

Parental awareness and attitudes about food advertising to children on Australian television

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The prevalence of overweight and obesity among Australian children and adolescents is escalating with 25% of New South Wales school students being overweight or obese.^{1,2} This is of concern given the associated increased risk of chronic disease.³ There is evidence that the increasing prevalence is the result of the consumption of an energy-dense diet.^{4,5} Research shows children who watch more television consume higher energy intakes and are more likely to be obese.⁶⁻⁹ This may be partly because television food advertising has an effect on children's food preferences and choices, purchase requests and eventual consumption.^{7,10-12}

Of concern then is that around 80% of the food advertisements on Australian commercial television are for unhealthy foods and there are significantly more such advertisements during children's viewing times than outside

these times.¹³⁻¹⁵ Children also show increasing influence over household food purchases with a positive relationship between hours of television watched by children and the number of advertised foods found in the home.^{7,16} Further, the influence of television food advertising on children's consumption behaviour is likely mediated by parental characteristics and the family environment.^{6,17,18}

The current regulation of food advertising may not be adequate in supporting parents to reduce children's exposure to marketing of unhealthy food products. The Children's Television Standards (CTS) place general restrictions on the content of advertising to children with only one provision dealing specifically with food advertisements in certain timeslots (CTS 19.6).¹⁹ The system also relies on industry self-regulation and complaints by the community to monitor compliance with the standards, and evidence

Abstract

Objective: To assess parents' concern regarding television food advertising to children and the marketing methods used, their awareness of existing regulations and support for strengthening restrictions, and to determine whether these factors differ across sociodemographic groups.

Methods: A randomly selected sample of 400 parents of children under 14 years in all Australian States and Territories completed the cross-sectional telephone survey in March 2007. Data were weighted by metropolitan and regional population proportions.

Results: Parents were concerned about unhealthy food advertising to children (67.3%), use of popular personalities (67.7%), toys (76.4%), and advertising volume (79.7%). Older parents, of high socioeconomic status (SES), with fewer household televisions were more likely to be concerned. Only 47.4% of parents were aware of current regulations and those with a tertiary education were more likely to be aware: odds ratio (OR) 2.96 (95% CI: 1.55-5.65). Parents supported a change from self-regulation (92.8%), a ban on unhealthy food advertising to children (86.8%) and, to a lesser extent, a ban on all food advertising (37.3%).

Conclusions and implications: There was widespread parental concern about food advertising and strong support for tighter restrictions. Given that the existing regulations rely on complaints and awareness is low, particularly among parents with lower education levels, a system of external monitoring and enforcement is essential. Clearly more effective regulations are needed to protect children and parental support for this is high.

Keywords: children, food advertising, obesity, television.

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suggests the system is failing to prevent breaches and to enforce compliance.^{13,20,21} Despite this, there is little recent quantitative evidence regarding parental perceptions of television food advertising to children and awareness of current regulation of the practice, nationally.

Recent qualitative studies have investigated parents' perceptions of television food advertising to children. An Australian study of 21 mothers of young children suggested they perceived children's food preferences and food consumption were negatively impacted by advertising techniques used to market unhealthy food products to them.²² In particular, offers of toys and giveaways were seen to drive greater demand for unhealthy food. Similarly, an Australian study of 32 parents of primary school children suggested they perceived that television food advertising impacted negatively on children's food preferences and choices and they expressed high levels of concern.²³ Parents also suggested that current regulations were not being enforced and questioned their adequacy and usefulness in protecting children. In general, parents supported the introduction of stronger restrictions, in particular, restrictions on food advertising during children's viewing times.

