

A qualitative study exploring socio-economic differences in parental lay knowledge of food and health: implications for public health nutrition

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Abstract

Background: The role played by lay knowledge in understanding health inequalities has received increased interest recently. Very little is known, however, about how lay knowledge of food and health varies across social class. The present exploratory study compared and contrasted ways in which people from different social backgrounds draw on and use different forms of lay knowledge about food and health.

Method: Parents from 40 families were recruited from two socio-economically different suburbs (20 families from each suburb). In-depth interviews were conducted with the mother and father in each family to examine lay knowledge about food and health. All interviews were transcribed and coded for specific themes. Responses from each suburb were compared and contrasted.

Results: Different forms of lay knowledge about food and health were noted, especially concerning children's eating habits. Parents in the high-income suburb were more likely to discuss food and health in technical terms informed by contemporary nutritional or medical priorities. Parents in the low-income suburb did not share this discourse, but instead were more likely to discuss food in terms related to children's outward appearance or functional capacity.

Conclusions and implications: The research highlights differences in lay knowledge about food and health across social class. It emphasises the need for public health nutrition policy-makers and practitioners to pay attention to lay knowledge on its own terms, rather than attempting to educate from predetermined assumptions, principles and standards.

Keywords
Parents
Social class
Lay knowledge
Qualitative research methods
Pierre Bourdieu

There is now a large body of evidence concerning the relationship between social structures and health. Indeed, under the heading 'Social determinants of health' can be found a burgeoning body of research – theoretical and empirical – emphasising the role social forces play in influencing the burden of disease in Western society. Much of the focus of this work concerns the origins and consequences of health inequalities in an attempt to better understand why individuals in higher socio-economic groups enjoy better health than those in lower groups. Importantly, this is not merely a comparison between the very poor and the very rich, the practice of which has a long and enduring history in public health¹. Rather, what has become apparent is the existence of a health gradient across all social strata, not merely at the extremes². To some extent this research direction can be seen as a counter-balance to an earlier emphasis on behavioural risk factors, which were often seen as merely a matter of individual choice. This focus has been criticised for failing

to consider the social milieu in which individual choices are made. For example, work by Graham found that women in underprivileged circumstances used cigarette smoking as a coping measure to overcome the social pressures of managing families within limited resources³. Thus the examination of health-related behaviours is better informed when social circumstances are considered.

In Australia, a number of surveys have examined food in relation to social position, class or social prestige^{4–13}. These comparative surveys have demonstrated that in Australia, as elsewhere, people from different social backgrounds shop differently, eat differently and have different food belief systems. While these insights have an important role to play in understanding food habits across social class, surveys – with pre-set questions and instruments – have a limited ability to gain a more in-depth examination of the issues. Qualitative research, on the other hand, which seeks the viewpoint or stories of the

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respondents themselves, is more likely to yield richer insights^{14,15}.

The notion of lay knowledge has been discussed in depth by Popay *et al.*¹⁶, who use it to represent the ways of speaking, or 'narratives', which represent the meanings and experiences influenced by the social circumstances in which people live. It is a more useful term than 'attitude' or 'beliefs' because it acknowledges the social milieu in which meaning and knowledge are constructed.

Some Australian studies have used qualitative research to provide in-depth understandings of food within particular social groups, e.g. low-income women¹⁷ and sole parents¹⁸. These studies are useful but, because of the focus on one particular group, limit our ability to compare findings across social class.

The Adelaide Food and Families Study reported here set out to contrast lay knowledge and eating habits of people from different social backgrounds. The study took a mainly qualitative approach to data collection with the explicit aim of attempting to understand the complexity of food practices within family life from the perspectives of the respondents. In doing so, it sought to examine lay explanations to provide insights into participants' lay knowledge.

One particular aim of the study was to examine the ways in which people from different social backgrounds draw on and use different forms of lay knowledge about food and health. Such an examination is very important because, while public health nutrition programmes (especially those with an education component) attempt to convey simplified messages, they do in many ways assume foundational scientific understandings and nutritional concepts. Studies have shown that these are not always shared across social class¹⁹. When this is the case the effectiveness of public health nutrition education programmes is limited, especially with those groups who experience greatest disease burden from diet-related illnesses such as low-income groups.

