



Parental food choices for children when eating out: attitudes and impact of healthy choice menu labelling based on a hypothetical scenario

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Abstract

Objective: To understand how healthy menu labelling information is used by parents/caregivers and where it fits within predictors of healthy meal choices when eating out.

Design: Parents were recruited to complete a 15-min observational, online survey regarding their experiences and hypothetical choices when eating out with their child/ren.

Setting: Australia.

Participants: Eligible participants had one or more child/ren aged between 2 and 12 years and attended cafes, restaurants, hotels and clubs (CRHC) for lunch or dinner at least four times a year. Of initial respondents (n 1802), 92.5 % provided complete and valid data. Participants were 84.7 % female, ranging from 18 to 68 years old.

Results: 98.3 % believed that healthier alternatives should be available for children in CRHC. For general food choices, health was a strong motivator (45.7 %); however, parents reported eating at CRHC mainly for pleasure or a treat (61.2 %) and being driven by children's taste preferences (85.9 %) when selecting menu items. 59.0 % of orders included a combination of healthy and traditional items. 42.0 % of the sample were influenced by the healthy choice (HC) labelling. Multiple regression revealed that, in addition to some demographic variables, the percent of HC ordered was positively associated with self-reported parent vegetable consumption, making food choices for the children for health reasons, familiarity with HC items and making order choices due to dietary needs and good nutrition.

Conclusions: Despite a preference for availability of healthier children's menu choices in CRHC, menu labelling highlighting healthy options may have limited impact relative to child preferences.

Keywords

Food choice

Eating out

Children

Food labelling

Full-service restaurants

Childhood overweight and obesity is a major public health issue in Australia. One in four (25 %) Australian children and adolescents aged between 2 and 17 years are classified as overweight or obese, with substantial long-term health and economic impacts as a result⁽¹⁾. Fundamentally, overweight or obesity is driven by an imbalance between energy intake and output; however, underlying this is a range of complex individual, environmental and societal factors⁽²⁾.

A food environment that encourages and supports families to make healthier food choices is an important element to address overweight and obesity⁽³⁾. The proportion of Australian household food budget spent on meals eaten 'away from home' has steadily increased from 25 % in

1988–1989 to 34 % in 2015–2016⁽⁴⁾. This includes food purchased from fast food restaurants and other venues such as cafes, restaurants, hotels and clubs. During the same period, expenditure on meats, fruit and vegetables and breads and cereals fell. Meals eaten away from home are often larger in portion size, higher in kJ and higher in nutrients of concern, e.g. Na, saturated fat and added sugar. For example, modelling of children's fast food meals based on daily requirements revealed excessive amounts of energy, fat, sugar and Na⁽⁵⁾. For these reasons, eating away from home is associated with higher intakes of energy and lower intakes of beneficial nutrients⁽⁶⁾.

Due to the prevalence and possible dietary consequences of eating food away from home, there is an

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imperative to increase the availability and consumer acceptance/preference for healthier menu choices, particularly for children's menus. Dedicated children's menus typically offer meal options for those under the age of 12 that are smaller and cheaper than main meals. Typically, these meals are also less healthy and include pizza, nuggets and burgers. In fast food restaurants, these meals may also include a toy. Consumer demand can encourage food outlets to make more healthy options available; a recent example of this is the emergence and popularity of products labelled gluten free because of perceived health attributes⁽⁷⁾. Qualitative data from Ireland suggest that families would more likely choose venues if they provided meal options that met child preferences and were healthy⁽⁸⁾. Therefore, helping parents realise a desire to provide healthy options to their children may translate to improved meal choices.

One common method to influence consumer behaviour and increase demand for healthy choices (HC) is menu labelling. Menu labelling initiatives currently take various forms including calorie labelling, traffic light colours or use of 'health' symbols and can be implemented at a large scale. For example, in 2018 in Victoria, Australia, the government mandated that large chain food businesses to include average kJ content for all products along with the statement that, 'The average adult daily energy intake is 8700 kJ' on menus and displays (named the Victorian kiloJoule Labelling Scheme). However, kJ information alone does not necessarily represent the overall healthiness of a food choice, and many people lack adequate health literacy to interpret this information. Reviews have suggested that qualitative or interpretive symbols used alone or in combination with energy information have been more effective at increasing selection of healthy menu choices than energy labelling alone^(9,10).

