

OLDER AUSTRALIANS' PERCEPTIONS AND PRACTICES IN RELATION TO A HEALTHY DIET FOR OLD AGE: A QUALITATIVE STUDY

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Abstract: *Objective:* To explore older independently-living Australians' perceptions and practices about what constitutes a healthy diet for older people. *Design:* Qualitative methodology, focus groups. *Setting:* Independently-living retirees in Northern NSW, Australia. *Participants:* A total of 29 participants in five focus groups, ranging in age from 60-93 years, with a mean age of 73.3 ± 8.8 years; the majority (79%) were women. *Results:* Thematic analysis of the focus group interviews revealed four themes that best represent older people's perceptions and practices in relation to healthy eating for old age. These included: 1) healthy foods - participants believed in a hierarchy of perceived healthfulness or importance of foods; 2) quantity - participants believed that ageing was associated with a reduced dietary intake and less need for meat; 3) personal circumstances - participants acknowledged that food costs, social situations and health conditions influenced their food choices; and 4) good intention - participants acknowledged that the desire to regain or maintain wellbeing and to preserve health positively influenced their food choices. Participants were unaware of the national nutrient targets for older Australians. *Conclusion:* The trend towards reduced dietary intake of meat and the indifference to dairy products expressed by many participants in this study suggests that they are at risk of not achieving the requirements for protein and calcium in particular. Failure to meet these age-adjusted nutrient targets has important implications for the health and functional capacity of older people.

Key words: Australians, diet, elderly, focus groups, nutrition, perceptions.

Introduction

Studies have shown that numerous factors influence the food choices and dietary practices of older people. These include lifestyle, education (knowledge about food), taste, convenience, traditional and cultural beliefs, and cost (especially in relation to fruit and vegetables) (1-4). Health concerns and medical conditions also have a major impact on food choices in this age group (4, 5). Personal beliefs, attitudes and values are important predictors of how people construct their own definition of, and approach to, healthy eating habits and patterns.

According to the literature the meaning of a healthy eating for older men and women is associated with the notion of a 'proper meal' i.e. a meal that they have been brought up on; one that usually includes meat or fish, potatoes and vegetables. Typically, individuals maintain familiar and long-established eating behaviours and food routines (6, 7). Older people tend to perceive 'healthy' eating in terms fresh fruits and vegetables, a balanced meal, a variety of foods eaten in moderation, or a 'healthful' meal (5, 6). Lau (3) found that perceived healthfulness of foods ranked second to taste for older people, as a predictor of eating behaviour. Convenience foods and processed foods are often described by older people as junk or rubbish foods, and are seen as being incompatible with the notion of a healthy diet (8).

The Australian National Health and Medical Research Council (NHMRC) has established a set of nutrient reference values for the Australian population. These include specific nutrient recommendations for two categories of older individuals; 51-70 and 70+ years. The suggested requirements

for some nutrients, such as protein, calcium, vitamin D, riboflavin and pyridoxine, are actually set higher for older Australians, in comparison to younger adults (see Table 1). These age-adjusted targets represent a 20%-30% increase in the requirement for protein, calcium, riboflavin and pyridoxine for older Australians (9). More specifically, men and women aged 70 years and over require approximately 25% more protein than individuals aged 19-50 years of age.

The NHMRC has also developed dietary guidelines to reduce the burden of preventable diet-related diseases, and to promote good nutrition and health for all Australians. These include recommendations for intake from the core food groups and are designed to meet adequate nutritional requirements. Older Australians are encouraged to consume a wide variety of nutritious foods, and aim for 2 servings of fruit, 5 servings of vegetables, 2 servings of milk, 1 serving of meat, and 4-9 and 4-7 servings of cereals (for men and women respectively) each day, in order to meet their nutritional requirements (10).

Although guidelines for healthy nutritional practice have been established, little is known about how this information is applied to food choices and daily life for older people. Therefore the aim of this research was to explore the perceptions and practices of older Australians in relation to 'a healthy diet', and to interpret these findings in the context of the age-adjusted nutrient requirements for older Australians.

