British Journal of Nutrition (1999), **81**, Suppl. 2, S133–S137

https://doi.org/10.1017/S0007114599000987 Published online by Cambridge University Press

Perceived barriers in trying to eat healthier – results of a pan-EU consumer attitudinal survey

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Information on the perceived difficulties in trying to eat a healthier diet is important in assisting those in nutrition education devise more effective programmes. The objective of this study was to determine the main perceived barriers that people have in trying to eat a healthy diet in the 15 member states of the European Union (EU). A cross-sectional study in which quota-controlled nationally representative samples of approximately 1000 adults (15 years upwards) from each member state completed a face-to-face interview-assisted questionnaire. The most frequently mentioned perceived barriers to healthy eating concerned time and taste factors. Time-related factors were more important for younger respondents and those with a higher level of education, who appear to regard taste as being compromised by healthy eating. Variation exists both between member states and between demographic groups in the frequency of barriers mentioned. A lack of knowledge about healthy eating was not selected by many as an important barrier. A major obstacle to nutrition education is the fact that 70 % of EU subjects believe their diets are already healthy. It may be that nutrition educators should concentrate on showing consumers how to evaluate their own diet appropriately in terms of fat, fibre, and fruit and vegetables. Food-based guidelines may be useful in this endeavour.

European Union: Barriers: Healthy eating: Beliefs: Socio-demographics

In the European Union most countries issue health-related nutrition guidelines. A remarkable level of agreement exists between countries in the dietary guidelines that are issued for the promotion of a healthy diet (Cannon, 1992). However, such healthy-eating guidelines have generally been derived solely on an epidemiological basis with little or no account being taken of consumer attitudes and perceptions. These guidelines have been used in health promotion programmes to try to alter the population's eating habits. However, they have met with limited success. Studies in the UK (MAFF, 1994) and the Netherlands (Hulshof *et al*. 1993) found that less than 1 % of the population was achieving all the guidelines. Such guidelines, while they may be ideal, appear to be unattainable to a large proportion of the population. If some account was taken of consumer attitudes and perceptions about healthy-eating messages as well as the cultural context in which the healthy-eating messages are derived, perhaps such programmes would be more successful in effecting long-term changes to the diet. Thus, an awareness of the difficulties that people have or perceive they have in trying to eat a healthier diet is critically important for those involved in healthy-eating promotion and nutrition education. Such information enables those involved in developing programmes to devise more effective and focused strategies by taking account of the difficulties (perceived or encountered) when trying to eat a healthier diet.

There are many reasons why nutritional advice may not be followed. It may be due to a lack of knowledge or information, a general lack of interest towards making a change to one's diet, or certain perceived or encountered barriers may prevent people from eating healthier diets such as lack of money (cost), lack of availability, lack of time (too busy with work or study commitments) or taste (healthy food is uninteresting and boring). On the other hand, it may be due to a non-barrier such as an unwillingness to comply where people do not see the need to make changes to their diet as it is already healthy enough.

While there has been some research on the difficulties and barriers to the adoption and maintenance of healthy diets, many of the studies have been carried out on patient groups and their attitudes to a therapeutic diet (Koikkalainen *et al*. 1996). In contrast, very little is known about the barriers considered to be important in the general population of the fifteen member states in the EU. To date, all of the studies on difficulties in trying to maintain or adopt a healthy diet among healthy free-living subjects have been conducted on samples within individual member states. A number of obstacles to maintaining healthy eating practices have been identified from these studies. These include social factors whereby the presence of other people makes it more difficult to adhere to a particular diet (Holm, 1993; de Castro, 1997). The cost of food (Lloyd *et al*. 1995), the choice and

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https://doi.org/10.1017/S0007114599000987 Published online by Cambridge University Press

Table 1. A list of 22 possible statements from which EU subjects were asked to select the major barriers for them in trying to eat healthier