In children, there has been some evidence that energy labelling and other forms of labelling in fast food environments can reduce overall energy intake. However, these observations are more likely to be made in hypothetical scenarios than in observational studies⁽¹¹⁾. One experimental study used a hypothetical menu scenario that asked parents to make selections for their children and found that labelling lowered the energy content of meals selected in a fast food restaurant but not a family restaurant⁽¹²⁾. Few papers have explored labelling strategies targeting children's meals in a full-service restaurant environment rather than a fast food restaurant. One study that interviewed families after they had dined in a restaurant suggested that menus did influence order choices, in addition to taste and family/server suggestions⁽¹³⁾. Overall, it appears that food labels can help people with an existing desire to eat healthy foods make choices in environments where nutrition information is limited⁽¹⁴⁾.

There are a variety of drivers of food choice when eating out of home, particularly when choosing a meal on behalf of children. There is a need to better understand the

parental decision-making process and how a healthy labelling system may influence the decision-making process in environments away from the home. Fast foods and take-aways account for just over half (55%) the spending on foods away from home in Australia⁽¹⁵⁾ and, in many places, these styles of establishments are already required to meet certain labelling schemes. Full-service restaurants, such as cafes, restaurants, hotels and clubs (CRHC), have received little attention despite the fact they also represent a large portion of eating away from home. This study aimed to understand whether (and how) healthy menu labelling information is used by parents/caregivers when eating at CRHC. It also aimed to better understand what amongst a hierarchy of possible drivers predicts the selection of HC when they are available.

Methods

In this observational, online survey, parents/caregivers were recruited via social media advertising and existing email lists and asked to complete questions regarding their experiences and choices when eating out with their child/ren. To be eligible, participants needed to be a parent/caregiver, with children between the ages of 2 and 12 years, who attends CRHC for lunch or dinner at least four times a year. The survey was approximately 15-min long, and participants were offered a chance to win a \$100 grocery voucher via random draw. After being presented with a participant information sheet, participants indicated their consent prior to being taken to the survey items.

Instruments

The survey was implemented through Survey Gizmo and designed by the research team, except for validated scales which are noted below. The first section asked participants about the number of children they have, the age of each in years, the subjective health of their children (excellent, very good, good, fair and poor), how often they eat out at CRHC with their children, who places orders for each child and the main reasons for eating out. When considering their responses, participants were guided specifically to exclude fast food purchases and eating occasions. After these questions, a sample children's menu was displayed (Fig. 1), and participants were asked to place a theoretical meal order for each of their children aged between 2 and 12 years of age.

The menu was divided into main meals, desserts and drinks and included a combination of traditional children's menu items (and therefore higher in kJ, saturated fat, Na or added sugar; i.e. less healthy options) and healthy menu alternatives. Healthy menu choices were labelled as 'HC' (Fig. 1). Healthy alternatives were designed to match traditional options with more favourable nutrition. These were designed based on national guidelines by accredited



CHILDREN'S MENU

Healthy Meal Choices are listed as HC



meal

Chicken Nuggets + Chips
served with tomato sauce

HC Oven-baked Chicken Nuggets
house made, oven-baked, crumbed pieces of chicken fillet, served with steamed rice and vegetables

Crumbed Calamari + Chips
served with tartare sauce and hot chips.

HC Oven-baked Fish + Wedges
served with oven-baked potato wedges + a garden salad.

Mac + Cheese
Macaroni and cheese served with pieces of bacon.

HC Penne Napolitana
Napolitana sauce served with penne pasta

Ham + Pineapple Pizza
ham and pineapple on regular base, topped with cheese.

HC Chicken Pesto Pizza
grilled chicken fillet with pesto on wholemeal base, topped with capsicum, mushroom, pineapple and low-fat cheese.

dessert

Ice Cream
2 scoops of vanilla ice cream served with either chocolate, strawberry or caramel topping and sprinkles

HC Fresh Fruit 'Sundae'
layers of fresh strawberries and vanilla yoghurt, topped with raspberry sauce

Jelly + Ice Cream
choice of lime or raspberry jelly with vanilla ice cream

HC Chia Pudding
Chia pudding sweetened with a smooth blend of vanilla, fresh banana and dates, topped with toasted coconut.

drinks

HC 100% Fruit Juice

Lime Cordial

HC Plain Milk

Soft Drink

Bottles of tap water are available for your convenience at the counter.



