

# Are young adults' discussions of public health nutrition policies associated with common food industry discourses? A qualitative pilot study

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Unhealthy diets account for a large proportion of increased risk for chronic disease. Unhealthy diets are responsible for 11 million premature deaths annually worldwide and contribute significantly to population-level morbidity.<sup>1,2</sup> One aspect of unhealthy diets is the consumption of energy-dense, nutrient-poor (EDNP) foods and drinks, defined as products high in salt, sugar and/or fats with low nutrient density.<sup>3</sup> These products, sometimes referred to as 'discretionary', 'junk' or 'convenience' foods, tend to be widely available, frequently marketed and inexpensive for consumers to purchase.<sup>4,5</sup>

In order to improve diet and address the growing global impact of chronic disease, the World Health Organization<sup>6</sup> recommends a number of 'best buy' public health nutrition policies, such as reducing salt levels in the food supply and implementing taxes on EDNP products like sugar-sweetened beverages (SSBs). There are also other public health nutrition policies that governments can implement to encourage a reduction in the consumption of unhealthy foods and improve population diet; these policies include changes to the food environment and restrictions on advertising for children.<sup>4,7,8</sup>

While some of these public health nutrition policies are being adopted around the world, many remain contentious. Unhealthy commodity industries (UCIs) have demonstrated major resistance towards greater regulation by governments.<sup>9</sup>

## Abstract

**Objective:** Unhealthy diets are a key risk factor for chronic disease, with young adults (18–30 years old) in high-income countries like Australia and the UK particularly at risk. Improved public health nutrition policies can help address unhealthy diets in the population, but many of the more regulatory policies are opposed by food industry groups. This research explores how young adults in Australia and the UK discuss a range of topical public health nutrition policies and analyses whether and how their views may be associated with food industry discourses.

**Methods:** Eight focus groups were held in Sydney, Australia, and Glasgow, UK, with a total of thirty young adults participating. A deliberative-style method was used in the focus groups to generate discussion about six public health nutrition policies, such as taxation of sugar-sweetened beverages and restrictions on advertising of less-healthy foods. Discourse analysis was used to examine participants' discussions.

**Results:** Twenty discourse codes were developed iteratively from the focus group data. These were thematically linked with nine food industry discourses found in the peer-reviewed literature, including industry self-regulation, personal responsibility, corporate social responsibility and challenging nutrition science.

**Conclusions:** These results demonstrate there is an association between common food industry discourses and some young adults' views about public health nutrition policies.

**Implications for public health:** Identifying, engaging with and responding to common industry discourses is a priority in order to build greater public support and acceptability of policies that will improve diet and prevent chronic disease.

**Key words:** young adults, public health nutrition, policy, discourse analysis, food industry

This is particularly the case for the major multinational food industry players that sell highly profitable EDNP food and drink products.<sup>10</sup> These multinational food industry groups are commonly referred to as 'Big Food' and represent the majority of global food sales in countries such as Australia.<sup>11</sup> The peer-reviewed literature on the corporate or commercial determinants of health has highlighted how commodity industries shape

regulation and exert political power.<sup>12–14</sup> This literature also highlights that UCIs are part of a broader neoliberal paradigm, which shapes the relationship between society, state and market.<sup>15</sup>

The political power of corporations and industries manifests itself visibly and invisibly through actions such as shaping dominant narratives and setting rules and regulations.<sup>12</sup> 'Big Food', or the global food industry, is a UCI

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that uses specific tactics to resist public health policies and regulation.<sup>16</sup> One tactic is to influence public discourse – the interchange of ideas between people, communicated through written texts as well as dialogue and conversation.<sup>17</sup> Discourse can also be seen as an ‘articulatory practice’ that involves the exercise of political power and hegemony – the ways in which a regime, policy or practice secures compliance and organises social relations.<sup>18</sup> Analysing how specific discourses are used by UCIs is therefore crucial to understanding their political power, given that UCIs like the food industry use particular information and messaging to promote their aims.<sup>19</sup>

There is growing evidence that UCIs have learned from the denormalisation of tobacco products and are deploying a range of tactics against governments implementing more regulatory measures.<sup>20</sup> Many of the discourses used by the food industry were first utilised by the tobacco industry, including a focus on personal responsibility<sup>21,22</sup> and using corporate social responsibility (CSR) messaging.<sup>20,23</sup> Other discourses commonly used by the food industry include challenging the science about nutrition,<sup>24</sup> pivoting to a focus on physical activity or ‘balance’,<sup>25</sup> creating uncertainty and undermining public health consensus,<sup>9</sup> promoting industry self-regulation,<sup>16,26,27</sup> and implying that the food industry needs to be part of the solution for health problems like obesity and poor diet.<sup>19,22</sup>

