence of small children was also unacceptable. Results also found that women were generally more likely to believe that drinking in the presence of small

children was unacceptable than men, but that there were no differences in opinion by age of youngest child in the home.

The complexity of these attitudes and their influence is important to note, and while no conceptual framework exists, evidence by Raitasalo et al. (2011) demonstrated that parental attitudes were largely independent of actual drinking behaviour, and those with a negative attitude to consumption nonetheless reported drinking in the presence of children. Further, Scheffels et al. (2016) found that, among Norwegians, the acceptability of drinking in front of children decreased as the amount consumed increased in hypothetical scenarios ranging from 'drinking a glass of wine', to getting 'slightly intoxicated' and finally getting 'clearly intoxicated'.

In this study we aim to investigate levels of alcohol consumed by parents in front of children, and examine whether this differs between mothers and fathers according to the age of the youngest child in the home. We further aim to examine what normative beliefs Australian adults hold about parental consumption in front of children; whether these differ for mothers and fathers and whether norms held by Australian parents are associated with their actual drinking behaviour in front of children and the moderating impact of child age. This study builds on two studies conducted in Europe (Raitasalo et al. 2011; Scheffels et al. 2016), as these are two of the few studies in this field, and our earlier study that found differences in parental consumption by age of the youngest child (Bowden et al. 2019). The following hypotheses were tested:

Consumption around children

Hypothesis 1: *Age of youngest child in the home and gender of parent will impact prevalence of regular drinking in front of children, with fathers being more likely than mothers to consume more regularly and parents of younger children less likely to consume regularly in front of their children.*

Normative attitudes

Hypothesis 2: *Adult's attitude to others' parental consumption of alcohol in front of children will vary depending upon whether the referent parent is a mother or father, with more negative attitudes to maternal consumption.*

Hypothesis 3: *Parents of younger children and parents who drink in front of their children less regularly will be more concerned by drinking in front of children than parents of older children and those who drink in front of their children more regularly.*

METHOD

Design, participants and procedure

Data were collected from a cross-sectional sample of Australian adults aged 18–59 years. Fieldwork was undertaken in October 2017. Ethics approval was obtained from the University of Adelaide Human Research Ethics Committee, application no. 17/77. The sample comprised 1000 18–59 year olds. Recruitment was conducted through an online panel, including participants who had been actively recruited previously from around Australia who had supplied demographic information (e.g. age, gender, location and various other profiling questions to assist in survey targeting). The online panel is accredited under the International Organization for

Table 1. Description of sample

	% Total sample (<i>n</i> = 1000)	% Parents with dependent child under 18 in household (<i>n</i> = 670)	% Non-parents (<i>n</i> = 328)	Chi-square test between parents and non-parents
Gender*				
Male	46.5	39.0	61.9	χ^2 (df = 1) = 46.6, <i>P</i> < 0.001, ϕ_c = 0.22
Female	53.5	61.0	38.1	
Age				
18–29 years	11.8	9.1	17.3	χ^2 (df = 2) = 64.7, <i>P</i> < 0.001, ϕ_c = 0.25
30–44 years	47.4	56.3	29.5	
45–59 years	40.7	34.6	53.2	
Drank in the past year				
Yes	90.9	91.5	89.7	NS
No	9.1	8.5	10.3	
Parents only				
Age of youngest child in the home				
0–5 years	-	43.0	-	-
6–17 years	-	57.0	-	-

*Two non-parents self-classified as gender diverse and were removed for this analysis so that chi-square test could be conducted without violating assumptions. NS = chi-square test between parents and non-parents not statistically significant.

Standardization's (ISO) standards for access panels in market, opinion and social research (AS ISO 26362).

Survey panel members were invited to participate via email, with a web link to the online survey developed by the authors as per the measures section below. Participants were offered points towards rewards for completion of the survey from the panel supplier (equivalent to less than \$5 to be redeemed for gift cards, points programs, charitable contributions, and partner products or services). Potential participants first completed questions assessing qualifying criteria and quotas (to achieve at least 50% parents, responses across each Australian jurisdiction (so that all were represented) and approximately even numbers of men and women). Single parent households were included. The survey was anonymous and took ~20 minutes to complete. Refer to Table 1 for a description of the final sample. Further analysis revealed that the sample was largely comparable to the 2013 National Drug Strategy Household Survey sample (NDSHS) in terms of gender (46.5% male (95% CI = 43.3–49.5) vs 49.5% male in NDSHS (95% CI = 48.4–50.5)) and geographic location (Australian jurisdiction). There was some under-representation of the younger age groups, possibly due to the quota applied for parents; 11.8% 18–29 year olds (95% CI = 9.8–13.8) in this sample vs 25.1% in NDSHS (95% CI = 24.0–26.3) (Bowden 2018).