Fig. 1 (colour online) Copy of the hypothetical menu presented to participants

dietitians. Overall, the menu was designed to be like a real-world menu. This method has been used successfully in previous food choice research⁽¹²⁾. Prices were not indicated to avoid any undue influence.

After placing their order, participants were asked to select the reasons for their menu choices from a pre-defined list, indicate whether they noticed the HC labelling, describe the potential impact of the presence of healthier menu items on their choices and describe their general attitudes towards healthy alternatives. Parents were also asked to indicate the most important factor that determined their wider food choices for their child/ren from a list based on the higher order factors of the food choice questionnaire (i.e. Health, Tastes Good, Familiarity, Natural, Price, Weight Control, Convenience, Ethical and Mood)⁽¹⁶⁾ with the addition of an 'other' category and associated free-text entry. The survey concluded by asking participants how many servings of vegetables they consumed per day, whether they had ever studied nutrition or dietetics, a measure of parental self-efficacy (parenting sense of competence (PSOC))⁽¹⁷⁾ and some basic demographic information.

Analysis

All available participant data are included in analysis for those who failed to complete the survey. This means that

the total numbers for different questions are variable and therefore documented for each. Where 'other' was chosen as a response from pre-defined lists, accompanying free-text responses were recoded into existing categories where possible and new categories were added where recurring themes appeared.

All data were analysed in SPSS version 23. Descriptive data are largely based on percentages. Linear regression was used to predict the proportion of HC relative to traditional menu options ordered. This was done for all items rather than by course type to gain a picture of overall ordering for an eating occasion rather than for specific meals. Parents with multiple children between the ages of 2 and 12 were asked to place orders for all possible children rather than a single representative. This facilitated avoiding the need for arbitrary rules (e.g. responding based on youngest child). However, it also meant that larger families had a higher number of possible items in their orders. In order to limit any undesirable effects that family clustering could have on a predictive model, the proportion of HC relative to traditional menu options ordered was calculated.

Variables were entered into the regression model in a single step. The variables entered related to parent and household characteristics (age, sex (female), level of education, vegetable consumption, number of children between 2 and 12 in household, having studied nutrition

Table 1 Frequencies for motives for eating out, general food choice and sample children's menu choices

	<i>n</i>	%
Parent motives for eating out at CRHC (<i>n</i> 1802)		
Because its enjoyable	644	35.7
As a treat	459	25.5
For special events	310	17.2
Ease/convenience	188	10.4
To get out of the house	156	8.7
Combination/other	13	0.7
Parent motives for general food choices for their children (<i>n</i> 1692)		
Health	774	45.7
Tastes good	293	17.3
Familiarity	189	11.2
Natural	143	8.5
Children will eat	89	5.3
Price	56	3.3
Mixture of motives	55	3.3
Convenience	42	2.5
Ethical	38	2.2
Other	13	0.8
Parent motives for sample children's menu choices* (<i>n</i> 1760)		
Child taste preferences	1512	85.9
Good nutrition/healthy	657	37.3
Special treat	588	33.4
Easy for child to eat independently	411	23.4
Dietary needs	271	15.4
Sounded filling	80	4.5
Something new to try	79	4.5
Easy for child to chew	56	3.2
Will eat/avoid meltdown	33	1.9
Other	23	1.3

CRHC, cafes, restaurants, hotels and clubs.

*Multiple options could be selected.

(or not), presence of preschool-aged children (under 5 years), presence of primary school-aged children (5–12 years) and parental self-efficacy), average child characteristics (parent-reported health), the reasons for order choices (dummy coded), frequency of eating at CRHC (scale representing increasing frequency), familiarity with HC presented (seven-point scale), trust in HC labelling (seven-point scale), confidence in choosing healthy alternative (seven-point scale) and general food choice motives (dummy coded). Reasons for menu selections and wider food choices were only included in the model if more than 5% of the sample selected that option (Table 1).

Results

Participants

Totally, 1802 people consented to take part in the survey and 92.5% (*n* 1667) of these provided complete and valid data. Dropouts occurred throughout the survey, most occurred on the page immediately after the menu selections where forty-two people dropped out. Overall, people who did not complete the survey did not make different choices in terms of the proportion of HC, $t(1800) = -1.42$, $P > 0.10$.