Quantitative studies suggest that community opinion is evolving over time. An earlier survey of parental attitudes toward food advertising to children in 2002 found that half of parents (54.2%) disagreed that food advertising had an influence on their child's eating habits, and only one in four believed that it did.²⁴ On the other hand, a 2004 government health survey of 2000 randomly selected households found 88.6% agreed unhealthy food advertisements cause children to persuade their parents to purchase the products, and 94.2% agreed that the use of toys and giveaways associated with a food product influences children to want the product.²⁵ In terms of support for regulation of food marketing to children, a recent survey in 2006 indicated 82% of the community supported governments regulating the way food and drink is advertised and marketed to children, while only 13% were against.²⁶ International surveys indicate similar patterns of concern and support for stronger regulations. A UK survey in 2006 of 815 parents of children under 17 showed 79% supported a ban on unhealthy food advertising during times when children watch television.²⁷

Given the rising rates of childhood obesity and pressure on parents to monitor and regulate children's consumption behaviour, television advertising for unhealthy food products designed to appeal to children has been a recent focus of public debate. Whether the issue is of concern to parents across all sections of the community or confined to those of particular sociodemographic groups is unclear. Research has suggested that higher parental education is associated with greater concern about the amount of television children watch.²⁸ However, sociodemographic indicators of concern about food advertising have been equivocal. There is some evidence that concern about the nutritional quality of food products advertised to children is positively associated with parental education attainment.²⁹ On the other hand, early research found individual parent characteristics such as age and education, and family characteristics such as age of the oldest child and

family size, failed to predict parental concern about child-directed advertising.³⁰ Given the amount of recent news coverage of the issue of food advertising to children and debate about policy initiatives aimed at curbing the rising rates of childhood obesity in Australia, this issue requires re-examination.

Objectives

This survey was designed to assess parental concern about unhealthy food advertising on television as well as the methods used by advertisers to market these products to children. In the context of the review of regulations taking place, the survey further investigated parents' awareness of existing regulations and support for strengthening of regulations to provide greater protection to children. Finally, parental concern about television food advertising to children and support for strengthening of regulations was investigated across different sociodemographic groups.

Method

Sampling

A randomly selected sample of 400 parents of one or more children aged 0 to 13 years residing in private households in metropolitan and regional areas across all Australian States and Territories were surveyed.

Measures

The survey questionnaire was developed by the research team. A pilot test of 38 interviews led to minor refinements. Parents were asked about their level of concern about unhealthy food advertising at times when children watch television (see Box 1). Those who indicated they were at least 'a little' concerned were asked about their level of concern regarding specific advertising techniques. Parents were also asked about their awareness of current regulations on television food advertising to children, after which they were informed about the nature of the regulations. Their support for the introduction of stronger restrictions overall and a change from self-regulation to external monitoring and enforcement and the introduction of specific regulations were also investigated. The questions were based broadly on those utilised by local and international surveys of parents on food advertising.^{26,27}

The sociodemographic characteristics measured were age and sex of parent, number of children, number of household televisions, Index of Relative Socio-Economic Advantage/Disadvantage (IRSAD) and education level. Of these, SES was determined according to IRSAD and education level. The IRSAD is one of the Socio-Economic Indices for Areas and is derived from area attributes such as income, educational attainment, employment status and occupation. Each participant was assigned an IRSAD corresponding to their postcode and index values were divided into quartiles (low, lower middle, upper middle, high) based on national cut-offs.³¹ Education was coded into four categories: tertiary degree/diploma, vocational qualification, completed secondary school, and less than secondary school.

Procedure

The survey was conducted in March 2007 by the Social Research Centre, using Computer Assisted Telephone Interviewing (CATI) and a Random Digit Dialling (RDD) sample frame for all of Australia. The parent who identified as the primary care giver for the children in the household under 14 was interviewed. Of the 27% of households identified as in-scope, the overall response rate was 47.8% and the average interview length was 10 minutes. A weighting was applied to data adjusted to capital city and rest of state population proportions using 2001 Census data,³² to ensure the survey estimates reflected the geographic distribution of the Australian population. The data were not weighted by age or sex as there are no known population parameters of primary carers of children aged 0 to 13 years.

Data analyses

The data were analysed in SPSS statistical software (version 14.0 for Windows)³³ using analyses of variance, bivariate cross-tabulations, and multiple logistic regression. A significance level of $p < 0.05$ was accepted throughout. Multiple logistic regression analysis was used for variables that showed significant bivariate associations.