The current evidence on food industry discourses is empirical, for example, identifying and quantifying the types of discourses that are used in formal documents, such as reports and publicly available information<sup>19,23</sup> and industry-funded research,<sup>28</sup> as well as informal documents such as emails and correspondence.<sup>29</sup> How industry messages are ‘framed’ in the media has also been the subject of analysis.<sup>22,30,31</sup> A much smaller body of qualitative evidence has explored people’s interpretation of these discourses, such as positive and negative views of CSR tactics of ‘Big Food’ brands, based on interviews with parents and children.<sup>32</sup> However, little evidence exists about whether these discourses may influence opinions and attitudes about the role of government in addressing poor diet, and if these same discourses are used by members of the community to justify views about specific public health nutrition policies. This is important, as some research

on discourse in obesity prevention and regulation has demonstrated that people’s views are produced through engagement and connection with broader discourses about the issue.<sup>33,34</sup>

One population group at particular risk of poor diet is young adults in high-income countries such as Australia and the UK. This group tends to have unhealthy dietary patterns such as high intake of EDNP foods.<sup>35–37</sup> Young adults are also a target advertising market for EDNP food and drink companies.<sup>38</sup> Restrictions on pricing, availability and marketing of EDNP foods and drinks are therefore important public health nutrition policies for this population group. Previous studies have looked at the barriers and enablers for healthy diets in young adults<sup>35</sup> and the attitudes of young adults in Australia and the UK in relation to food choices.<sup>39</sup> This research suggests that young adult participants feel strongly about the importance of education and making the ‘right’ food choices as adults. Other research suggests a dominant view of the importance of individual responsibility for health and a preference for individual-focused measures,<sup>40</sup> although some have also found there is a shared role for government in promoting health.<sup>41</sup>

This study aimed to explore young adults’ views and opinions of specific public health nutrition policies and analyse whether and how their discussions may be associated with discourses used by the food industry.

## Methods

### Choice of methodology

Focus groups were chosen as the methodology for this research study. Acceptability and public opinion of policies are created through encounters with other people and viewpoints, which helps people to make sense of that policy, idea or issue.<sup>42</sup> Focus groups are one way in which participants can engage with others about a specific topic, for example, discussing their views about tobacco control policies.<sup>43</sup> The discursive interaction between participants is of primary importance, as it can result in novel findings about the topic and enable an exploration of which discourses develop, how and why. Focus groups are therefore an important methodology through which to understand the social construction of knowledge and practice, including how these are negotiated between individuals.<sup>44</sup>

### Recruitment and data collection

Young adults aged 18–30 years living in Sydney, Australia, and Glasgow, Scotland (UK), were recruited via targeted digital advertising on social media sites and word of mouth to participate in a one-hour focus group. Advertising of the study identified the primary aims of the research, which were to explore and discuss the food choices and views of young adults. This study is part of a larger study exploring young adults, dietary behaviours and chronic disease prevention.<sup>39</sup> Participants completed an online screening questionnaire, providing demographic information, contact details and written consent to be contacted again by the researchers to discuss participating in a focus group. Participants who had completed the screening were then purposively selected by the study authors to participate in a focus group. Participation in a focus group was based on availability and demographic characteristics such as age and gender, with the authors aiming to have a mix of both age and gender for each focus group where possible. A total of 190 young adults completed the screening questionnaire, of which 66 were purposively selected for focus group participation. In all, thirty young adults aged between 18 and 30 years of age participated in one of eight focus groups, three in Sydney, Australia, and five in Glasgow, UK, held between August and October 2017 (Table 1). Participants who were selected but who did not participate in a focus group were unavailable at that time or no longer interested in the study.

### Focus groups facilitation

In-person, face-to-face focus groups were facilitated by the primary author, a young adult woman with a postgraduate background in public health and experience of focus group facilitation from other qualitative research projects. The aim was for peer-based discussion groups run in a semi-structured, conversational way. Focus groups were conducted in person in two sites, Sydney and Glasgow, with the groups run in the evenings in a centralised location of a university student union bar (Glasgow) and a local pub close to a major university campus (Sydney). These times and locations were chosen to fit with the participants’ schedules. The study was approved by human research ethics committees at both the University of Sydney and the University of Glasgow.

Participants in the focus groups gave written and verbal consent to participate in the study. Written consent forms were scanned and uploaded to a secure research data storage facility at the University of Sydney. Focus groups were recorded using a small audio recorder, with a backup recording on an Apple iPhone belonging to the primary author in case of technical or audio failure. The files from the audio recorder were uploaded after each focus group in an encrypted format to a secure research data drive hosted by the University of Sydney, with the physical recorder stored securely by the researchers, as per the ethics requirements. After checking for the sound quality of the primary recordings, the backup recordings on the iPhone were permanently and securely destroyed.

The primary author was the only researcher present during the focus groups and made field notes during and after each session. Focus groups were held for approximately 60 minutes each. The audio recordings of the focus groups were transcribed verbatim by an external company. These transcripts were checked twice by the primary author for accuracy. After the transcripts had been completed and checked for accuracy, the primary author replaced all the names with pseudonyms to de-identify the participants, with the metadata of original names and contact details stored in an encrypted format on a secure research data drive hosted by the University of Sydney. Transcripts were not provided to participants for comment or correction. As per the ethics approvals from both universities, de-identified transcripts are not publicly available to other researchers.