Methods

In order to explore current views about a healthy diet for old age the research utilised focus groups, which provide insights

OLDER AUSTRALIANS' PERCEPTIONS AND PRACTICES IN RELATION TO A HEALTHY DIET FOR OLD AGE

into people's beliefs and attitudes. Qualitative inquiry is best suited to research that is interested in exploring the 'real life context' (11). The emphasis of qualitative study designs is to produce descriptive data that assists efforts to understand the nature and meaning of people's experiences. The intent of focus groups is to explore the views of individuals, not to generalise to larger groups.

In June 2010 the project was promoted through a local radio station, in northern NSW Australia where individuals aged 60 years and over were invited to participate. We then asked these participants to promote the study to their extended network of acquaintances, because we wanted groups of people who shared similar characteristics whereby familiarity would encourage candid, open and honest discussions. Our role as moderators of the focus group interaction was to guide participants through the questions, probe and encourage discussion, and ensure that all participants had the opportunity to contribute their views.

We adopted Krueger and Casey's (12) framework for constructing focus group questions i.e. we commenced with opening and introductory questions, followed by transition questions, before moving on to the key questions, which were the 'focus' of the discussions. This article presents the findings of the two key research questions of the focus groups: 1) What are you doing to achieve a healthy diet? and 2) Do you think that as people get older their dietary requirements change? Focus groups were conducted until a clear pattern of responses emerged and subsequent groups produced only repetitive information.

The discussions were transcribed verbatim. The structured transcripts were then examined independently by the researchers using thematic analysis. The first step in data analysis was to apply an initial code or descriptor to the data. Then, these codes were grouped into categories of related concepts; a process referred to as axial coding (13). Finally, the themes that reflected the content of each of the categories were developed. The double-coding of the data ensured that the process of data analysis was rigorous. The research was approved by the Southern Cross University ethics committee (approval no.ECN-09-151).

Results

Five focus groups were conducted and responses were collected from n=29 participants (6 men, 23 women). Groups ranged in size from four to eight participants. Within each group participants were generally known to each other as acquaintances and shared similar social and cultural backgrounds. The age of participants ranged from 60 to 93 years (mean =73.3± 8.8 years). Just over half (52%) of the sample lived with someone; either a spouse or companion, and the remainder lived alone. This section presents a discussion of the four main themes to emerge from the data analysis, including some quotes from the participants as examples of these themes. Table 2 shows how these themes were constructed from the initial codes and categories.

Table 1

Nutrient Reference Values Recommended Dietary Intakes/per day for select micronutrients and protein for Australians

	Calcium RDI	Vitamin D RDI	Riboflavin RDI	Vitamin B6 RDI	Protein RDI
Men					
19-50	1000mg	5µg	1.3mg	1.3mg	64g
51-70	1000mg	10µg	1.3mg	1.7mg	64g
70+	1300mg	15µg	1.6mg	1.7mg	81g
Women					
19-50	1000mg	5µg	1.1mg	1.3mg	46g
51-70	1300mg	10µg	1.1mg	1.5mg	46g
70+	1300mg	15µg	1.3mg	1.5mg	57g

Healthy foods

Across all groups there was agreement that fruit and vegetables are an important component of a healthy diet for older people. Consistently the participants emphasised the value of fresh, seasonal, home-grown produce, where possible. It appeared that participants' consumption of fruit and vegetables, above all other food groups, was the reference point for their perceptions about the quality of their diet.

Table 2

The process of data analysis and the construction of themes

Initial code	Categories	Themes
Freshness - fruit and vegetables	Perceived healthfulness of foods	Healthy foods
Seasonal, home grown		
Some meat, dairy and cereals	Positive food connotations	Quantity
Cutting down red meat	Perceived reduced nutritional requirements	
Reducing fat	Negative food connotations	Personal circumstances
Balance	Unsure about amounts - fruit	
Physical activity	Social situation	Individual
Living arrangements	Individual	
Family circumstances	External influences	Good intention
Health conditions		
Income	Desire to be healthy	Moderation
Variety		
Balance	Perceived value of food supplements and potential deficiencies in diet	
Supplements		

"I think our diet is really good because we try to grow our own vegetables ... we eat a fair amount of them".

In general, red meat was not viewed as being central to participants' views about what constitutes a healthy diet. In fact, many participants viewed fish as being a healthier alternative to red meat and were aiming to incorporate fish into their diet on a regular basis.