Measures

Demographic questions captured gender, age, parental status and age of the youngest child in the home using the age groups 0–5 years and 6–17 years which are similar to Raitasalo et al. (2011)¹.

Measures of alcohol consumption

To assess self-reported parental drinking behaviour in front of their children, parents who reported having children under 18 years of age and who had drunk in the past year were

asked to report how often they consumed at each of levels (i.e. do you drink a glass of alcohol; get slightly intoxicated (i.e. defined for all measures as 'getting more talkative and lively than usual'); and get clearly intoxicated (i.e. 'speak unclearly, walking unsteadily'). Response categories were at four frequency levels (a couple of times per year; a couple of times per month; a couple of times per week; or each day when my child/ren are present) (Table 2). For some analyses (Tables 3 and 5) the response categories 'each day' or 'a couple of times per week' were combined to 'at least weekly'.

Measures of participants' perceived social norms

Injunctive norms for drinking in the presence of children were measured using two tools. The first three-item tool measured concern about a father and mother 'drinking a glass of wine' and getting either 'slightly' or 'clearly intoxicated' while a 10-year-old child is present (Table 4). This tool was slightly modified for the Australian context from Scheffels et al. (2016). Respondents reported their concern about each item across three levels of consumption (a couple of times per year; a couple of times per month; each day or a couple of times per week) on a scale from 1 = 'not at all concerning' to 4 = 'very concerning'. Mean concern for each item was summed for concern about a mother and concern about a father. There was good internal consistency, with all Cronbach alpha coefficients 0.89 or higher.

The second tool assessed injunctive norms using four items. The tool was based on responses to three questions to drinking in front of small children, (at all, to drunkenness generally, or to drunkenness in the presence of a sober caregiver), modified for the Australian context from Raitasalo et al. (2011). Another question was added to assess views of moderate consumption, defined as 'one or two drinks' (Table 5, item 2). Response categories were in the form of a 5-point Likert scale from 1 = 'totally agree' to 5 = 'totally disagree', with responses of 1 or 2 taken to indicate agreement.

Descriptive norms for drinking in the presence of children (occasionally, at gatherings, and as perceived role models) were assessed using three items (Table 5, items 5–7). Response

¹ Raitasalo et al. 2011 used age groups of 0–6 years and 7–17, however we used 0.5 years and 6–17 years which is more reflective of the pre-school age in Australia.

Table 2. Self-reported parental drinking behaviour in front of children among those who drank in the last year (%)

	Total % (95% CI) (n = 608)	Fathers % (95% CI) (n = 247)	Mothers % (95% CI) (n = 361)	Chi-square between fathers and mothers
Do you drink a glass of alcohol				
At least weekly when your child/ren are present	37.3 (33.5–41.1)	44.9 (38.7–51.1)	32.1 (27.3–36.9)	χ^2 (df = 3) = 17.76, P < 0.001, ϕ_c = 0.17
A couple of times per month when your child/ren are present	24.2 (20.8–27.6)	26.3 (20.8–31.8)	22.7 (18.4–27.0)	
A couple of times per year when child/ren are present	24.3 (20.9–27.7)	17.4 (12.7–22.1)	29.1 (24.4–33.8)	
Never while child/ren are present	14.1 (11.3–16.9)	11.3 (7.4–15.2)	16.1 (12.3–19.9)	
Do you get slightly intoxicated (i.e. get more talkative and lively than usual)				
At least weekly when your child/ren are present	20.1 (16.9–23.3)	26.3 (20.8–31.8)	15.8 (12.0–19.6)	χ^2 (df = 3) = 15.87, P < 0.001, ϕ_c = 0.16
A couple of times per month when your child/ren are present	19.9 (16.7–23.1)	22.7 (17.5–27.9)	18.0 (14.0–22.0)	
A couple of times per year when child/ren are present	23.0 (19.7–26.3)	18.2 (13.4–23.0)	26.3 (21.8–30.8)	
Never while child/ren are present	37.0 (33.2–40.8)	32.8 (27.0–38.6)	39.9 (34.8–45.0)	
Do you get clearly intoxicated (i.e. speaking unclearly, walking unsteadily)				
At least weekly when your child/ren are present	8.6 (6.4–10.8)	12.1 (8.0–16.2)	6.1 (3.6–8.6)	χ^2 (df = 3) = 14.36, P = 0.002, ϕ_c = 0.15
A couple of times per month when your child/ren are present	9.0 (6.7–11.3)	12.1 (8.0–16.2)	6.9 (4.3–9.5)	
A couple of times per year when child/ren are present	9.2 (6.9–11.5)	10.1 (6.4–13.8)	8.6 (5.7–11.5)	
Never while child/ren are present	73.3 (69.8–76.8)	65.6 (59.7–71.5)	78.4 (74.2–82.6)	