### Focus group questions

The authors developed the focus group questions in consultation with a small convenience sample of young adults prior to the focus groups. Six questions were covered in the focus groups, which first explored food choices and decisions, then asked for participants' views about specific public health nutrition policies. A deliberative-style method was used to ascertain these views. This type of method has been used in other studies including tobacco control<sup>43</sup> and childhood obesity.<sup>45</sup> In this study, a set of six Likert-scale questions were developed as a prompt for deliberation, with responses ranging from 1 'Terrible idea' to 5 'Great idea', with 6 'No opinion' (Supplementary file S1). The facilitator explained the prompt, with

**Table 1: Characteristics of focus group participants.**

	Sydney	Glasgow	Total
<b>Gender</b>			
Female	7 (50%)	11 (69%)	18 (60%)
Male	7 (50%)	5 (31%)	12 (40%)
<b>Age range (years)</b>	19 – 29	19 – 29	-
<b>Average age (years)</b>	25	24	-
<b>Age group</b>			
18 – 24 years	5 (36%)	7 (44%)	12 (40%)
25 – 30 years	9 (64%)	9 (56%)	18 (60%)
<b>Employment / education status</b>			
Employed full time	5 (36%)	6 (37%)	11 (37%)
Employed part time	-	3 (19%)	3 (10%)
University or college student	8 (57%)	7 (44%)	15 (50%)
Other	1 (7%)	-	1 (3%)
<b>Highest level of education completed</b>			
High school – Year 10 or 4th form	-	-	-
High school – Year 12 or 6th form	2 (14%)	4 (25%)	6 (20%)
Bachelor degree or diploma	9 (64%)	10 (63%)	19 (63%)
Masters degree or other postgraduate degree	3 (22%)	2 (12%)	5 (17%)
<b>SES of home suburb<sup>1</sup></b>			
Average	7.57	6.15	-
Median	8.50	7.00	-
Fluent (native) English speakers	11 (79%)	15 (94%)	26 (87%)
<b>Total</b>	14	16	30

Note:

a: For SES of home suburb for Glasgow participants, we cross-referenced the home suburb postcode given with the Scottish Index of Multiple Deprivation 2016 Deciles, where 1 is most deprived and 10 is least deprived (see <http://simd.scot/2016>). For Sydney participants' SES, we cross-referenced the home suburb given with the ABS' State Suburb (SSC) Index of Relative Socio-economic Advantage & Disadvantage NSW, a data cube of the 2011 Socio-Economic Indexes for Areas (SEIFA). We used the decile ranking within NSW which is a SES decile score of 1 to 10, where 1 is most deprived and 10 is least deprived (see <http://www.abs.gov.au/ausstats/abs@.nsf/mf/2033.0.55.001>).

copies of the prompt and pens handed out to each participant before the exercise. The facilitator then asked each participant to individually rate all of the policies using this scale. The participants completed this exercise, then were asked to share their reasoning during a group discussion of each of the policies so that other participants knew how they had scored the policy. The six policies discussed were developed from four of the ten areas in the NOURISHING framework<sup>8</sup> (Table 2).

The policy examples were chosen for two reasons: their relevance to the existing literature on young adults and food choices, and what was already occurring at a policy level in Australia and the UK. For example: the removal of sugary drinks from adult settings like universities<sup>46,47</sup> and hospitals and health services,<sup>48</sup> and changing the placement of less-healthy foods in stores and supermarkets.<sup>49</sup> Economic or fiscal policies such as taxing sugary drinks were included because at the time, such a tax had been introduced in the UK and discussed in Australia.<sup>31</sup> The policy of making less healthy foods more expensive was also proposed, given young adults tend to be price- and

value-conscious in regards to food.<sup>35,9</sup> Policies relating to EDNP advertising and promotions were included, given the demonstrated evidence that young people are being targeted by marketers, particularly on digital platforms including social media.<sup>38,50-52</sup> As the focus groups were limited to 60 minutes, only six policy examples were chosen for deliberation in order to facilitate and enable in-depth discussion by the participants. We also prioritised those areas of the NOURISHING framework where there has been some contestation and mixed levels of support.<sup>41,45,46,53</sup>

### Data analysis

Discourse analysis was used to examine participants' discussion of the six proposed policies. The choice of this research method was informed by other discourse analysis that has been used in public health.<sup>17,54,55</sup> Discourse analysis considers how ideology (belief systems) and relations of power are reproduced through specific discursive processes such as language, words, phrases and themes.<sup>17</sup> It focuses on how people construct their social reality through these

practices, and what kinds of knowledge are being produced through such practices.<sup>56</sup> Two authors iteratively coded each line of the transcript looking at how the proposed policies were discussed and interpreted by the participants. The focus was on specific words, phrases and contexts that the participants used to generate meaning. The approach outlined by Mooney-Somers et al.<sup>55</sup> was used, which involves determining how the topic is represented, identifying what linguistic features are used by the participants, and deciphering what kinds of discourses are produced as a result of these discursive practices. The authors cross-checked coding development, identifying patterns and themes in the discourse by and among participants, until no new codes were developed. The authors developed discourse definitions based on this coding and interpretation of participants' discussion. During this process of coding, the primary author also developed a matrix of food industry discourses. These discourses were based on codes iteratively developed from the data and the relevant peer-reviewed literature on UCIs (Supplementary file S2). During the final stage of analysis and drafting, identifiable demographic characteristics (including gender, age and location) were removed according to Willig's<sup>56</sup> process of discourse analysis. Microsoft Excel 2013 was used by the authors to code and track all the data from the focus groups. Participants were not involved in the development of codes and findings.