Qualitative research is undertaken primarily to understand and describe, and in doing so generate theories or explanations, rather than test hypotheses²⁰. The present study was exploratory and results are not presented to prove conclusively a case for social class differences in lay knowledge. Rather, they are presented to encourage further research into and debate about the ways in which people's understandings of food and health vary according to social background, and what this might mean for public health nutrition.

Materials and methods

The study

Families were recruited to the Adelaide Families and Food Study from two different areas chosen on the basis of information from the Australian Bureau of Statistics. Area A was characterised by high numbers of low-income

families, high levels of subsidised or housing trust accommodation, and low levels of tertiary education. Area B was characterised by the opposite profile – households were mostly high-income, home ownership levels were high and tertiary education and professional qualifications were common.

The sample

Families were recruited to the study in the following way. Maps of the census collection districts (CCDs) in each area into were divided into six equal sections. A number between 1 and 6 was randomly selected (by the roll of a die) to select the section of each CCD for recruitment. All households in the selected section of each CCD received a letterbox-dropped invitation to join the study. This was followed up by a door-knock at each house to recruit suitable families. A family was deemed suitable if there were no more than four children living at home; at least one child was less than 12 years old; both mother and father lived at home; both parents agreed to be interviewed; and parents could communicate in English. The purpose of the selection criteria was to recruit so-called 'typical families', i.e. couples with young children, and to avoid duplicating studies that had already examined eating patterns in certain family types such as single-parent families¹⁸. In all, 20 families from each area (total of 40 families, 80 respondents) were recruited. No family dropped out of the study. The study was given ethics approval by the Ethics Committee in Flinders Medical Centre. Household income, home tenure and family profiles are provided in Table 1.

Methods

The parents in each family were interviewed in their own home on three separate occasions by the author. A different range of issues was discussed during different visits. All interviews were audio-taped (with permission) and transcribed. Interview transcriptions were indexed,

Table 1 Household income*, home tenure and family profile in Areas A and B

	Area A (n = 20 families)	Area B (n = 20 families)
No. of families with annual income <AU\$20 000	7	0
No. of families with annual income AU\$20 000–50 000	8	1
No. of families with annual income >AU\$50 000	2	15
No. of families buying home	6	19
No. of families with parents with university education	1	17
No. of families with at least one child <4 years	8	7
No. of families with two or fewer children	12	15

* Three families in Area A and four families in Area B declined to provide family income information.

coded and managed using NUDIST version 4.0 (QSR Software, Melbourne, Australia), a package for handling qualitative data.

To guide the interviews a schedule was used. The schedule was piloted on two families (not included in the final sample) to ensure that the type, flow and number of questions were appropriate to the aims of the study. The final schedule consisted of open-ended questions about everyday routines around food preparation, shopping and other aspects of family food management and decision-making. Thus discussions ranged over a number of food-related issues. An overview of the areas addressed in the interviews is given in Table 2.

Extensive field notes were recorded during data collection. Field notes are an important component of qualitative research, providing the opportunity for active reflection and *in situ* analysis of the data to highlight themes that arise. In light of this, the interview schedule was gradually modified during data collection to capture and explore emerging issues. However, a number of core questions about shopping, cooking and management of food in the home were asked of all families, partly to provide a structure to the interviews and partly to allow for comparisons between families and across Areas A and B.