Table 3. Logistic regression analysis for drinking in front of children by three levels

	Odds ratio (n = 608)	95% CI for odds ratio
1. Drink a glass of alcohol at least weekly in front of children		
Gender (female as reference category)		
Male	1.63**	1.16–2.30
Age of youngest child (0–5 years ref)		
6–17 years	1.29	0.87–1.93
Age group of parent (18–29 years as ref group)		
30–44 years	0.95	0.51–1.79
45–59 years	1.29	0.64–2.61
2. Get slightly intoxicated at least weekly in front of children		
Gender (male as reference category)		
Male	1.95**	1.30–2.94
Age of youngest child (0–5 years ref)		
6–17 years	1.57	0.97–2.53
Age group of parent (18–29 years as ref group)		
30–44 years	0.66	0.32–1.36
45–59 years	0.54	0.24–1.21
3. Get visibly intoxicated at least weekly in front of children		
Gender (male as reference category)		
Male	3.24***	1.72–6.12
Age of youngest child (0–5 years ref)		
6–17 years	1.45	0.76–2.74
Age group of parent (18–29 years as ref group)		
30–44 years	0.23***	0.11–0.51
45–59 years	0.04***	0.01–0.12

***P ≤ 0.001. **P ≤ 0.01. *P < 0.05.

categories were in the form of a 5 point Likert scale from 1 = ‘strongly agree’ to 5 = ‘strongly disagree’, with responses of 1 or 2 taken to indicate agreement.

Analyses

Data were analysed using IBM SPSS Statistics 22. To assess levels of drinking in front of children, frequencies calculated and a chi-square analysis compared fathers and mothers (Table 2). To assess hypothesis 1, which predicted that age

of the youngest child in the home and status as mother or father will relate to drinking in the home, with the least consumption by mothers of young children, three logistic regressions were undertaken. With The dependent variable rated amount of alcohol consumed (drink a glass of alcohol; get slightly intoxicated and get clearly intoxicated in front of children at least weekly), and the independent variables were parental gender and age, and age of the youngest child in the home (Table 3).

Table 4. Concern about a father and mother drinking while a 10-year-old child is present (injunctive norm)

Injunctive norm. . .while his/her 10-year-old child is present	Mean (SD) Among all adults ($n = 998$) ^a		Repeated measures ANCOVA
	Estimated marginal mean concern about father	Estimated marginal mean concern about mother	
..drinking a glass of wine ^b	Transformed mean 0.18 (SD = 0.20)	Transformed mean 0.20 (SD = 0.21)	Main effect: $F(1,997) = 10.51$, $P = 0.001$; $\eta^2_c = 0.01$
..getting slightly intoxicated ^c	2.46 (SD = 0.93)	2.45 (SD = 0.97)	NS
..getting clearly intoxicated ^c	3.23 (SD = 0.88)	3.24 (SD = 0.87)	NS

^aTwo respondents indicated that they were gender diverse (the total of 464 males and 534 females is $n = 998$). ^bTransformed mean controlling for respondent gender, parental status and age. Higher mean indicates more concern. ^cEstimated marginal mean controlling for respondent gender, parental status and age. Higher mean indicates more concern (1 = not at all concerning – 4 = very concerning), all responses ranged from 1 to 4. NS = no significant main effect between mean concern about father and mean concern about mother.