## Results

Twenty discourse codes were identified and developed iteratively from the focus group data in a coding tree, which were linked with nine industry food discourses (Supplementary file S3).

Table 2: NOURISHING policy examples (taken from Hawkes C et al. 2013).	
Policy for deliberation	NOURISHING Framework area
Removing sugary drinks for sale from public places like hospitals, schools and universities	O – Offering healthy food and set standards in public institutions and other specific settings
Putting less healthy foods and drinks at the back of a convenience store	S – Set incentives and rules to create a healthy retail and food service environment
Putting a tax on sugary drinks	U – Use economic tools to address food affordability and purchase incentives
Making less healthy foods and drinks more expensive or costly for people to buy	U – Use economic tools to address food affordability and purchase incentives
Not allowing advertising of less healthy food and drink on TV and social media	R – Restrict food advertising and other forms of commercial promotion
Not allowing less healthy food and drink companies to sponsor celebrities, sporting teams or events	R – Restrict food advertising and other forms of commercial promotion

### Industry self-regulation

One discourse used by the food industry is the importance of industry self-regulation, in which companies voluntarily adopt certain practices without regulation from other sectors such as government. The importance of companies actively taking responsibility for their own regulation was identified by some participants:

*I think it's companies taking responsibility. I think to some degree government has a place because they can write laws within that country, [...] ultimately it has to be down to the companies to – they have to be the ones to execute the plan.*

In this discourse, the participant makes a clear distinction between the formulation of regulation (laws) versus the implementation of regulation, with the former done by governments and the latter by companies (industry). These are contrasted in terms of their position in the sentence, with the participant positioning companies as having the most power, or literally, the final say.

Some participants also implied there were certain areas in which government had little or no authority to regulate, such as the private sector:

*It just felt like it wasn't the government – like, it can be the government's place to advocate and potentially do some ideas, but that one, it felt like overstepping into a different realm that's not the government sector.*

Words like 'overstepping' are used to put limits on the regulation of the market by government. In these discussions, young adult participants indicated a dual framing, suggesting that self-regulation of industry was an important response for improving the food system or environment, but they also acknowledged government had a role in setting limits.

### Industry as part of the solution

The notion that the food industry has to be part of any solution was particularly highlighted when discussing social media policies:

*The only problem is with social media it's so hard, soooo hard, to police advertising on there. Um, I'd like to see it done, and it probably – I mean I say it's so difficult to police – they could write an algorithm! They could fix it!*

Participants' discussion reflected nuances about the challenges that governments face in terms of regulating advertising on social media ('policing'). But ultimately, such initiatives primarily sit with the relevant private sector companies, as demonstrated by the exclamative reference to an algorithm.

Industry being part of the solution was also indicated by the participants in terms of driving action on issues such as sugary drinks:

*And the onus has been on the companies, and Coca-Cola have known this is coming and so are changing the recipes on all of their drinks. [...] they know this is coming in, they are changing their recipes because they will be the ones paying the tax, not the consumer. So, the onus is on them to change and I think that – that is a good idea.*

The participant talks about an 'onus' on companies to change and make lower-sugar beverages, but that companies are ultimately the ones driving this. Some participants also questioned the effectiveness of regulatory measures without the support or engagement of the private sector:

*Let's say you want to bring down the prices of a certain food, how do you enforce or say to a company that, "Your food... Bring down the price of your food now". And it's like, "But this is how much it costs us to make", or "This is our profit margin", and then they say, "Well, no, you've got to bring your food down". It's just like...*

This participant performs or acts out two dual and competing perspectives, by pretending to be government (doing the enforcing by 'telling' companies what to do) and the private sector or industries responding with their perspectives on the feasibility of that intervention.

### Personal responsibility

Personal or individual responsibility is a key industry discourse that was reflected by some participants. Participants used specific terms such as 'responsibility' and 'informed choice' to represent this discourse:



*I think you eventually get to that point and decide at 16, 18, whatever precise age it is, where you're deemed to have full responsibility for yourself under the law, etcetera, etcetera, and obviously kids up until at least 14, 15, 16, don't have that responsibility. So, similarly, why would you expect them to be able to make informed educated choices about their calorie intake, what they're eating and all the rest of it? They wouldn't. [...] Whereas, again, with an adult because you've got that sort of personal responsibility, I think there's less of an impetus on companies and government to sort of protect you in the same sense.*

This participant reflects the idea that 18 (the age of adulthood in the UK and Australia) is a major turning point for young adults in terms of expecting health-protective environments. It suggests a focus on personal responsibility for diet and health, rather than government or corporate responsibility for creating healthier food environments or products. However, participants did respond positively to some policies relating to greater government regulation, such as restricting unhealthy food advertising to children. One participant (unprompted) referred to the Ofcom advertising regulations<sup>57</sup> in the UK, which were introduced in 2007 and ban unhealthy food advertising on television during children's programming:

*If we did reduce advertising of less-healthy food, maybe it should be reduced or like not having it all during kids' TV time, like right when they come home from school, or daytime, even then have it more at night when adults are watching TV.*

Participants did propose these measures as valid responses to the concerns about advertising to children and young people, suggesting that among the participants this was a popular area for greater action by government, although still leaving it up to adults to exercise a sense of responsibility or choice.