The material presented in this paper is concerned with the ways in which the families responded to core questions, raised during the third and last interview,

Table 2 Areas addressed in interviews for the Adelaide Families and Food Study

Interview 1 – Food shopping and food storage in the home

Location of food shops
Distance to food shops
Means of getting to shops
Frequency of shopping for food
Time spent shopping
Aids to food shopping (e.g. lists, coupons)
Views on location and variety of shops
Budgeting for food shopping
Responsibility in the family for food shopping
Household inventory of storage facilities

Interview 2 – Family meal patterns and food preparation

Description of family meal patterns
Meals shared with others (friends, other family members)
Eating away from home as a family
Eating away from home as individuals (school/work lunches)
Cooking and food preparation
Influences on the family menu
Effects of food preferences of family members on food patterns
Social influences on meal patterns
Changes to family meal patterns over time
Any special arrangements to accommodate children

Interview 3 – Health, health information and family food choices

Information sources about food and health
Influences of information about health on family food choices
Views on current information and advice about food and health
Views on what children eat
Views on what parents eat
Health problems that influence family food choice
Home production of food (e.g. garden produce)
Local (neighbourhood) food networks

which asked about children's eating habits. The responses to these questions were separated out of each family's transcript for examination and comparison. During the analysis special attention was paid to the language and concepts used in participants' explanations. In qualitative research increased rigour is often brought to analysis by an independent examination of the results (sometimes known as investigator triangulation²¹). In this study, triangulation was undertaken by mailing the relevant data to an observer (in Canada) who had had no prior contact with the study, and who was 'blind' to the social status of each Area. The observer was asked to read through the interview transcripts and identify whether different forms of lay knowledge could be identified and whether there was any association with Area. The observer's assessment of the data corresponded with that of the author.

The rest of this paper compares the ways in which participants discussed children's eating habits, with special attention to the differences between Areas A and B. The paper then examines the implications for public health nutrition.

Results and discussion

Parents raised a number of concerns about children's food preferences during the three interviews. Mainly these related to difficulties parents faced trying to cater to children's food tastes, and the impact this had on family food practices. This has been reported elsewhere²².

In relation to specific questions raised in the last interview about children's eating habits, marked differences between parents' responses in Areas A and B were noted. Responses from parents in Area B tended to be longer and more in-depth. However, there was also a major difference in the language and concepts used. For example, explanations from Area B parents were more likely to be in terms of the quality of the food, often described in technical language informed by nutritional science. Mostly this directly referred to the nutritional value of the food children did or did not eat. The examples below demonstrate this (emphasis added and all names used are pseudonyms):

*Lyn [daughter] is the most likely one to refuse her meat at the evening meal and I'm not worried from a **nutritional** kind of view because I know that she's eating, you know. Most of her sandwiches are either cheese sandwiches or peanut paste with the wholemeal bread, that's probably not bad.* (Mother, family #2, Area B)

*I want them to enjoy eating but I don't know how much **nutritional** value, if any, or how bad, for instance, canned ravioli is.* (Mother, family #15, Area B)

Occasionally reference to food values was couched in more descriptive language of food but still referring to

nutritional values, as can be seen in this father's comments:

*'But Craig doesn't have as much the way of **green food**, or the **orange or yellow** types of food.'* (Father, family #11, Area B)

More commonly, however, there was direct and overt reference to various nutritional components:

*'Different **nutrients** from different things but I think again when you look at things overall I think they probably have a very **adequate diet**.'* (Mother, family #10, Area B)

*'It's a good sign that she [daughter] does like her fruit, so I feel a lot happier that she's getting her **vitamins** in, in the fruit intake, whereas she's missing out on vegetables, she does make up for it a certain extent with the fruit.'* (Father, family #9, Area B)

Also of note was the focus for worry about children's diets. Area B parents' concerns about children's food were often related to specific illness or risk of disease:

*'We're sort of giving her what we consider to be healthy foods, meat, fruit, vegetables, pasta, which are all supposed to be that **fibrous stuff** and all that, but in ten years they say, "Well actually this preservative has been added and your child is going to end up with a liver complaint or something".'* (Mother, family #14, Area B)

And discussions often included direct reference to medical conditions and syndromes, as this discussion between a father and mother indicates:

Father: *'You influence her [daughter] strongly and she responds very well.'*

Mother: *'Because she understands about, she knows about girls who are **anorexic** and had **bulimia**. She's got a girl friend at school who's been a bulimia sufferer and she also doesn't want to be **obese**, so she listens, she does take notice. Because I've said, "You know, if you keep eating that way you'll just eat too many **calories** and you'll be fat and it's very hard to get rid of once you've got it on". And you can see her, she's happy with that now, she doesn't want to be **obese**.'* (Father and mother, family #16, Area B)

In contrast, parents in Area A rarely used nutrition-informed concepts in their responses. They were instead more likely to discuss children's eating habits in terms of children's outward physical appearance and general stamina. There was an overall assumption that because children grew, were happy and there were no outward signs of sickness, then they were eating well and healthy. The following excerpts demonstrate this (emphasis added).