- Irregular work hours
- Busy lifestyle
- Willpower
- I do not want to change my eating habits
- Too great a change from my current diet
- Cooking skills
- Healthy foods are more perishable
- Lengthy preparation
- Storage facilities/limited cooking facilities
- Price of healthy foods
- Unappealing foods
- Strange or unusual foods
- Giving up foods I like
- Feeling conspicuous amongst others
- Taste preferences of families and friends
- Not knowing enough about healthy eating
- Experts keep changing their minds
- Healthy options not available in shop or canteen or home
- Not enough food to satisfy hunger
- Other (please specify)
- No difficulty

availability of foodstuffs (Barnes and Terry, 1991) and the taste of food where patients anticipate that a healthy diet is going to be unpalatable and boring (Holm, 1993) have also been noted as barriers. Lack of information and resistance to change have also been identified as difficulties when trying to eat healthily (Rudat *et al*. 1992). The Institute of European Food Studies Pan-EU survey on consumer attitudes to food, nutrition and health was the first study to examine the perceived difficulties to healthy eating in all fifteen member states, thereby enabling an examination of the influence of cultural background as well as socio-demographic influences on the perceived barriers to eating a healthier diet (Lappalainen *et al*. 1997).

Methods

A cross-sectional study involving approximately 1000 adults (15 years upwards) from each member state was conducted between October 1995 and February 1996. The questionnaire containing fourteen questions was developed by a project management group comprising a representative from each member state with expertise in attitudinal research in the field of nutrition, as well as some industry representatives with market research experience. Subjects were asked to select from a list of twenty-two possible barriers those which they perceived as major difficulties in trying to eat a healthier diet (Table 1). In total, 14 331 subjects completed the interview-assisted face-to-face questions. In each member state, sample selection was quota-controlled to make the samples nationally representative. Interviews were conducted by a group of market research organizations offering omnibus research in each member state. To ensure comparability of results between member states, great care was taken to make sure that the translated versions of the survey maintained the sense of the original English version. Results are shown for the combined EU sample weighted according to population size and for national profile weighted according to age, sex and regional distribution. In describing the results a greater emphasis was placed on the practical significance rather than the clinical significance, because, owing to the large sample size, even very small differences (of 2 and 3 %) between responses were significantly different. For the purpose of identifying target groups in the population for nutrition education programmes, differences of at least 10 % were regarded as being of practical relevance. The methods involved in sample selection for each member state, as well as the organization and administration of the questionnaire, have already been outlined in detail elsewhere (Kearney *et al*. 1997).

Results and discussion

Almost 80 % of the EU population associated some difficulty with trying to eat a healthier diet (Table 2). The main perceived barriers among EU subjects related to time – 'irregular work hours' (24 %) and 'busy lifestyle' (17 %) – and taste – 'giving up liked foods' (23 %). Other important perceived barriers that were frequently mentioned included: 'willpower' (18 %), 'price' (16 %) 'preferences of others'

Table 2. The percentage of subjects in each EU member state ($n = 14\,331$) selecting the main perceived barriers to healthy eating

	Irregular work hours	Give up foods	Busy lifestyle	Willpower	Price	Preferences of others	Eating out	Unappealing food	No difficulty	Don't want to change
Austria	31	39	13	24	19	18	23	9	18	15
Belgium	35	25	34	22	16	20	18	16	16	17
Denmark	21	21	25	14	17	8	6	6	18	17
Finland	19	27	23	26	15	12	7	11	14	10
France	23	22	19	21	19	14	13	12	23	16
Germany	12	22	6	10	9	13	11	4	34	16
Greece	13	22	15	13	13	17	14	12	30	16
Ireland	17	34	19	31	14	21	4	9	13	14
Italy	36	18	16	10	7	9	8	10	9	12
Luxembourg	41	43	20	28	24	26	26	27	7	12
Netherlands	27	20	21	17	16	13	7	11	21	20
Portugal	27	22	21	13	21	15	14	16	20	16
Spain	30	15	18	25	16	12	7	22	21	13
Sweden	25	32	37	20	21	14	13	11	9	11
UK	25	33	24	27	23	12	12	11	14	16
EU*	24	23	17	18	16	13	11	11	21	15

*Weighted for population size.