### Parental responsibility

Some participants emphasised the importance of parental responsibility in their discussion of the proposed policies. This discourse focuses on the responsibility of parents to provide healthy food for their children:

*... just even working like with young kids, and you get horror stories in like the hospital, like kids who have died because they're obese cos their parents have been feeding them crap and like, no one's been able to intervene*

*because that, like, would be intervening, like it's not...yeah.*

This participant uses a metaphor of death and horror to emphasise that childhood obesity is the responsibility of parents. The participant suggests that trying to affect children's diets is not socially acceptable, because it may be too 'interventionist' and that parents have the ultimate responsibility.

Although the responsibility for children's health was often situated with parents, participants also talked about being in 'definite agreement' with other participants that children had an implied right to be protected from advertising of 'bad' products like unhealthy food:

*I kind of – I went 'not sure', because I definitely agree on the children's side of things. I think some restriction in terms of times, but I think – or maybe places where it could be advertised. But I'm not sure I'd say an all-out ban is necessarily in order. So, I think part of it is a big 'yes', I think especially young people and younger kids, I think that would be really good. Because again I work with young people and the influence of advertising is a little bit scary to see, so I think yeah definitely with that. But I'm not sure, I think adults it's kind of a bit of fair game in terms of... [trails off]*

Adjectives like 'definitely' and 'big' are used to exaggerate the consensus about children, which is then contrasted with the feeling of being unsure when it comes to adults. It implies children are passive recipients of marketing and advertising and thus warrant protection. Adults, in comparison, were implied as being 'fair game' for advertisers, with the responsibility to act as parents to protect children.

### Education rather than regulation

Preferring the promotion of education for individuals over the regulation of industry was another discourse used in participants' discussion. Participants emphasised the importance of education, linking it to the discourse of personal responsibility by contrasting specific terms like 'better choices' with terms such as 'bans':

*I disagreed that the state should have a say in our freedom of choice on those matters. I don't think banning sales is the answer. I would think education is, um, so still letting people have the freedom of choice, but educating them well to make better choices.*

This discourse suggests policies are interpreted through the lens of how

much they restrict individual choice – the dichotomy proposed by the participant is that bans restrict individual choice while education empowers individuals to 'make better choices'. Many participants suggested education-based, individual-level strategies should be implemented rather than more restrictive or regulatory policy options. For example, some participants felt that labelling was an effective policy to help consumers make informed decisions:

*There's been a bit – at least there's been a bit more information of where food is coming from. Yeah, and that's a good thing, like an intervention. It's not really pushing you to a certain 'Do this' or 'That is bad' but it's just giving you the information, like, easier to digest and so you can make your own decision, whether you want to pick this over another or not. Like... it's not perfect but...*

Participants felt that food labelling was one way to give them some agency over their food choices, with some participants commenting they thought labelling systems such as Australia's Health Star Rating (HSR) should be standardised on all food and drink packaging. The emphasis by the participants on labelling as a crucial public health nutrition intervention reinforces the idea that education and information are priorities to help people make improved choices regarding food.

### Corporate social responsibility

In discussions about limiting advertising or sponsorship for unhealthy foods and drinks, participants referred to the corporate social responsibility (CSR) activities of major EDNP food and drink companies. These activities were often framed in a positive light, albeit with some ambivalence. The participants felt these activities contributed to a 'social good' such as community sport or major events like the Olympics:

*I find it a bit funny when I see McDonald's or Coca-Cola signs on big billboards at the back of a sporting event. But at the same time, I think those events are really important for getting young people involved in sports, and they wouldn't be able to be as big as they are without big sponsorships. So, I don't know if it comes full circle with the Olympics getting people to strive to do better in sports. There might be the necessary evil of having like a company you might not agree with funding it. So yeah, I wasn't sure on that one.*

These discussions were also tinged with unease about this relationship between sporting groups and EDNP foods, such as

giving the impression it was a 'necessary evil' of getting funding for these events and activities to go ahead. There was a verbal catch – a 'but' – in which some good aspects of McDonald's sponsorship were identified, namely the amount of money contributed to children's sport:

*I hate seeing the sporting teams with McDonald's things on their jerseys, but at the same time, I think they're pretty good for getting involved and they put a lot of money into it, especially [for] the younger kids.*

Participants also suggested that getting rid of sponsorship from EDNP food companies would have a negative impact:

*I think if you could have finances coming in to support these events from a different quarter, I think that would be great, but I'm also hesitant to say that it would be – completely get rid of it – would be a good idea.*

Using terms like 'finances' underlines that some participants felt the economic or business benefit of sporting events should be prioritised when considering regulations in this area.