*'...they are **growing**, you know I saw them growing well and I see them, they're eating.'* (Mother, family #6, Area A)

*'They don't seem to **get ill** or anything very often, so I mean, obviously [we are] not doing anything too bad and that's pretty well what it is. They're both fairly healthy, don't have*

too many problems, so we can't be doing too bad.' (Father, family #9, Area A)

*'The short answer to that question is that my kids aren't **starving** and they're obviously reasonably content in life, it doesn't worry me.'* (Father, family #11, Area A)

*'But they are so **athletic** see, they **play football**, they've both played football for years and that. And the young fellow, like he has 4 Weetbix for breakfast and 4 bits of toast every morning, you know which is incredible.'* (Father, family #3, Area A)

When concerns were raised about their children's eating habits, parents in Area A also discussed them in terms of children's outward appearance. As one mother put it:

*'I think they [are] healthy kids. Maybe Ulrich [son] is not as healthy because he **looks chubbier** but otherwise I don't really complain about the way they eat.'* (Mother, family #15, Area A)

Or in another family, a parent commented:

*'You must control because you can't give a child everything she wants and especially [when] **you see it goes on her body** so the best way is to say no.'* (Father, family #18, Area A)

In sum, Area B high-income families were much more likely than Area A low-income families to advance explanations about children's eating habits in terms of nutrition and nutrients, and were more likely to relate to food as a health risk (e.g. obesity, damage to body systems). In Area A, parents rarely described food using technical nutritional descriptions. Instead, Area A parents were more likely to describe eating habits in relation to children's outward activity (growth, activity, etc.) or ability to play. A statistical analysis of responses would be inappropriate given the qualitative methodology employed in this study; however, the numerical differences can be described as follows. Thirteen of 20 Area B families employed a nutritionally informed response (compared with one of 20 families in Area A). Eight of 20 Area A families offered an outward activity-informed response (compared with two of 20 families in Area B). In qualitative research terms these differences are highly insightful in that they highlight different ways of expressing understandings about food and health.

In qualitative research, negative or disconfirming cases are deliberately used to examine the 'exceptions to the rule'²³. Indeed, close examination of negative cases – respondents who do not fit the overall picture for the whole group – can provide useful clues that may support or qualify the ways in which theories or hunches are interpreted. In this study, one family in low-income Area A was a negative case in that they articulated a more nutritional understanding about food with a direct reference to fat in the family diet.

Interviewer: *'So generally how happy are you with the eating habits of your kids?'*

Mother: (indistinct)

Interviewer: *'You're pulling a face Frank.'*

Father: *'Mmm, I think our faces tell it all. We're not as happy as we'd like to be. We think we have to take more action on it.'*

Mother: *'Even though we've in a way sort of reduced our **fat intake** and sometimes we, you know, it's a battle trying to... yeah, we, it's sort of a battle with us with our eating habits, well I'm not really pleased with my eating habits.'* (Mother and father, family #20, Area A)

It so happened these participants worked in the community health service sector. Their responses therefore are more likely to be informed by professional experiences of health care; experiences which separate them from the other participants in Area A.

Overall then there was a marked difference in the responses by participants across social class, which was verified by an independent observer. Results from this research support findings elsewhere. For example, the study in the UK by Charles and Kerr found significant differences in women's responses about food and health across social class¹⁹. Similarly UK research by Calnan²⁴, which compared attitudes to health, including diet, found that middle-class women were more likely to articulate a wider range of ideas and dietary components than working-class women. However, the study reported here demonstrates that these differences are not confined to women. In this research men from different class backgrounds also displayed different forms of lay knowledge about food and health.