Results

Sociodemographic characteristics

As shown in Table 1, the majority of the respondent sample who answered the survey as the primary caregiver of the children in the household under 14, was female (79.3%). The sample was skewed towards higher SES with 41% being in the highest IRSAD quartile and a similar proportion (43%) having completed tertiary education (compared to 18.4% for the general population).³⁴ The respondents ranged in age from 18 to 65 years and were surveyed from both metropolitan (64%) and regional (36%) areas in all Australian States and Territories. There were, on average, two children under 14 years and three televisions per household.

Concern about television food advertising to children

About two-thirds of respondents were concerned about the advertising of unhealthy food products during children's television viewing times (Table 2). Among those who indicated they were at least 'a little' concerned, concern regarding particular methods used to market unhealthy food products to children was explored. Parents were somewhat or very concerned about the use of popular personalities or characters (67.7%), free toys or gifts with products (76.4%), and the amount of television advertising of unhealthy food shown at times when children watch television (79.7%). In multivariate analysis, older parents, of high IRSAD, and those with fewer televisions in the household appeared to be more concerned about unhealthy food advertising on television.

Table 1: Sociodemographic characteristics of parents.

Variable	Range	n	M (sd)
Age of parent	18 to 65	399	38 (7)
Number of children	1 to 7	399	2 (1)
Number of televisions	1 to 9	396	3 (1)
			%
Sex	Male	83	20.7
	Female	317	79.3
Education	Tertiary	170	42.9
	Vocational	67	17.0
	Completed secondary	86	21.7
	Less than secondary	73	18.4
IRSAD ^a	High	156	40.8
	Upper middle	121	31.5
	Lower middle	62	16.2
	Low	44	11.5

Notes:
 (a) High IRSAD indicates greater advantage, low IRSAD indicates greater disadvantage.

Box 1: Survey measures	
Question	Response options
To what extent, if at all, are you concerned about the advertising of unhealthy food products at times when children watch television (TV)?	Not at all concerned/A little concerned/Somewhat concerned/Very concerned
To what extent, if at all, are you concerned about the use of popular personalities or characters to promote unhealthy foods to children?	As above
To what extent, if at all, are you concerned about food advertising that promotes free toys or gifts with products?	As above
To what extent, if at all, are you concerned about the amount of TV advertising of unhealthy food at times when children watch TV?	As above
Regulations are currently in place dealing with TV advertising to children. Did you know that these sorts of regulations existed?	Yes/ No
Do you agree or disagree that the government should introduce stronger restrictions on food advertising at times when children watch television?	Strongly agree/ Agree/ Neither agree nor disagree/ Disagree/ Strongly disagree
At the moment action is only taken against breaches of the advertising regulations when people make a formal complaint. Would you support or oppose the system being changed so that action is taken against breaches any time they occur?	Strongly support/ Support/ Neither support or oppose/ Oppose/ Strongly oppose
Please tell me whether you support or oppose a ban on advertising of unhealthy foods at times when children watch TV	As above
Please tell me whether you support or oppose a ban on all food advertising at times when children watch TV	As above

Awareness and attitudes about regulations

Less than half of parents of children under 14 were aware that regulations currently exist for television advertising to children (Table 3). In multivariate analysis, those with a tertiary education were nearly three times as likely to be aware of current regulations as those who had not completed secondary school (OR 2.96; 95% CI: 1.55-5.65).

Almost all parents (92.8%) agreed that the government should introduce stronger restrictions on food advertising shown at times when children watch television and that the system should be changed so that action is taken against breaches of the regulations any time they occur, regardless of whether a formal complaint is made. Most (86.8%) supported a ban on unhealthy food advertising during children's viewing times whereas only 37.3% supported a ban on all food advertising during these times. In multivariate analysis, older parents, those with fewer household televisions, and those with a higher educational attainment, were more likely to support a total ban on food advertising to children.

Discussion

The survey investigated Australian parents' concern about unhealthy food advertising on television and the methods employed to market these products to children. Awareness of

existing regulations and support for stronger restrictions were also examined in the context of the current review of regulations. There was widespread parental concern about food advertising and strong support for tighter restrictions. However, less than half of parents were aware of current regulations and awareness was almost three times as likely among those with a tertiary level of education.