"Kangaroo meat, fish and sardines are good, but not much red meat".

Surprisingly, among a predominantly female sample, there was widespread ambivalence about the importance of dairy products in the diet. A few women claimed that they consumed 2-3 cups of milk daily because they enjoyed the taste and it was a continuation of a lifelong habit. In contrast, other women

JNHA: NUTRITION

doubted the benefit of dairy products for bone health and some even believed that dairy products exacerbated or caused respiratory problems such as catarrh or rhinitis.

Cereals were viewed as being a source of fibre and energy, and were the least discussed food group among participants. Participants with diabetes and bowel problems were aware of the need to carefully select cereals based on their glycaemic index and fibre content, respectively. There was a general level of interest in adopting low-fat dietary guidelines. Participants questioned the nutritional value of pre-packaged convenience foods and frozen meals.

Quantity

What emerged strongly was that the majority of participants believed that their nutritional requirements were less than when they were younger, and that cutting down certain foods (such as meat and fat) was beneficial to health in old age.

"I think quantity is a really big issue with meals for older people ... older people should consume less".

Across the groups there was a widely held perception that their need for red meat in particular was reduced in old age.

"I don't eat much red meat, maybe we don't need as much protein now ... we used to cook meat for big muscular men going out to work, but not now that we are older".

Although as previously mentioned, the participants associated fruits and vegetables with positive health attributes the majority of them did not discuss them in reference to any particular dietary recommendations. Instead, they commonly used the expression 'lots or plenty' as the target for fruit and vegetables, and 'less' when referring to their meat intake. Participants were aware of the importance of regulating their food intake according to their level of physical activity in order to maintain their weight and to prevent weight gain.

"... if we end up doing lots more physical activity we can cope with a bigger diet and more calories, it is individual".

Personal circumstances

The cost of fresh fruit and vegetables, and good quality meat, was mentioned by a few participants as a barrier to healthy food choices. Some participants identified factors associated with their social situation that limited the extent to which they could adopt a healthy diet. For example, a few cited differences in food preferences and eating patterns among household members as a factor that restricted their access to a healthy diet.

"I'd say that the person I live with makes a big difference to what I eat ... when I do live alone I think my diet will change a lot ... it will be better".

Some individuals in this study with a chronic health condition believed that their current dietary practices were compatible with recommended guidelines for these conditions. For example, some of the participants with type II diabetes were of the belief that they were adopting the correct dietary guidelines for this condition, as prescribed by a health

professional.

Good Intention

The desire to regain or maintain wellbeing and to preserve good health was a significant determinant of food choices in this group. A 'good' diet was viewed as being essential for a productive, long life. Most participants believed that optimal health could be achieved by eating a variety of food, whilst also adopting the approach of 'moderation in all things'. The term 'balanced diet' was frequently used by participants to describe their goal in relation to food choices and their pursuit of good health. Participants claimed to be incorporating nutritious, tasty foods into their diet.

"Taste and the desire to be healthy are the most important things that influence what I eat".

"We aim for a balanced diet, with lots of fresh healthy fruits and vegetables, and some meat".

Discussion

The objective of this study was to explore older independently-living Australians' perceptions and practices about what constitutes a healthy diet for older people. An important finding was that there was consensus among the participants that a diet rich in fresh fruit and vegetables, complemented with meat (not necessarily daily) and some dairy products and cereals was the basis of a healthy diet for an older person. A diet that is high in fruit and vegetables is protective against several chronic diseases, including cardiovascular disease, cancer and diabetes (14-17).

In reference to the quality and composition of a diet, particularly for an older person, participants were generally of the opinion that "there isn't any difference between a healthy diet for an older person and a healthy diet for a younger person, you have to have a balanced diet ... but don't overdo it". This viewpoint is in agreement with findings from another study that explored the dietary beliefs and practices of people aged 75 years and over living in Scotland. This study found that there was almost unanimous support for the view that 'as long as you are healthy, and have a good variety of food, there's no need to change anything'(6). Interestingly, very few Scottish people who participated in this research thought that there were any special nutritional requirements that older people should adopt to safeguard or improve their health in old age, which is consistent with the views of participants in our study.