Mean responses and standard deviations for items assessing normative attitudes towards drinking in front of children are reported in Table 4. To test hypothesis 2, which predicted that attitudes towards parental consumption of alcohol in front of children would vary by gender of the parent, with maternal consumption viewed more negatively, a Generalized Linear Model (GLM) repeated measures analysis was conducted. Data were tested for normality and were found to be positively skewed for 'drinking a glass of wine'. These data were transformed using the log linear transformation to satisfy the assumption of normal distribution required for a GLM repeated measures. The within-subjects variables (i.e. repeated measures) were concern about a father (drinking a glass of wine for Model 1, getting slightly intoxicated for Model 2 and getting clearly intoxicated for Model 3) and a mother doing the same for each model. The covariates for all 3 models were entered as dummy variables for parental status, gender and respondent age (18–29 years, 30–44 years or 45–59 years). Effect sizes were also calculated (Cohen's d)² (Cohen 2013).

To test hypothesis 3, which predicted that, among parents, injunctive and descriptive norms regarding alcohol consumption in the presence of young children would vary by age of their own youngest child and self-reported drinking in front of children, an ANCOVA was undertaken for each injunctive and descriptive norm (with each norm being included in a model as a dependent variable; Table 5). Age of youngest child in the house, whether parents drink in front of their children at least weekly, and the interaction between these two variables were included as fixed factors. Gender and age of the parent (18–29 years, 30–44 years or 45–59 years) were included as covariates in the form of dummy variables.

RESULTS

Parental drinking behaviour in front of one's own children

Table 2 shows that more parents who drank in the last year (37.3%) reported drinking a glass of alcohol at least weekly than reported getting slightly intoxicated (20.1%) or clearly intoxicated (8.6%). With all parents as the denominator, 33.9% of parents reported drinking a glass of alcohol each day or a couple of times a week; 18.2% reported getting slightly drunk; and 7.8% indicated getting visibly drunk each

day or a couple of times a week with their children present. As these response categories were not mutually exclusive, overall, 37.5% of parents reported drinking in front of their children on an at least a weekly basis (whether it was a glass, or drinking to intoxication; with 20.4% getting slightly or clearly intoxicated on a weekly basis). Table 2 also shows that fathers were more likely to report drinking more frequently in front of their children than mothers, although effect sizes were small.

Hypothesis 1 predicted that age of the youngest child in the home and status as mother or father will relate to drinking in the home, with the least consumption by mothers of young children. Table 3 shows that, age of the youngest child in the home did not relate to drinking regularly (i.e. at least weekly) in front of children. However, gender did, with fathers being more likely to drink regularly across the three levels (a glass, slightly intoxicated and visibly intoxicated). Age of the parent was significantly associated with getting visibly intoxicated regularly, with older parents being less likely to do so regularly in front of their children than those aged 18–29 years.

Normative attitudes towards drinking in front of children

Hypothesis 2 predicted that attitudes towards parental consumption of alcohol in front of children would vary by gender of the parent, with maternal consumption viewed more negatively. After controlling for participant age, gender and parental status (which did not have any significant effects on the model), there was significantly less concern about fathers, than about mothers drinking a glass of wine in front of their child. The effect size was small.

Mothers and fathers did not differ significantly on concern about either getting slightly or clearly intoxicated in front of the child/ren.

Additionally, although not specifically tested, means appeared to indicate more concern as the hypothetical frequency of parental consumption in front of a 10-year-old child increased.

Associations between child age and reported drinking in front of children and injunctive and descriptive norms

Table 5 shows that most adults agree 'it is okay for a person to have one or two drinks in the presence of small children' but that it is not acceptable '... to get drunk in the presence of small children'. Most adults also agreed that 'most people my

² 0.2 is considered a 'small' effect size, 0.5 represents 'medium' and 0.8 a 'large' effect size.

Table 5. Normative views about drinking in presence of small children (% agree) and mean responses by age of child in the house and drinking by parents in front of children