It is well known that language use is intimately linked to social class²⁵ and whether the differences noted in this research simply reflect variations in idioms and language usage is hard to say. What is clear is that the middle-class respondents in Area B are more likely to share similar ideas and concepts about food and health with health professionals. These differences demonstrate the way that middle-class respondents' knowledge of diet connected with concepts of food (vitamins, fibre, risk of disease) that professionals often espouse. People from more working class backgrounds did not articulate these understandings, but instead tended to make reference to the outward, more functional aspects of food (growth, stamina, vitality). The data point to a difference in the lay knowledge that is used to inform understandings about food and health in various social classes.

Lay knowledge is now regarded as significant in its own right and not merely a set of quaint 'beliefs' subordinate to expertise or 'scientific' knowledge. For example, recent studies of health inequalities have found lay knowledge and lay theories (sometimes known as 'lay epidemiology'²⁶) to be particularly illuminating in better understanding people's views on causality of health outcomes²⁷.

In the same way, the present study provides an opportunity to appreciate different social understandings of food and health relationships.

Clues to the social basis of lay knowledge across social class can be drawn from the work of Pierre Bourdieu^{28,29}. Bourdieu's large study of social class in France examined food within a social context and found that people from working class backgrounds were more likely to see food as a means of fuel and an immediate source of sustenance. They were also more likely to view the body as something to be used for (physical) work purposes, rather than aesthetically, i.e. strength rather than shape. Bourdieu used the term 'dispositions' to describe the ways in which individuals conceive of and view the world from their social position. Dispositions are constructed by a variety of social, cultural and material resources and experiences; they disposed individuals and groups towards particular attitudes, morals and expectations. The result is a class rationality or logic – a sense-making framework – that provides a foundation for lay knowledge. In Bourdieu's work it made sense (on the basis of current experiences) for working-class people, who were more likely to be involved in physical labour, to view the body as a machine and to see food as fuel for that machine. Middle-class groups were more likely to distinguish themselves by preferring to see the body as an aesthetic, cultural form, and see food as a matter of good taste and style. It is this distinction in the form of what Bourdieu calls 'cultural capital' that allows one social group to have and exhibit its prestige over another. In terms of the findings of the present study, it is possible that the working-class parents saw food very much from a functional pragmatic point of view in terms of its effect on children's health. Middle-class parents were more inclined to express a scientific, more abstract, nutritionally informed understanding of food. This knowledge of food, and its articulation, may serve as a marker of social and educational privilege.

The consequences of 'disposition' are clear in other research findings on food and health. For example, Jain *et al.*³⁰ studied the attitudes of low-income mothers to children's weight problems. The mothers were suspicious of standard growth charts used by professionals to define obesity, did not see overweight as a problem so long as children were active and had good appetites, and blamed family tendencies as a major factor for children being overweight. In other words, for these parents, outward appearances were a convincing and a more rational basis for decision-making than abstract, scientific concepts of weight plotted on a graph. Cornwall's study of working-class families in east London demonstrated that concepts of health are embedded in the daily experiences of the respondents³¹. For many, there was a sense of fatalism about illness which individuals did not always have control over. Limited material resources may also make day-to-day family decision-making more focused on pragmatic survival issues³². On the other hand, Backett's

study of health concepts in UK middle-class families showed that respondents were much concerned with an individual's responsibilities (so-called 'oughts') for their health behaviours³³. This contrast could arguably represent the ways in which individuals in different social classes experience and perceive different degrees of control of resources and choices. Cornwall and Backett's work was carried out in the UK, where social class positions may be more distinctly recognised. However, Australia is far from 'classless' and the research presented here raises important implications for public health nutrition.

Conclusions and implications for public health nutrition

This paper has examined the lay knowledge of parents from different social backgrounds in relation to children's food and health. It highlights a relationship between social class and the different stocks of lay knowledge of food and health issues. The study is one of the first to suggest that class-based considerations of food and health issues are evident in men as well as women informants. Moreover, since this study was deliberately conducted in a family situation, where mothers and fathers were interviewed together in the home environment, the results come close to understanding a family context of food issues, as opposed to a more individual viewpoint. The theory developed in this research acknowledges an intellectual debt to the work of Bourdieu, which has been used by other researchers in food and nutrition³⁴.