In total, 1667 participants had demographic information. Participants included mostly females (84.7%). Age of respondents ranged from 18 to 68 years (M 37.84, SD 5.65). The average household size was four people with a range from one to nine people. Most participants had an annual household income of \$100 k or more (57.7%), were married (79.7%), employed (62.8%), qualified with a bachelor's degree or higher (71.9%), living in a metropolitan area (74.4%) and on the east coast of Australia (66.5%). 7.2% of the sample had studied nutrition or dietetics. 19.3% of participants reported consuming five serves of vegetables a day. Parents (*n* 1676) confidence based on the PSOC efficacy was 24.63 (SD5.12) on average. Reported normative scores differ relative to who completes the measure (mother or father) and child characteristics (gender, age) but range between 24.95 and 25.77 which suggests, on average, the current sample had fairly typical feelings of efficacy regarding their parenting⁽¹⁷⁾.

Between participants, there was a total of 3120 children aged between 2 and 12 years. The number of 2–12-year-old children per respondent household was between 1 and 6, with 88% having 1 or 2 children between these ages (*n* 1586). 70.4% (*n* 1268) of parents rated their children's health between very good and excellent. Households mostly had exclusively primary school-aged children (43.1%, *n* 777) with an equal number having exclusively preschool-aged children (28.6%, *n* 516) or a combination (28.2%, *n* 509).

Most people reported eating out at a CRHC with their children between monthly and a few times a fortnight (44.4%, *n* 801). About a fifth of people ate out either infrequently (every few months; 18.1%, *n* 326) or frequently (at least once a week; 22.8%, *n* 412).

Across all possible children, in 67% of cases, parents indicated that they or other caregivers were responsible for order choices when eating out. This varied significantly by the age group of the children ($\chi^2 = 276/6$, $P < 0.001$). 95.5% (*n* 493) of parents with exclusively preschool-aged described themselves or other caregivers as responsible for ordering, compared with 52.1% (*n* 405) of those with exclusively primary school-aged children and 60.9% (*n* 310) of parents with a combination of primary- and preschool-aged children.

Parent motives for eating out at cafes, restaurants, hotels and clubs and general food choices

Eating out was largely driven by pleasure-seeking motives, 'because it is enjoyable' or 'as a treat' (Table 1). Convenience/ease was a less commonly selected motive.

The main motive respondents selected as a driver of general food choices for their children was health (Table 1). Tasting good and familiarity were the second and third most common motives; however, combined they still represented less than health. The free-text option resulted in an additional category 'to avoid waste and child meltdowns'. Weight control and mood categories from the

Table 2 Orders placed by respondents using a sample children's menu, for 3120 children

Mains	<i>n</i>	Desserts	<i>n</i>	Drinks	<i>n</i>
Oven-baked Fish & Wedges*	694	Ice Cream	690	100 % Fruit Juice*	672
Oven-baked Chicken Nuggets*	616	No dessert	613	No drinks	607
Penne Napolitana Pasta*	564	Fresh Fruit Sundae*	443	Soft Drink	356
Chicken Nuggets & Chips	481	Jelly and Ice Cream	192	Plain Milk*	232
Crumbed Calamari & Chips	285	Chia Pudding*	96	Lime cordial	28
No main meal	237	–	–	–	–
Mac and Cheese	95	–	–	–	–
Total	2972	Total	2034	Total	1895

*Healthy menu choices; labelled HC on sample menu.

original food choice questionnaire were combined with the 'other' category due to low response numbers.

Orders placed by respondents using a sample children's menu

Participants were asked to select items from the sample children's menu for their each of the 2–12-year-old children. Orders were placed for 95.3 % of all possible children despite the inclusion of 'no main meal', 'no dessert', 'no drink' options. Parents may have ordered some items to share or may not have ordered for some children (Table 2).

There were respondents who ordered a combination of healthy and traditional choices (59.0%), only HC (30.4%) and those who ordered only traditional choices (10.6%). This pattern differed between courses. Respondents made the highest number of exclusively HC for main meals (52.4 %) and drinks (fruit juice or milk; 41.9%). For dessert, most respondents selected traditional choices (ice cream; 37.4%) or no dessert (34.2%).

Parent motives for sample children's menu choices

Child taste preferences were by far the most commonly selected driver of parents' ordering choices (Table 1). About one-third of respondents selected 'providing a treat' and 'good nutrition' as motives for choosing particular menu items. Within those who selected good nutrition as a driver of their order choices (*n* 664), 83.4 % still were driven by their child's taste preferences, but less were inclined to select 'a special treat' (27.0 %) relative to the whole group.