	Univariate analysis of variance							Overall model		
	Total % agree (adults)	Estimated marginal means and (SE) by age of child in the house (a)			Estimated marginal means and (SE) by drinks a glass of alcohol in front of children at least weekly (b)	P value	Interaction between a and b (P value)		Univariate ANOVA	
		0–5 years	6–17 years	P value						No
Injunctive norms* , in the presence of small children.	(N = 1000)									
1. Alcohol should not be used at all.	40.9	2.90 (0.09)	3.04 (0.07)	NS	2.75 (0.07)	3.19 (0.09)	P < 0.001	NS	F(6,601) = 7.53, P < 0.001	0.07
2. It is okay for a person to have one or two drinks.	63.3	2.11 (0.08)	2.19 (0.06)	NS	2.37 (0.06)	1.93 (0.08)	P < 0.001	NS	F(6,601) = 4.57, P < 0.001	0.04
3. A person should not get drunk.	76.5	1.72 (0.08)	1.82 (0.06)	NS	1.61 (0.06)	1.93 (0.08)	P < 0.001	NS	F(6,601) = 3.38, P = 0.002	0.03
4. If there is a person present who is sober and takes care of the children, a person can get drunk.	23.2 [^]	3.71 (0.09)	3.53 (0.07)	NS	3.87 (0.07)	3.37 (0.09)	P < 0.001	NS	F(6,601) = 9.24, P < 0.001	0.08
Descriptive norms#										
5. Most people my age drink alcohol in front of children occasionally	68.9 ^{^^}	2.03 (0.07)	2.13 (0.05)	NS	2.19 (0.05)	1.98 (0.07)	P = 0.04	F(6,601) = 4.15, P = 0.04, φ_c = 0.007	NS	0.06
6. Most people my age drink alcohol at gatherings where children are present	68.1 ^{^^^}	2.02 (0.07)	2.27 (0.06)	P = 0.01	2.17 (0.05)	2.12 (0.07)	NS	NS	F(6,601) = 4.22, P < 0.001	0.04
7. Most people don't think about the fact that they are role models for children in regard to alcohol consumption	57.2	2.34 (0.08)	2.57 (0.06)	P = 0.04	2.40 (0.08)	2.51 (0.08)	NS	NS	NS	-

* Asked on a scale of 1 (totally agree) to 5 (totally disagree) # asked on a scale of 1 (strongly agree) to 5 (strongly disagree) – all responses ranged from 1 to 5. ^ indicates significant difference between parents (20.4% agree vs 28.8% agree) and non-parents, χ^2 (df = 1) = 8.6, P < 0.05, φ_c = 0.09. ^^ indicates significant difference between parents (70.7% agree vs 65.2% agree) and non-parents, χ^2 (df = 1) = 6.1, P < 0.05, φ_c = 0.08. ^^ indicates significant difference between parents (69.9% agree vs 64.5% agree) and non-parents, χ^2 (df = 1) = 6.3, P < 0.05, φ_c = 0.08. Univariate ANOVA controlled for parental age and gender.

age drink in front of children occasionally' and *'most people my age drink alcohol at gatherings where children are present'*. Parents were more likely to agree that *'most people my age drink alcohol in front of their children occasionally'* and *'most people drink alcohol at gatherings where children are present'* than non-parents.

Hypothesis 3 predicted that, among parents, injunctive and descriptive norms regarding alcohol consumption in the presence of young children would vary by age of their own youngest child and self-reported drinking in front of children. Attitude to consumption in front of small children varied by age of the youngest child for two norms, *'most people my age drink alcohol at gatherings where children are present'* and *'most people don't think about the fact that they are role-models for children in regard to alcohol consumption'*, with parents of younger children being more likely to agree with these statements than parents of older children. Those parents who reported drinking a glass of alcohol in front of children at least weekly were less likely to agree that *'alcohol should not be used at all'* and that *'a person should not get drunk'* in the presence of small children. They were also more likely to agree that *'it is okay for a person to have one or two drinks in the presence of small children'*; *'if there is a person present who is sober and takes care of the children, a person can get drunk'* and *'most people my age drink alcohol in front of children occasionally'*. For this last statement there was a significant interaction effect which revealed that when parents do report drinking a glass of wine in front of their child/ren at least weekly, parents who had a youngest child aged 0–5 years vs 6–17 years, were more likely to agree with the normative statement *'Most people my age drink alcohol in front of children occasionally'*. Conversely, age of youngest child had no bearing on agreement with this statement when parents did not report drinking in front of their children. Table 5 shows the overall model was significant $F(6,601)=6.58$, $P < 0.001$.