It should be noted that, along with other forms of research and data collection, qualitative research could conceal biases. Researcher bias has been addressed in this study through a reading of the relevant interview data by an independent observer, who supported the results discussed here. However, other forms of bias can occur. For example, conceivably the social differences discussed in this research could be the result of methodological artefact, especially the degree of comfort experienced by respondents of different social backgrounds when discussing eating habits with a university researcher. Noting the shared worldview between middle-class respondents and health professionals, it could be argued that the interviewer and the interview process, in some way, encouraged a greater articulation of nutritionally based information from families in Area B, or that families in Area A were less likely to open up. As mentioned earlier, middle-class suburb B parents participated in discussions to a greater degree. However, it is unlikely that families in Area A felt unable or unwilling to openly express themselves. The questions examined in this paper were put to the respondents in the last of three in-depth interviews (each lasting between 60 and 90 min) with the same researcher. During each of the previous interviews, all carried out in the respondents' home, care was taken to

establish rapport and to make it easy for participants to feel comfortable in discussions. The fact that no family withdrew from the study could be taken as an indication that participants felt at ease with the level and kind of questions. Moreover, that the findings of this study resonate with those from other research on health and social class is a further indication that the differences recorded here are not the results of a methodological artefact. It is likely therefore that the results are the product of social structures, backgrounds and lay knowledge of respondents.

The results of this study could be interpreted as demonstrating that respondents from Area B were simply more informed, better educated, better read and (therefore) more conversant with nutritional issues than were respondents from Area A. This may well be true since educational levels, university attendance and professional qualifications were higher in Area B (Table 1). The corollary of this for public health nutrition is, however, far from simple. Public health nutrition programmes, especially those with an educational component, have to address individuals, groups and communities from a variety of socio-economic backgrounds. And increasingly low-income groups have become something of a target³⁵. However, public health nutrition education programmes have traditionally been based on an approach where health professionals deliver nutritional facts and concepts to passive lay audiences. This has been described as the 'injection' model of education³⁶. The assumption behind this approach is that education, by virtue of its capacity to enlighten, informs and possibly emancipates those who hold illogical and unfounded knowledge and beliefs. It is based implicitly, and sometimes explicitly, on a belief that lay knowledge is inferior and needs correcting. This principle has a long history in nutrition education³⁷. Recently, however, greater acknowledgement has been given to the importance of engaging with lay logic as it presents and on its own terms, rather than attempting to re-educate people to predetermined standards. In community development an approach termed 'assets-based inquiry' is a process that explicitly begins with a high regard for the resources already existing in a community – be they intellectual, cultural or material – on which further capacity can be developed³⁸. In organisational development the approach known as 'appreciative inquiry' is used in a similar way³⁹. These approaches are similar to the work with indigenous communities, where pre-existing social and cultural knowledge and practices form the basis of health programmes. For example, the telling of appropriate stories, set in within the cultural milieu, has been integrated into nutrition education and used within Aboriginal communities⁴⁰. The overall approach also resonates with emerging work on the use of narrative in nutrition counselling, where history-taking and decision-making develop from the client telling their story⁴¹. All these approaches are based, in one way or another, on an

acceptance that there resides within individuals, organisations and communities logic and practical reason which is worthy of regard and as a useful starting point for participative inquiry⁴². This is not to argue that lay knowledge must remain unchallenged even when it appears to foster eating habits which do not promote health. It is to argue, instead, that for too long public health nutritionists have paid more attention to a universal, science-based understanding of food which they attempt to impart to clients and communities without an appreciation of lay knowledge, its social origins and the role it plays in structuring worldviews. There needs to be a recognition that different forms of knowledge co-exist, and that lay knowledge has a logic, a rationality and a sense-making basis, and is an important starting point for health improvement.

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