Influence of healthy choice menu labelling

41.2 % of respondents (*n* 1752) indicated that the HC labelling influenced their choice at least somewhat ('yes' and 'somewhat' responses). The highest proportion (48.1 %) indicated that the labelling did not influence their choice. A further 10.7 % indicated that they did not notice the label. These people were excluded from answering further questions about the HC-labelled items.

Totally, 1561 participants answered items about familiarity with HC options, ease of choosing a HC from those presented and how much the label made choices easier. Scores of five or more out of a possible seven were coded

as some level of agreement with each of these items. 77.8 % reported some level of familiarity with the HC food/drink items on the sample children's menu. Most (67.1 %) reported that they could order suitable items for their child if they had only been presented with the HC menu items, and 43.4 % indicated that the HC label made it easier to make a healthier selection.

Attitudes towards healthy choices on children's menus

98.3 % of 1725 respondents indicated 'yes' in response to the question as to whether healthy options should be available for children in CRHC. When asked about the proportion of healthy alternatives relative to traditional options that should be available, 57.5 % and 25.2 % indicated that most or some options should be healthy, respectively, with only 14.6 % indicating that all options for children should be healthy.

Almost half of 1725 participants (47.1 %) indicated some level of distrust in labels on children's menus in CRHC (selected three or less out of seven). Most participants (90.9 %) felt some level of confidence that they could pick HC for their child/ren, and over half of the whole sample felt extremely confident in their abilities with 54.2 % selecting seven out of a possible seven.

Predicting ordering healthy alternatives

The percentage of total items ordered that were HC was significantly predicted by the variables considered, $F(23, 1462) = 29.75, P < .001$.

In the final model, four of the child and parent characteristics were significant predictors of the percentage of HC ordered (Table 3). Higher ratings of child health and higher self-reported vegetable consumption in parents had a small, positive association with the number of healthy alternatives ordered. The number of children between 2 and 12 years had a negative association. The presence of preschool-aged children (those under 5) significantly predicted a higher proportion of HC options, whereas the association was opposite for families with primary school-aged children (those 5–12 years old).

Three items capturing different drivers for menu choices were significant (Table 3). Making selections for dietary needs or good nutrition positively predicted the proportion of HC made, while choosing items as a treat was in the

Table 3 Variables predicting proportion of healthy choice menu options (relative to traditional options) ordered based on linear regression model (*n* 1486)

<i>n</i> 1486; Adjusted $R^2 = 30.8\%$	<i>B</i>	SE	Beta	<i>P</i>
Parent age, in years	-0.21	0.142	-0.04	0.133
Parent sex (female)	-1.77	2.515	-0.02	0.481
Parent highest level of education	0.02	0.469	0.00	0.958
Parent daily vegetable consumption (serves)	1.63	0.541	0.07	0.003
Parent never studied nutrition/dietetics	-2.26	2.703	-0.02	0.404
Parenting self-efficacy (PSOC)	0.01	0.144	0.00	0.957
Number of children: 2–12 years old	-2.60	1.223	-0.06	0.034
Presence of preschool-aged children (under 5 years)	6.00	1.988	0.09	0.003
Presence of primary school-aged children (5–12 years)	-9.21	2.386	-0.13	<0.001
Average rating of child health	3.18	1.165	0.06	0.006
Food choice motives: Health	5.97	2.090	0.09	0.004
Food choice motives: Natural	5.25	3.014	0.05	0.082
Food choice motives: Familiarity	-0.01	2.748	0.00	0.996
Food choice motives: Tastes good	0.36	2.461	0.00	0.884
Level of trust in healthy choices	-0.04	0.528	0.00	0.943
Familiarity with healthy alternatives	0.95	0.411	0.05	0.021
Confidence to make healthy choices for children	1.06	0.631	0.04	0.091
Frequency eating out at restaurants, etc.	-0.20	0.389	-0.01	0.603
Order choice: Taste preference	-0.89	2.136	-0.01	0.678
Order choice: Dietary needs	10.20	1.996	0.11	<0.001
Order choice: Good nutrition/healthy	22.71	1.558	0.34	<0.001
Order choice: Special treat	-9.67	1.549	-0.14	<0.001
Order choice: Easy for child to eat by self	-0.06	1.804		0.973

Note: Data are excluded listwise.

opposite direction. The only general food choice motive that predicted choosing more HC items was being driven by health which had a positive association. The final variable significantly contributing to the model was familiarity with the HC items. Confidence, trust and global parenting self-efficacy (PSOC) did not significantly predict the proportion of healthy alternatives selected.