Results suggest that parental concern about television food advertising to children is not confined to a small section of the population, but is widespread. Two-thirds of parents were at least somewhat concerned about unhealthy food advertising shown during children's viewing times. Their concern is supported by the high volume of advertisements for unhealthy foods on Australian commercial television.¹³⁻¹⁵ Older parents of high IRSAD, and with fewer televisions in the household, were more likely to be concerned. Research suggests SES is negatively associated with children's television viewing time, and that this relationship is (in part) mediated by the number of televisions in the household.¹⁸ Parents in this sociodemographic group may limit the number of televisions in the household for a number of reasons, most likely with a view to reducing children's sedentary behaviour but thereby also reducing their exposure to unhealthy food advertising. Greater concern about the nutritional quality of food products advertised to children has also been associated with higher SES.²⁹

Table 2: Level of concern among parents about methods of food advertising to children: logistic regression analyses (N=400).

	Unhealthy food advertising to children (n=398)			Use of popular personalities (n=352)		Use of toys or giveaways (n=353)		Use of frequent advertising (n=349)	
	Somewhat /Very	A little/ Not at all	OR (CI)	Somewhat /Very	A little/ Not at all	Somewhat /Very	A little/ Not at all	Somewhat /Very	A little/ Not at all
Overall %	67.3	32.7		67.7	32.3	76.4	23.6	79.8	20.2
	M(sd)	M(sd)		M(sd)	M(sd)	M(sd)	M(sd)	M(sd)	M(sd)
Age of parent	38.4 (6.6)	35.7(7.2)	1.08 (1.04-1.12) ^b	38.4 (6.9)	36.7 (6.8)	38.2 (6.8)	36.6 (7.3)	38.0 (6.8)	36.7 (7.3)
Number of Children	1.9 (0.9)	2.0(0.9)	0.90 (0.70-1.16)	1.8 (0.9)	2.0 (0.9)	1.9 (0.9)	1.9 (0.9)	1.9 (0.9)	1.8 (0.7)
Number of Televisions	3.2 (1.0)	3.4(1.2)	0.75 (0.60-0.93) ^b	3.2 (1.1)	3.2 (1.0)	3.1 (1.0)	3.2 (1.1)	3.1 (1.0)	3.2 (1.1)
	%	%		%	%	%	%	%	%
Sex									
Male	63.4	36.6	1.0	65.8	34.2	78.1	21.9	78.1	21.9
Female	68.4	31.6	1.57 (0.89,2.79)	68.3	31.7	76.0	24.0	80.1	19.9
Education									
Tertiary	74.1	25.9	1.0	72.9	27.1	80.8	19.2	81.0	19.0
Vocational	71.6	28.4	1.19 (0.60,2.37)	62.7	37.3	79.7	20.3	77.6	22.4
Completed secondary	60.0	40.0	0.81 (0.44,1.50)	67.6	32.4	70.8	29.2	80.3	19.7
Less than secondary	56.2	43.8	0.67 (0.35,1.29)	60.3	39.7	68.8	31.3	78.1	21.9
IRSAD									
High	76.1	23.9	1.0	73.2	26.8	84.1	15.9	83.3	16.7
Upper middle	60.3	39.7	0.54 (0.31,0.94) ^a	67.0	33.0	74.8	25.2	78.3	21.7
Lower middle	62.9	37.1	0.65 (0.32,1.31)	62.3	37.7	63.5	36.5	78.4	21.6
Low	63.6	36.4	0.58 (0.27,1.27)	63.4	36.6	73.2	26.8	73.2	26.8

Notes:

(a) $p < 0.05$

(b) $p < 0.01$

Parents were also concerned about the specific methods used to market unhealthy food to children, including use of popular personalities or characters and offers of toys, with similar concern shown across different sociodemographic groups. These findings extend those of qualitative studies suggesting the use of promotional strategies to appeal to children is of concern to parents.^{22,23} Parental concern is warranted given toys and giveaways are a frequently used food advertising strategy and one-fifth of food advertisements shown on Australian television during children's programs offered a premium.^{21,35} The vast majority of the community (94.2%) perceive that the use of toys and giveaways influence children to want associated food products.²⁵ Indeed, research suggests the use of characters and premium offers is associated with increased product recognition among children and positive attitudes towards advertised products.³⁶⁻³⁸ A recent survey found that 85% of Australian consumers support government regulation of these strategies used to market unhealthy food to children.²⁶

Of particular concern to parents was the amount of unhealthy food advertising shown during children's viewing times (79.7%). This figure quantified findings from qualitative research suggesting that parents are concerned about the number and repetition of food

advertisements aimed at children.²³ Indeed, research has shown the frequency of such advertisements peaks during children's viewing times.¹³⁻¹⁵ There is evidence to suggest that repetition of food advertisements influences children's attitudes and purchase intentions.³⁹ Current regulations on the amount of advertising shown apply only to children's programs that meet certain criteria, and these are often not the ones shown during children's peak viewing times or watched by most children.⁴⁰

Current regulations dealing with television advertising to children require complaints to be made by the community to prompt investigation and action on breaches. It is of concern then that less than half of Australian parents are aware of the current regulatory system. Those without a tertiary education were less likely to be aware of the regulations, a finding underscored by their complexity. The advertising industry groups argue the community is not concerned about children's advertising, as few complaints are received by the Advertising Standards Bureau in relation to the Advertising to Children code⁴¹ but, investigations show that breaches are common.^{13,20,21} These findings suggest that the current regulations are ineffective, given the lack of awareness and that the onus rests with the community to ensure they are enforced.

Table 3: Awareness of current regulations and support for regulatory options among parents: logistic regression analyses (N=400).

	Awareness of current regulations (n=398)			External monitoring (n=387)		A ban on unhealthy food ads (n=396)		A ban on all food ads (n=396)		
	Yes	No	OR (CI)	Support	Oppose	Support	Oppose	Support	Oppose	OR (CI)
Overall %	47.4	52.6		92.8	7.2	86.8	13.2	37.3	62.7	
	M (sd)	M (sd)		M (sd)	M (sd)	M (sd)	M (sd)	M (sd)	M (sd)	
Age of parent	38.2 (6.1)	36.9 (7.5)	0.97 (0.94, 1.00) ^a	37.5 (6.7)	37.3 (9.6)	37.5 (6.9)	37.7 (6.8)	38.6 (6.7)	36.9 (7.0)	1.05 (1.02, 1.09) ^c
Number of Children	1.9 (0.9)	1.9 (1.0)	0.95 (0.75, 1.19)	1.9 (0.9)	2.2 (1.2)	1.9 (0.9)	1.9 (0.9)	1.9 (1.0)	1.9 (0.9)	1.04 (0.82, 1.31)
Number of Televisions	3.2 (1.1)	3.2 (1.1)	0.96 (0.79, 1.18)	3.2 (1.1)	3.6 (1.3)	3.2 (1.1)	3.4 (1.4)	3.1 (1.1)	3.3 (1.1)	0.77 (0.62, 0.95) ^b
	%	%		%	%	%	%	%	%	
Sex										
Male	48.8	51.2	1.0	93.7	6.3	86.6	13.4	26.5	73.5	1.0
Female	46.8	53.2	0.99 (0.58, 1.69)	92.5	7.5	86.9	13.1	40.2	59.8	2.10 (1.18, 3.74) ^b
Education										
Tertiary	57.1	42.9	1.0	93.3	6.7	87.6	12.4	33.9	66.1	1.0
Vocational	53.7	46.3	1.08 (0.59, 1.98)	92.5	7.5	85.1	14.9	38.8	61.2	1.50 (0.79, 2.84)
Completed secondary	37.2	62.8	2.15 (1.21, 3.82) ^c	90.5	9.5	82.1	17.9	35.3	64.7	1.13 (0.62, 2.03)
Less than secondary	31.5	68.5	2.96 (1.55, 5.65) ^c	94.1	5.9	93.1	6.9	45.1	54.9	1.95 (1.03, 3.71) ^b
IRSAD										
High	53.2	46.8	1.0	92.8	7.2	89.0	11.0	37.7	62.3	1.0
Upper middle	46.3	53.7	1.13 (0.68, 1.86)	93.0	7.0	85.0	15.0	37.2	62.8	0.96 (0.57, 1.62)
Lower middle	33.9	66.1	1.74 (0.90, 3.37)	93.4	6.6	88.5	11.5	38.3	61.7	0.90 (0.46, 1.76)
Low	45.5	54.5	0.95 (0.46, 1.97)	90.9	9.1	83.7	16.3	39.5	60.5	0.88 (0.42, 1.86)