Table 3. The percentage of EU subjects ($n = 14\,331$) who perceive 'time' and 'taste' barriers to healthy eating, classified by sex, age, education level and employment status

	Time*	Taste†
Sex		
Male	34	31
Female	31	31
Age (years)		
15–34	42	35
35–54	38	30
55+	15	29
Education level		
Primary	20	29
Secondary	40	32
Tertiary	45	31
Employment status		
Working	44	32
Housewife	30	29
Student	34	29
Unemployed	24	33
Retired	11	28

* Time = 'irregular work hours' and 'busy lifestyle'.
† Taste = 'give up foods', 'unappealing food' and 'strange and unusual foods'.

(13 %) and 'don't want to change' (15 %). Interestingly, knowledge was not seen to be a major obstacle to trying to eat healthily, being selected by only 7 % of the EU population. Similarly, the concept that 'experts keep changing their minds' was considered an important barrier by only 8 % in the EU. However, 20 % of Danes considered this a major barrier to eating healthier. While the availability of healthy foodstuffs has been found in earlier studies to be an important barrier, in this survey just 7 % of the EU samples selected this barrier statement. Other barriers not considered to be particularly important among the total sample included: 'lengthy preparation' (8 %), 'cooking skills' (7 %), 'healthy foods are more perishable' (5 %), 'limited cooking facilities' (3 %) and 'storage facilities' (2 %).

A considerable degree of variation across member states was evident in the selection of responses (Table 2). For example, while only 12 % of Germans selected 'irregular work hours', this was selected by almost three times that number of Belgians (35 %). Similarly, 'busy lifestyle' was not considered important for Germans (6 %), but was the most frequently selected barrier in Sweden (37 %) and Denmark (25 %). This wide geographic range in the selection of responses was seen for most of the barriers.

In contrast, the influence of socio-demographics was not as strong. The influence of the socio-demographic variables – age, sex, education level and employment status – was examined in the two most important perceived barriers: time (includes 'irregular work hours' and 'busy lifestyle'), and taste (includes 'giving up liked food', 'unappealing foods' and 'strange and unusual foods') (Table 3). There was hardly any effect of sex on the selection of either time or taste, with the selection of time being marginally more important for males. For the selection of taste, there was no effect of education level or employment status and only a small effect of age, taste being more important among the youngest age groups (15- to 34-year-olds). In contrast, the selection of time was strongly influenced by age, education level and employment status. It was far more important for younger subjects, those with a tertiary-level education compared to a primary-level education, and for the working population, students and housewives compared to the unemployment and retired. Thus, time is very important to specific subgroups in the population while taste is equally important among all groups in the EU (particularly in younger subjects).

Only 15 % of subjects in the EU regarded price as an important barrier to healthy eating. There was, however, considerable geographic variation as well as variation among certain groups classified according to employment status (Table 4). In Germany and Italy 'price' was not perceived as an important barrier to healthy eating in any of the employment status categories and indeed only 2 % of Italian students and 4 % of German housewives perceived price to be an important barrier. In contrast, price was mentioned by almost 1 in 4 subjects in the UK and Luxembourg and over 1 in 5 subjects from Sweden and Portugal. In 9 out of the 15 member states, price was most frequently mentioned by the unemployed compared to the other employment status categories. These results highlight the fact that for some subgroups in the EU population, price is a prohibitive factor in attempting to eat a healthier diet.

Table 4. The percentage of subjects in each EU member state who perceive 'price' as an important barrier to healthy eating, classified by employment status

State	Total	Working	Housewife	Student	Unemployed	Retired
Austria	19	17	27	19	21	16
Belgium	16	15	16	21	26	13
Denmark	17	16	9	24	25	15
Finland	15	13	8	20	21	11
France	19	21	20	12	21	18
Germany	9	11	4	13	8	6
Greece	13	11	13	19	22	14
Ireland	17	14	23	10	28	13
Italy	7	6	9	2	3	6
Luxembourg	24	24	29	31	63	10
Netherlands	16	12	19	13	38	18
Portugal	21	20	17	15	21	12
Spain	16	16	17	15	21	12
Sweden	21	17	24	24	34	27
UK	23	20	32	25	30	21

https://doi.org/10.1017/S0007114599000987 Published online by Cambridge University Press