Discussion

This large Australian survey has shown that parents of children aged between 2 and 12 years were overwhelmingly in support of making healthier alternatives more available on children's menus in CRHC. However, given that eating out is reported as 'a treat' and for enjoyment, parents indicated that they wanted healthy children's menu choices to be available in combination with traditional (less healthy) options. They reported 'health' was the stronger motive for general food choices for their children; however, when making specific selections from a menu, their foremost consideration was the child's taste preferences, with health, offering a 'treat' and 'something the child could eat independently' as secondary considerations. The percent of healthy menu choices ordered was positively associated with ratings of child health and parent vegetable consumption and negatively associated with child age and number of children in the family. Parents reported high confidence to choose appropriately healthy options if they were available, although this did not predict the number of healthy menu choices selected. The 'HC' labels on the sample menu

influenced less than half of respondents (42%), and almost half (47%) reported a lack of trust in such labelling.

Parents reported a strong preference for availability of traditional and healthy menu choices which may be driven by different courses. For example, parents tended to choose healthier alternatives for main meals, but then 'treat' their child to ice cream for dessert. These data suggest that parents want to be provided with options without being forced to make certain choices. Behavioural strategies could be used to complement labelling and menu changes. A review of obesity prevention interventions in children suggested that using a higher number of behaviour change techniques was associated with better effectiveness⁽¹⁸⁾. Theories such as self-determination theory would suggest that targeting motivation could be an effective strategy in combination with those targeting availability⁽¹⁹⁾. This could mean incorporating behavioural strategies such as changing environments (by offering more healthy alternatives and labelling these) along with providing incentives for choosing these items⁽¹⁸⁾. Simply using strategies that make parents feel like they are achieving the wider goals for their children – providing healthy foods – is also likely to improve the effectiveness of a broader scheme according to self-determination theory, especially given the observation that being motivated by health is associated with more HC selections.

Children are also stakeholders when placing orders in restaurants. As we observed, older children are more likely to choose their own items. Therefore, future interventions may also benefit from incorporating strategies focused at



children. One of the most common of these is the provision of a toy and/or use of characters to specifically promote healthier alternatives. In experimental studies in restaurants, the success of this strategy is varied^(20,21).

In terms of their perceptions of the labels and healthier alternatives, parents appeared to possess a level of distrust in the HC labelling in the restaurant-style settings. Their general level of distrust did not predict the number of healthy options they chose for their children in the regression. However, it is still important to note that the origin of labelling could be important for acceptance of any scheme. In a qualitative study of Australian consumers, consumers felt that industry and marketers determined food labelling and some indicated directly that they did not expect labels to be truthful and/or a level of scepticism that labels are used simply as a marketing tactic to get people to products⁽²²⁾. If there is a wider level of scepticism regarding labelling, this technique needs to be applied cautiously. Labelled HC will not make parents feel that they are meeting their aims to provide healthy food to their children if they do not believe a claim. A European study suggested that across a variety of countries, health professionals and government bodies were widely trusted regarding healthy eating⁽²³⁾, and it may be the case that labelling produced by these groups has a higher level of trust but further research is needed.

Most respondents indicated that the labelling itself also did not influence their choice, with a small group (10%) failing to notice the HC labelling. Interventions performed in restaurants have also report <50% noticed significant environmental changes to promote their children's menus⁽²⁰⁾. Those driven by familiarity are making menu choices based on habit rather than processing the complete menu. Previous research has shown that children have often pre-planned their choices^(13,24). Habitual decisions are a significant part of food choice and when this is combined with the pressure of a fussy child, it is undoubtedly difficult to get a parent to notice small details on a menu. Furthermore, in the context of eating away from home, other contextual factors, such as menu design or product placement, could be significant influences⁽²⁵⁾. Labelling schemes alone may have limited impact. Previous research has suggested that labels are used mostly for first-time purchases or when making a decision between products^(26,27). Based on the results of focus groups with mothers, Jones suggests that menu choices are made within multiple layers of influence where taste is a primary factor and health information is distal, and a factor used to rank options between choices already made⁽²⁸⁾.