Notes:
 (a) p<0.10
 (b) p<0.05
 (c) p<0.01

Further, when informed of the nature of the regulations, almost all parents supported the system being changed so that action is taken against breaches any time they occur, regardless of whether a formal complaint is made. This finding extends and quantifies the results of a qualitative study which suggested that parents were concerned about the lack of enforcement of current regulations.²³ In addition to changes to the workings of the system, the vast majority of parents (86.8%) supported the introduction of a ban on unhealthy food advertising at times when children watch television and support was consistent across sociodemographic groups. Indeed, a recent study which applied different regulatory scenarios to children's potential television food advertising exposure indicated the restriction of all unhealthy food advertisements during the major viewing period (between 07:00 and 20:30 daily) was the most effective regulatory scenario, reducing exposure to unhealthy food advertisements by 80%.⁴²

In addition, just over one-third of parents supported a tougher ban on all food advertising during children's viewing times. Older mothers, with a higher education level, and fewer televisions in the household, were more likely to support such a ban. This suggests a similar pattern of sociodemographic characteristics associated with both concern about food advertising to children and support for stronger regulation, and provides further substantiation for a mediating influence of the family environment on the impact of television food advertising on children's consumption behaviour.^{6,17,18,43,44} Specifically, higher SES families are more likely to both support external restrictions and to place greater limitations on children's access to television, and therefore exposure to food advertising. This suggests that making parents solely responsible for limiting children's exposure to unhealthy food advertising will not adequately address the issue across all sociodemographic groups. Given advertising prompts requests for unhealthy food products and undermines parental authority, sometimes creating family conflict,^{22,45} it underscores the importance of stronger food advertising regulations to support parents in reducing children's exposure.

Some limitations must be taken into account in interpreting these results. In comparison with Census data, the sample comprised a greater proportion of respondents who had completed tertiary education (42.9% versus 18.4%). This suggests a self-selection bias in responding to the survey and may be the result of greater engagement among this sub-group of parents on the issue of television food advertising to children. It is of note then that differences were detected by education level and suggest that these effects may be larger than the statistical significance at which they are reported here. Considered in combination with the relatively low response rate (47.8%) and the difficulty in accurately quantifying the sampling frame, generalisability of the findings is diminished. Finally, the cross-sectional survey design precludes causal inferences being drawn.

Conclusions

The study showed that Australian parents, particularly older parents of high SES, have a high level of concern about unhealthy television food advertising to children. Parents are also concerned about the methods used to market unhealthy food to children. Moreover, awareness of existing regulations and that they rely on complaints by the community before action is taken against breaches, is low, particularly among those who are less educated. Indeed, the vast majority of parents support more effective monitoring and enforcement. A large proportion also support the introduction of stronger regulations, in particular, a ban on advertising of unhealthy foods at times when children watch television, and to a lesser extent on all food advertising at these times.

Implications

Given that the current system relies on industry self-regulation and complaints by the community to enforce compliance, and that awareness is low overall and particularly among less educated parents, the current review of Children's Television Standards should consider strengthening the existing regulations to provide external monitoring. Parental support for such an approach is universally high. Based on the widespread support for restrictions on advertising of unhealthy foods during children's peak viewing times, it is also recommended that government regulations that protect children from high levels and persuasive methods for advertising unhealthy foods be implemented as a matter of urgency.

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