### Challenging nutrition science

Some participants reflected a discourse often used by the food industry to challenge nutrition science. Participants queried the policy options about 'less-healthy foods', demonstrating they were unsure about how these foods were defined in terms of understanding healthy versus less-healthy foods:

*I put 'not sure' for the ah, advertising one cos as you said, you can't really define unhealthy food, it's really hard...*

In discussions, some participants claimed that 'healthy' or 'less-healthy' foods were too difficult to define in terms of a policy measure:

*...so to say what's healthy and what's not – where do you draw the line between that?*

Participants trailed off or posed their responses as a question for the group, which could be a way to indicate their uncertainty about what's healthy or not:

*And the logistics of – of removing the sugary option compared to say just removing sugary drinks as opposed to removing sugary foods or unhealthy foods, it's just much easier for the logistics, you can just provide water, and you can provide sort of healthier drinks – quite easy, so there's access there. But whereas with food, definitely, there's a lot more question about by what do we mean by unhealthy?*

Again, a dichotomy of 'unhealthy versus healthy' was expressed by the participant. Raising and discussing this confusion also served to highlight the challenges in terms of developing appropriate policy interventions to promote healthier diets.

### Balance, moderation and physical activity

The discourse of balance and moderation was also demonstrated by the participants. Participants used specific words like 'balance' or 'moderation' when talking about whether they supported a public health nutrition policy:

*Why not just have everything in moderation?*

Posing a rhetorical question like this could suggest to other participants that the answer is simple and clear. Messages about the importance of balance or moderation were further highlighted by referring to physical activity:

*You can have a fish and chips on a Friday night, as long as you sorta have a good meal balance. It's all about balance and getting your diet right. And if you do a bit of exercise, um, every so often – 30 minutes a day of walking or cycling.*

This participant uses a common health promotion message – 30 minutes a day of physical activity or exercise – to defend their view that diet was not solely important for health, and that balance and moderation is what is needed.

### Creating uncertainty

Participants openly discussed and debated the merits of policies such as taxes on SSBs and other EDNP products. This debate did not usually result in clear agreement among participants but rather increased uncertainty about whether they could be effective. For example, a common response to these fiscal policies was that they unfairly targeted people on lower incomes and were not effective at changing behaviour:

*When like you put things like taxes or make things more expensive, you're not actually really solving a problem, you're just kind of adding to the problem, cos people aren't learning about why you're doing this [...] they're not really solving a problem in terms of people to make healthier choices, they're just...punishing people for buying foods they were already eating.*

Emotive language like 'punishing' is used by the participant to imply that taxation is a form

of chastisement by government that aims to discipline the masses for their decisions, particularly low-income people. However, participants also reflected their genuine concerns about why governments were implementing certain policies in this area, questioning how the government would spend the money raised:

*Who is the tax going to? Is it going to the government? Are they actually going to spend it on anything useful[?]*

Questions were an effective rhetorical device used by some participants to create uncertainty in the discussion and encourage other participants to rethink or 'second guess' their original response to the policy in the discussion prompt.

## Discussion

Discourse analysis in this study allowed for the careful examination of how young adult participants in their discussions of public health nutrition policies used specific terminology, phrases and meanings that could be associated with common food industry discourses. Understanding how these discourses appear and are reflected in conversation offers some opportunities for public health.

### The influence of industry discourse

According to the findings of this research, the discourses used by our participants that are also used by the food industry and other UCIs appear influential at informing their opinions and views about policies. It is therefore vital to understand and engage with these discourses in terms of considering the acceptability of public health nutrition policies.

For example, the 'personal responsibility script'<sup>10</sup> was commonly reflected by participants through the use of words like 'choice'.<sup>16,22</sup> The use of such words suggests that the participants related to policies that emphasised individual responsibility. The personal responsibility and individual choice discourse is particularly effective and is used by a range of UCIs, including tobacco and food, as a means of avoiding reform.<sup>21,58,59</sup> UCIs also suggest that interventions like sugary drinks taxes are 'nanny state' actions that serve to reduce personal choice.<sup>30</sup> Such a discourse is powerful, particularly for young adults who may want to feel empowered about their decisions as adults. However,

how 'free' people's choices are could be disputed. These choices are often pre-determined in commercial environments that are not conducive to health, and regulation by government is therefore necessary to provide better 'choice contexts' for individuals to be healthy.<sup>59</sup> A discourse of personal responsibility also deflects attention from structural drivers of obesity.<sup>34</sup> But it is not only industry groups that use this messaging or discourse about personal responsibility. Some have criticised public health for using this discourse, arguing that it has led to a normative valuing of public health interventions based on how much they restrict or promote individual choice.<sup>60</sup> It is therefore unsurprising that our participants reflected a view about personal responsibility for health that is widely promoted and socially normative in countries like Australia<sup>41</sup> and the UK.<sup>40</sup> This may also reflect the influence of a predominantly neoliberal policy paradigm that enables commercial entities to influence public policy and focus on personal responsibility.<sup>15</sup>