DISCUSSION

This study measured the prevalence of and attitudes towards drinking in front of children, and how these may vary for mothers vs fathers. Our results indicated that one in three parents reported that they drank a glass of alcohol each day or a couple of times per week in front of their children. It was concerning that each day or a couple of times a week, nearly one in five parents reported that they got slightly drunk or more talkative and lively than usual, and one in 13 (7.8%) reported getting visibly drunk in front of their children. These results are particularly concerning, for two main reasons. Firstly, these behaviours serve to normalize alcohol consumption for children, which has been linked empirically with earlier initiation of alcohol consumption (Peterson et al. 1994; Hawkins et al. 1997; Getz and Bray 2005; Ryan et al. 2010; Yap et al. 2017) and subsequent drinking habits (Ryan et al. 2010). Further, drinking to drunkenness in and around children is inconsistent with Parenting Guidelines (Ryan et al. 2011) with the suggestion that drunkenness is linked with poor supervision of children and their injury (Crandall et al. 2006) or in some cases maltreatment (Laslett et al. 2012). In total, 37.5% of parents, or about two in five reported drinking to some degree, at least weekly, in front of their

children. Although we did not find the predicted difference in drinking in front of children by age of the youngest child in the home, fathers reportedly drank more frequently than mothers in front of their children. This finding is not surprising given that drinking rates are higher in men than women in Australia (Australian Institute of Health and Welfare 2020), and in fathers than mothers (Bowden 2018). This finding is likely to be generalisable across other populations as drinking rates are higher in males than females in all World Health Organisation regions (World Health Organization 2018) and while there are fewer studies on parental alcohol consumption, studies from the Netherlands (Mares et al. 2011) and Hong Kong (Au et al. 2015) show fathers are more likely to drink alcohol more frequently than mothers. Further, a study from the USA found that children are more likely to grow up with fathers, rather than mothers, with problematic alcohol use (Dube et al. 2001).

We found that both males and females were somewhat more likely to be concerned about a mother than about a father drinking in moderation in front of a 10-year-old child, a result that is consistent with our second hypothesis but conflicts with Scheffels et al. (2016). This may be a reflection of the fact that that expectations of women in Australia, who tend to be the primary caregiver of children, may differ from those in Nordic countries, where family roles may be more equally shared (Baxter and Kane 1995). This finding is also consistent with broader historical and cultural norms; women's drinking in many contexts is more likely to be perceived as problematic than men's (Rolfe et al. 2009; de Visser and McDonnell 2012) and attracts more severe legal consequences, even after controlling for offence characteristics, intoxication increased the severity of assault sentences more for women than men in England and Wales (Lightowlers 2018).

The third hypothesis, that norms regarding acceptability of alcohol consumption in the presence of young children would vary by age of their own youngest child and self-reported consumption in the presence of children, was only partially supported. No significant differences in normative beliefs, including injunctive norms, were found in parents of young vs older children. This result was consistent with the findings of Raitasalo et al. (2011) in Finland. However, as hypothesized, parents with younger children were more likely to agree that *'most people my age drink alcohol at gatherings where children are present'* and *'most people don't think about the fact that they are role models for children in regard to alcohol consumption'*. These findings require further examination, and while alcohol use by parents in front of children is likely to occur predominantly in the home setting, it is also possible that consumption may still be occurring in settings where parents are required to gather with younger children to supervise them. Events may include children's parties or possibly even school events in some jurisdictions, where studies are limited but consumption by parents have previously been found to be commonplace in Victoria, Australia (Ward et al. 2016). Policy on permitting or restricting alcohol consumption by parents in schools differs by each Australian jurisdiction (Ward et al. 2017), ranging from no written policy prohibiting the consumption of alcohol in some jurisdictions (thereby alcohol consumption may be permitted) through to an explicit policy in NSW not allowing the consumption of alcohol by parents in schools (NSW Government 2021).

Notwithstanding the need for replication, results indicate that Australians are generally accepting of ‘moderate’ consumption—one or two drinks in the presence of children—but largely reject being drunk in their presence. This is despite one in five parents (20.4%) confirming they got drunk in front of children on a weekly basis. Moreover, these results suggest that Australians may have less strict views than those in Finland as described by Raitasalo et al. (2011). Whereas 41% of our sample agreed that alcohol should not be used at all in the presence of small children, a much higher proportion (72%) thought this in Finland. Further only three in four (77%) Australians agreed that ‘one should not get drunk in the presence of small children’, compared with near universal agreement (95%) in Finland. In addition, the Norwegians may be slightly more supportive than Australians of drinking a glass of wine in front of children, although they appeared less supportive of getting slightly intoxicated or clearly intoxicated than the Australians (Scheffels et al. 2016). Thus, results indicate a culture in Australia more accepting of alcohol consumption (at least in moderation) in front of children than at least some other countries (Finland and Norway).