The final limitation with any labelling strategy is the fact that these schemes are most likely to be of benefit to people already motivated to make HC. Behavioural theory reinforces the idea that intention is a strong predictor of actual behaviour. It is promising from the current results that, for this sample at least, the desire to provide healthy options for their children is there. Using techniques from behavioural economics such as controlling where on

menus certain items appear in addition to explicit labelling may be more effective for this sample.

Parents are strongly driven to make food choices for their children's health. Yet, in the context of eating out at a restaurant or similar, there seems to be a shift in priorities. Although a small number still are driven by health when making order choices, it appears that when eating out, most parents want to have a good (enjoyable) experience and provide something to their children that they will eat. This was echoed in free-entry text with multiple parents describing fussiness, avoiding meltdowns and food waste and stating simply, 'something they will actually eat' as a motive for food choices with similar observations made in qualitative research⁽⁸⁾.

A second element to the sentiment of providing children with 'what they will actually eat' is the desire to avoid 'making a scene'. Eating is a social occasion⁽³⁰⁾, and eating out comes with additional social pressures about the choices being made but also child conduct. Studies have shown how food choice influences person perception and how social factors influence choices in fast food environments^(31,32). Overall, this suggests that some parents balance their overall desire to provide healthy foods to their children with outsider judgement. A solution to this problem is to provide healthier alternatives in a form with which children are already familiar with and have a taste preference for. This way parents can balance their needs to provide healthy food and meet their child's immediate taste preferences. The observation that parent familiarity with the healthy alternatives presented also positively related to the number of healthy alternatives selected, further supports this tactic.

Liking and taste have been previously acknowledged as significant drivers of choice for children in restaurant environments^(13,29). To effectively improve choices restaurants may need to better understand child taste preferences beyond the traditional, unhealthy options. Existing studies have targeted side dishes and removed French fries and soft drinks from children's menus in full-service restaurants. These techniques have been shown to improve choices and that may even be sustained 2 years after implementation⁽³³⁾. Children themselves have also endorsed strategies such as offering fruit or vegetables as a meal accompaniment⁽²⁹⁾.

The sample who completed this survey was not representative of the wider population in Australia. Based on the 2016 census data, 22% of Australians have a Bachelor's degree, 66.7% are born in Australia and average income translates to roughly \$90 k per annum⁽³⁴⁾. It is unclear if the observations made would also be relevant for those with lower levels of education, for example. The sample self-reported good compliance to national guidelines for vegetable consumption which is considered a robust marker of overall diet quality. Furthermore, this variable was a strong predictor of a parent's choice to order more healthy alternatives. This would suggest, as expected, that healthier parents also aim to make better choices for their

children. In terms of the current sample, it may suggest that it was generally more health conscious than the wider population and therefore biased towards making healthier selections. The survey failed to exclude people who had children with specific dietary needs (allergies, vegetarian, etc.) that may limit their choices. These people could and, often did, indicate their restrictions which were coded into making general food choices due to 'dietary needs'. A final limitation is the virtual menu and hypothetical ordering scenario. While these methods have been used previously, this may result in a different level of processing relative to making order choices in situ. As noted previously, behaviours may be more likely to differ using these methods relative to real-world scenarios⁽¹¹⁾. Furthermore, this method meant that only one person (a parent) placed orders. In the real world, children, particularly older children, may choose their own items and we did see a trend of this for primary school-aged children in our sample. Nonetheless, only a third of parents in the current sample indicated that their child would have decided what to order. Previous studies have also indicated that parents mostly place orders for their children⁽¹³⁾.

Conclusions

Despite recognition of the growing issue of childhood overweight/obesity, few effective population-level strategies have been implemented to support parents' desire to make HC for their children. Eating away from home comprises a significant part of the Australian diet. Parents indicated a strong preference for availability of healthier children's menu choices in CRHC, however, also suggested that they are balancing health motivations with the desire to have a pleasurable experience and provide food that their child will eat. The availability and labelling of HC influenced only a sub-set of parent's menu choices and this may relate to familiarity as well as distrust in labelling systems. For maximum impact, healthy menu choices need to be matched with children taste preferences in order to allow parents to realise their desire to provide HC their children will consume. Labelling may be of secondary importance. These strategies also need to acknowledge older children who are more likely to place their own orders. This may mean incorporating persuasive tactics specifically targeting children as well as parents.

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