Linked to personal responsibility was the discourse of education rather than regulation. Participants often proposed educational public health nutrition interventions as an alternative to the more regulatory measures in the discussion prompt. The literature on community attitudes to food and obesity policies suggests educational interventions are broadly supported by all age groups including young adults.<sup>40,41,46,53</sup> These views are supported by the food industry, which promotes voluntary self-regulation and informational health promotion strategies of individuals.<sup>60</sup> The food industry also actively lobbies governments for initiatives that prioritise education and information-based interventions. This focus on the 'empowerment' of consumers occurs through the voluntary (not mandated) provision of information, with industry claiming this will assist consumers to make better choices.<sup>19</sup> This is despite the lack of evidence that education-based, informational strategies work on their own to improve population diet.<sup>7</sup> It also ignores the fact that the food industry has marketing budgets and market reach far in excess of any educational campaign or intervention.<sup>11,61</sup> Furthermore, industry resists more effective educational or informational measures, such as interpretative labelling schemes like traffic light or HSR labels, despite the evidence that such labelling is more easily understood and applied to consumer behaviour.<sup>16,62</sup>

Another discourse used by participants was the CSR discourse in terms of the discussion about restricting sponsorship and advertising of unhealthy food and drink products. The food industry often uses CSR messaging to promote positive connotations with brands and help market their products.<sup>20,23,30</sup> Examples include the promotion of charitable initiatives<sup>10</sup> and sponsorship of children's sport.<sup>23,63</sup> Despite participants' misgivings about the use of corporate sponsors, they often referred to major events like the Olympics being positive for health, despite there being no evidence to suggest events like the Olympics increase levels of physical activity in the population.<sup>64</sup> Rather, the primary aim of such sponsorship activities, particularly by EDNP food and drink companies, is to build positive brand associations and exposure, and demonstrate the company is a 'good corporate citizen' while increasing their financial bottom line. In addition, the economic importance of sponsorship was highlighted by participants in terms of the possible negative implications of removing sponsorship and advertising for sports clubs. This is despite the small amount of income for sports clubs in Australia that is derived from sponsorship with food and beverage manufacturers.<sup>63</sup> The perception that these companies contribute to the community is very powerful, particularly among young adults in this study, who were concerned about the financial impact of policies like restricting sport sponsorship or advertising.

Participants also at times reflected a 'pivot' to other arguments that could be associated with UCI discourses. For example, while young adults may be well educated about the health risks of products like sugary drinks,<sup>46</sup> in this study, the participants demonstrated genuine confusion about the healthiness of other food and drink products. The food industry and EDNP food manufacturers are well aware of this confusion and use this as a tactic to challenge nutritional science and public health,<sup>24</sup> distort scientific findings<sup>16</sup> and claim there are no 'good' or 'bad' foods.<sup>10,24</sup> Messaging of uncertainty about prevention policy effectiveness was also reflected in participants' discussions. Participants questioned whether the problem was really being solved, which promoted uncertainty in the discussions about why governments might implement certain measures, and whether there was 'evidence' to support it. Focusing on the uncertainty

of evidence or effectiveness is a type of discourse that has been deployed by UCIs to prevent further regulation of their products.<sup>9</sup> Concerns about the effectiveness of measures or implying government overreach can also be used by industry to claim such measures are ineffective and too simplistic at addressing complex health issues.<sup>9,31</sup> Another relevant discourse used by the food industry that appeared in participants' discussions was focusing on physical activity and a 'balanced' diet.<sup>25,30</sup> While physical activity is, of course, important to promote health and prevent chronic disease, there is growing evidence that multinational EDNP companies have directly funded researchers and influenced policymakers to focus on physical activity and exercise, or 'energy balance', in order to divert attention away from products like SSBs.<sup>28</sup>

### *Opportunities for public health*

Based on the results of this study, there are three main opportunities to address support and acceptability among young adults for public health nutrition policies, particularly those policies that are not yet implemented.

First, there is a need for public health to engage with the views of young adults regarding advertising restrictions, particularly as they relate to children and young people. Participants' discussions reflected the view that regulatory interventions were more acceptable if they were framed as protecting children and/or assisting parents against unhealthy food advertising. This did echo the concept of 'legitimate targets' – population groups for whom it is more acceptable for government to intervene or regulate, such as children.<sup>41</sup> This is a view reflected in other research on community attitudes to government intervention for health.<sup>53</sup> A strong argument has been made for regulations to protect children from unhealthy food marketing given that many children have difficulty distinguishing marketing from content.<sup>52,65</sup> However, the evidence suggests many advertising regulations are inadequate, with manufacturers either finding loopholes and/or increasing exposure elsewhere, including through digital platforms.<sup>52,65,66</sup> A different way of engaging with young adults' concerns about children, adulthood and responsibility could be the universal application of advertising and sponsorship bans. This occurred in tobacco control. Tobacco was re-framed as a product associated with harm to both children and adults; this re-framing



denormalised tobacco products<sup>20</sup> and directly challenged industry discourses.<sup>59</sup> Tobacco control provides valuable insight into how regulatory measures to denormalise harmful products across the population can help to shift cultural attitudes and social norms, particularly among young people.