Unlike Raitasalo et al. (2011), our study indicated that there was no conflict between parents’ perceptions of alcohol consumption in front of children (in the form of injunctive norms), and behaviour. However, when Raitasalo et al. 2011 investigated injunctive norms and blood alcohol limit, the perceptions aligned with actual consumption, indicating that the Finnish sample may be more inclined to respond in socially desirable ways than the Australian sample, or that the survey for this study was framed to minimize respondent bias. Further, in the Australian sample, those who were more likely to report drinking regularly in the presence of their children, reported less concern about drinking in the presence of children. These findings, particularly the rates of drunkenness around children, taken along with the fact that 57.2% of adults agree that ‘most people don’t think about the fact that they are role models’ for children’s later alcohol consumption, indicates that further study on awareness of how parental alcohol consumption can affect children is warranted. If awareness is low, health promotion efforts aimed at raising awareness (e.g. mass media campaigns) could have potential impact on consumption by parents. As parental perceptions of normative alcohol consumption also influence children’s early alcohol knowledge (Voogt et al. 2019), such efforts may also inform primary prevention strategies.

It is important to acknowledge that the data have some notable limitations. First, responses were collected online from a volunteer sample, which may bias representativeness. Although the relationships identified within the dataset are likely to be reliable, the present survey was not purposively sampled, nor weighted to be generalisable to the population. Some results go against this possible bias; the sample has a similar demographic composition (other than some underrepresentation of the younger age groups, possibly due to the quota applied for parents as discussed in the method section), to the participants in the NDSHS survey, a sample chosen more probabilistically from the Australian population. Secondly, the survey relied on self-report for measurement of alcohol consumption in front of children at three consumption levels (i.e. a glass of alcohol, do you get slightly intoxicated,

and do you get clearly intoxicated), and previous research has confirmed significant levels of underestimation, potentially linked to impression management (Davis et al. 2010). Thirdly, the survey item to assess concern about drinking in front of children was limited to concern about drinking a ‘glass of wine’ in the first instance to allow comparison with the results of Scheffels et al. (2016). Use of this item means that other forms of consumption were not captured. Further, in line with Raitasalo et al. (2011), the measure of perceived norms of drinking in front of small children, did not provide supplementary information to clarify the age of small children, and was thus subject to interpretation by the participant. Fourth, the survey is cross-sectional and therefore it cannot be determined whether attitudes are driving behaviour or vice-versa (e.g. self-reported drinking in front of children could impact a person’s norms, but these norms could also decide a person’s drinking in front of children). Further studies to unpack this are recommended. It is also important to note that these data were collected prior to the COVID-19 pandemic, and may be an underestimation of consumption during lockdowns.

Overall the results demonstrate that Australian adults are likely to have a permissive attitude to moderate alcohol intake in the presence of children, but probably consider ‘excessive’ intake unacceptable. In this study, fathers were more likely to drink alcohol in front of their children than mothers and attitudes tended to be consistent with behaviour; those who were less supportive of drinking in front of children were less likely to do so. Many parents exceeded health guidelines, with one in five drinking to the point of drunkenness in front of children on a weekly basis. Further research should investigate these data at the population level, with sufficient power to determine the sociodemographic characteristics of the parents who are regularly drinking to excess in front of their children, and messaging that might motivate them to reduce their consumption in these circumstances. Given the documented potential negative impacts of drinking in front of children, this study highlights an urgent need for governments to target health promotion prevention campaigns at adults and parents consuming in excess of health guidelines, and the many parents who are consuming alcohol at higher levels in front of their children. Further, it is also important to note that these adults and parents are part of a broader ‘alcogenic’ environment, and the broader public health initiatives recommended by the World Health Organisation (e.g. increased price and reduced accessibility and promotion) (World Health Organization 2017) if implemented, may go a long way to reducing both parental consumption and the normalization of overconsumption for the next generation.

ACKNOWLEDGEMENTS

We would like to thank the survey participants, the SAHMRI Health Policy Centre for funding the survey and Square Holes and Research Now for administering the survey. We would also like to thank Dr Joanne Dono for providing consultation on statistical analyses and Dr Ashlea Bartram and Nathan Harrison for edits to some subsections.

CONFLICT OF INTEREST STATEMENT

None declared.

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