There was widespread agreement among our participants that ageing was associated with a decline in food intake. A number of longitudinal studies have found that age-related dietary changes typically include eating less and making different food choices (18-20). The majority of participants in our study claimed that they were consuming less meat (often specifically red meat) compared to when they were younger, citing a perceived lack of need for meat in general as the main reason for reducing their intake. Widows frequently

OLDER AUSTRALIANS' PERCEPTIONS AND PRACTICES IN RELATION TO A HEALTHY DIET FOR OLD AGE

commented that since they 'no longer had to cook meat for their husband or family' they generally 'didn't bother with it'. Insufficient dietary protein and impaired protein metabolism, along with lifestyle, and hormonal and neurological factors, contribute to the progression of sarcopenia (21). Sarcopenia has major functional and metabolic consequences that include reduced basal metabolism, decreased insulin sensitivity, reduced muscle strength, increased risk of falls and increased risk of mortality (22, 23).

The apparent low dietary intake of dairy products by some participants in this study raises concern about the adequacy of their diet to meet the increased calcium needs of older women. Since this study did not obtain data about supplement usage (e.g. calcium supplements), or the intake of calcium-fortified beverages, the true extent to which this predominantly female sample is at risk of insufficient calcium intake is unknown. Diets that are low in dairy products or calcium-rich foods accelerate the rate of osteoporosis (24). Older women might benefit from targeted media campaigns that emphasise the importance of nutrition and lifestyle on bone health.

Almost half the participants in this study lived alone. Social isolation, marital status and living arrangements have been found to affect eating habits and nutritional status in this age group (25). Widowhood or separation can lead to loneliness and diminished interest in cooking and eating. Gustafsson and Sidenvall (26) found that among a group of Swedish women aged 65-88 years of age the widows had higher rates of poor nutritional status compared with cohabitating women who consumed more cooked meals and had greater food variety. For participants in this current study, living with a partner or companion was not necessarily perceived as being protective against poor nutritional practices. Some of our participants who believed that their food choices and dietary practices were constrained by their living arrangements actually thought that their dietary practices might potentially improve if they lived alone.

This study did not seek to quantify the use of dietary supplements in this sample. However, several participants made reference to the use of these products as additions to their diet to improve their health. International studies confirm that up to 60% of this age group regularly use vitamin and mineral preparations (27). The extent of supplement usage by the older population reflects a high level of interest in self-care and health maintenance.

According to Lau (3) compared with younger adults, older people are generally more concerned about restoring and maintaining health status in order to live healthier and longer, than younger people. Participants in this study expressed the same motivation to preserve health. They believed that their food choices and eating behaviour would help them to achieve this goal, yet interestingly none of them were aware of the NHMRC age-adjusted nutritional targets. As previously stated the NHMRC has increased the requirements for protein, calcium, vitamin D, riboflavin and pyridoxine for older

Australians, compared with younger adults. Failure to meet these age-adjusted nutrient targets has important implications for the health and functional capacity of older people.

There is agreement in the literature that nutrition education, combined with appropriate encouragement and support, is necessary to assist older people translate and apply nutrition information to their own situation (28-31). Effective nutrition education for older people could potentially improve their health and reduce the need for health and social services. Research has shown that simple, practical nutrition education targeting chronic health conditions (e.g. diabetes, hypertension) (32) or specific medical needs (e.g. interventions to lower sodium in hypertensive individuals) (33) can positively impact food choices and eating behaviour in these situations. Nutrition education that utilises a range of strategies, including print-based materials (e.g. educational booklet, newsletters etc.) can improve knowledge, attitudes and food practices in this age group (30, 34).

In conclusion, this study found that participants in this small sample of independently-living older Australians believed in the value of fresh healthy food (particularly fruit and vegetables), and when supplemented with dairy, cereals and some meat, formed the basis of a healthy diet for older people. They expressed a high level of commitment to what they believed were appropriate food choices to maintain health and wellbeing at their stage in life. Despite their good intention, we concluded that older people in our region might benefit from a targeted media campaign to raise awareness about the importance of age-adjusted nutrient targets for wellbeing. Further research is needed to construct and evaluate interventions to increase knowledge and awareness about appropriate food choices for healthy ageing.

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