Second, a focus on corporate and government responsibility, instead of personal responsibility, could be used to reframe the conversation, particularly in terms of building support for less popular regulatory measures. This approach is increasingly being promoted in other areas of public health regulation such as problem gambling.<sup>58</sup> Participants in this study already felt a strong sense of the importance of corporate responsibility and that industry should be engaged with as part of any regulatory response, such as developing an algorithm to restrict advertising on social media. Participants were also open to the idea of interventions such as sugary drinks taxes if framed in terms of positive reinvestment in health and support for low-income groups.<sup>53</sup> Another way of reframing the emphasis on personal responsibility is to offer policy solutions that acknowledge participants' clear preference for educational and informational interventions, but that have evidence of effectiveness and require a certain level of regulatory intervention by government. One example in Australia is to make consistent interpretative food labelling systems like the Health Star Rating mandatory.<sup>67</sup> This could help young adults feel they are supported to make healthier choices regarding food and promote a sense of agency.

Third, the young adult participants in this study were perceptive and engaged about the complexity of this area of public policy and regulation, demonstrating they are not passive recipients of government regulation but active citizens. While young adults in this study did sometimes reflect particular discourses that have been associated with food industry discourses, it is important to recognise that UCIs are very effective at co-opting existing community sentiment about an issue. Young adults' views are likely influenced by a range of other factors, including their peers, family, community, broader social norms, and media outlets (including social media). Identifying and critically engaging with common industry discourses is just one possible strategy to help increase public support for regulatory policies to improve diet, particularly in

groups such as young adults. Examples of this critical engagement can be seen in youth-led movements such as Bite Back 2030, which aims to raise awareness and discussion among young people about the strategies used by unhealthy food advertisers.<sup>68</sup> Other strategies must include clear explanations by governments and public health advocates of the evidence and benefits for particular public health nutrition policies, which may assist in reducing uncertainty while engaging young adults in the conversation.

### Limitations

This research has some limitations. One of the challenges with this study method was the separate presentation of the six different policy options when in fact they are all related, as the NOURISHING framework identifies. The food industry uses a 'divide and conquer' model to resist regulation by separating policy options and arguing that each policy isn't a 'silver bullet', which adds to a broader discourse of complexity and uncertainty.<sup>9</sup> How the policy options were framed and presented to the participants may have meant they did not consider that increasing revenue through a tax on sugary drinks might then be reinvested to make healthier foods cheaper, or that promoting less processed foods may have co-benefits for environmental sustainability, or that restrictions on unhealthy food marketing may create a more even playing field for other groups, government bodies and companies to promote healthier food options. This is important given other research suggests support for these measures increases when they are framed as reinvestments for health.<sup>45</sup> The policy options deliberated did not explore young adults' views about this and future research could explore this.

In addition, the focus groups were not a representative sample of the relevant population and were restricted to young adult participants who were well educated, highly urbanised, of medium to high socioeconomic status and predominantly from English-speaking backgrounds. The focus groups also had more women participants compared to men. The findings are therefore not generalisable to other populations or contexts. This research did not cover every possible code or theme identified in the data; instead, the research aimed to provide some initial insight into how discourse analysis can be used to understand attitudes towards specific public health

nutrition policies. Furthermore, due to the nature of qualitative research, it may be that researchers repeating these methods may end up with different interpretations and generate wholly different meanings from the data.

We also note the mixed composition of the focus groups may have affected the discussion. Focus groups can be challenging for public health research, particularly when discussing topics that may be political or ideological in nature. Mixed-gender focus groups, particularly for a topic such as food and nutrition, could have made it difficult for some men or women to participate, given the often gendered nature to these types of discussions. Some participants may also speak more than others, meaning opposing or contrary views are not always picked up in the data. While the facilitator did aim to ensure all participants could speak for equal amounts of time during the discussion, this may not always have been possible and may have affected the results.

### Conclusion

This research suggests that the attitudes and opinions of some young adults regarding public health nutrition policies may be associated with some common food industry discourses. This research raises some important questions for further research, including exploring the influence of these industry discourses in the broader population or other groups. Given the impact of chronic disease and poor diet in other countries and settings, it is vital to understand the reach of discourses promoted by UCIs, particularly in low- and middle-income countries where the burden of chronic disease is greatest and market growth for unhealthy commodities is apparent. Furthermore, research in tobacco control suggests that UCIs can be effective at promoting discourses such as personal responsibility for a variety of health behaviours. Public health has developed counter-arguments to these discourses, and these have been effectively used by governments and advocates to improve policymaking and regulation in areas such as in tobacco control. There is a need for similar counter-arguments to be developed and implemented for public health nutrition and other areas of chronic disease prevention.



## Implications for public health

Identifying, engaging with and responding to common industry discourses is a priority in order to build greater public support and acceptability of policies that will improve diet and prevent chronic disease.

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## Supporting Information

Additional supporting information may be found in the online version of this article:

**Supplementary File 1:** Likert scales discussion prompt.

**Supplementary File 2:** Food industry discourses.

**Supplementary File 3:** Code descriptions (coding tree).