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Fifteen percent of the EU sample mentioned 'Do not want to change' as a barrier with the level of resistance to change varying across member states and across education level (Table 5). Indeed, the selection of this barrier was more strongly influenced by education level than by geography. In all fifteen member states, resistance to change was more frequently mentioned by those with a primary-level education compared to those with a tertiary-level education. The level of decline in the percentage of subjects selecting this barrier with increasing education level varied across member state. In Austria, Belgium, Greece, Portugal and Luxembourg it was small, while in Ireland, Italy, The Netherlands and the UK the level of decline was considerably greater. Thus, resistance to change, as a barrier, represents a significant obstacle among specific subgroups (primary-educated subjects and older subjects) in the EU population. This suggests that it may be important for nutrition educators to convince people that healthy eating doesn't have to entail eating strange or unusual foods and nor does it necessarily mean giving up one's favourite foods. It is this perception that if it is healthy then it must be boring and devoid of all one's favourite and most tasty foods, that makes young EU consumers feel that taste is being compromised for the sake of a 'healthy diet'. Resistance to change has been found to be an important barrier in previous research. In a UK survey conducted by MORI in which over 200 health professionals were asked for their opinions regarding the public's most common barriers to changing their diet, apathy was the most important barrier (Rudat *et al*. 1992), while the most important barrier selected by consumers was 'lack of knowledge'.

One of the most significant findings arising from the IEFS Pan-EU survey on consumer attitudes to food nutrition and health was the result that 71 % of subjects in the EU believe (either agreeing or agreeing strongly) they do not need to make changes to their diet as it is already healthy enough (Table 6). This represents a major non-barrier, which presents those in nutrition education trying to convince people to eat a healthier diet with a formidable challenge. While people may be aware of the main nutrition messages – and they do appear to be judging from their definitions of a healthy diet 'Eat less fat', 'Eat more fruit and vegetables', 'Aim for balance and variety', they do not perceive these as personally relevant to themselves. This suggests that people may have a problem in evaluating their own diets or that they are simply unable to do so. Indeed, this has been shown in a number of studies that found that the correlation between perceived and actual fat intakes was low (Glanz *et al*. 1993) and that people tended to underestimate their fat intakes believing their intakes to be lower than they actually were (Brug *et al*. 1994; Paisley *et al*. 1995). This behaviour is known as optimistic bias and indicates an unrealistic optimism in self-perception of diet quality (Raats and Sparks, 1995). Some research carried out in the UK by MAFF has found that people respond much better to personalized advice compared to impersonal advice, especially when given in the health care setting. Furthermore, in another study UK consumers were found to be poor at estimating the fat content of various high- and low-fat foods (Mela, 1993). More efforts should perhaps be put into helping people to evaluate their own diets correctly, and thereby recognize the possible need to alter their diets, rather than into the provision of information, given that the majority of people in the EU did not see knowledge of healthy eating as a barrier. The advent of food-based dietary guidelines (FAO/WHO, 1996) may greatly assist those in nutrition education to help people to evaluate their own diets more readily.

Table 5. The percentage of subjects in each member state selecting resistance to change as a barrier towards healthy eating, classified by education level

State	Education		
	Primary level	Secondary level	Tertiary level
Austria	15	17	12
Belgium	17	17	15
Denmark	25	16	15
Finland	14	8	9
France	18	16	13
Germany	18	12	13
Greece	14	19	10
Italy	17	10	7
Luxembourg	16	10	7
Netherlands	35	19	14
Portugal	18	12	16
Spain	15	9	8
Sweden	14	9	11
UK	26	16	6
EU*	18	14	11

*Weighted for population size.

Table 6. The percentage of subjects in each EU member state who agree and disagree with 'I do not need to make any changes to the food I eat, as it is already healthy enough'

	Number	Agree	Disagree	Do not know
Austria	867	73	27	0
Belgium	800	74	24	2
Denmark	1000	62	38	0
Finland	971	47	53	0
France	970	74	24	2
Germany	1231	63	32	5
Greece	1001	58	40	2
Ireland	1009	66	30	4
Italy	1014	87	10	3
Luxembourg	507	62	30	8
Netherlands	974	73	27	0
Portugal	1012	73	26	1
Spain	1009	79	20	1
Sweden	1000	70	30	0
UK	961	62	37	1
EU*		71	23	6

*Weighted for population size.
Agree = strongly agree and tend to agree
Disagree = strongly disagree and tend to disagree.

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