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Research report

Relationship between attitudes towards healthy eating and dietary behaviour, lifestyle and demographic factors in a representative sample of Irish adults

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Abstract

Attitudes towards healthy eating were explored according to dietary, lifestyle and socio-demographic correlates in a random sample of 1256 Irish adults. Data were obtained from an Irish cross-sectional survey (1997–1999). A self-administered questionnaire was used to obtain attitudinal information. Food consumption was estimated using a 7-d food diary. A majority of the sample had a positive attitude or motivation towards their healthy eating behaviour. Those who perceived their own eating habits to be healthy were more likely to comply with current dietary guidelines than those who did not. Females, increasing age, higher social class, tertiary education, non-smokers, lower body-weights and increased recreational activity were associated with a lower odds ratio (OR) for having a negative attitude towards their healthy eating behaviour. An increased intake (g/d) of breakfast cereals, vegetables, fruit and poultry dishes were associated with decreased OR for negative attitudes towards their healthy eating behaviour, while an increased intake of high-calorie beverages (g/d) was associated with an increased OR. It can be concluded that attitudes or motivation towards eating healthily was related to measured dietary and lifestyle behaviour in this sample. Future research is warranted to devise appropriate methods of instituting attitude change towards dietary behaviour in certain subgroups of the population.

Keywords: Attitudes; Motivation; Dietary behaviour; Health behaviour; Socio-demographics; Ireland

Introduction

Recent public health nutrition campaigns have highlighted dietary recommendations to decrease fat and increase fibre consumption to reduce the risk of chronic disease (Department of Health & Children, 1999; WHO, 2003). In many countries, including Ireland, dietary recommendations and actual consumption do not coincide on a general population level (Harrington, McGowan, Kiely, Robson, Livingstone, & Morrissey, 2001). An approach to comprehend the public's response to dietary advice may be offered by the systematic study of the beliefs and attitudes held by the population, such as the examination of self-perceived dietary behaviour (Gatenby, 1996; Shepherd & Sparks, 1994). The availability of information on personal attitudes and beliefs and the cultural context in which this information is derived can also facilitate comprehension of the relative importance of factors that influence food choice (Kearney & McElhone, 1999; Saba & DiNatale, 1998).

A fundamental assumption underlying the attitude concept is the notion that attitudes in some way guide, influence, direct, shape and predict actual behaviour (Kraus, 1995). However, it is not known to what extent pre-existing attitudes and beliefs about diet and lifestyle modify individual responses to dietary recommendations and subsequent dietary advice. One dilemma regarding the role of attitudinal research in determining food choice behaviour is that people may be unaware of how much

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influence a particular factor has on their behaviour. It is therefore necessary to test the relationship between attitudes to particular foods and self-perception of dietary patterns with actual dietary behaviour (Shepherd, 1989).

Relatively few studies have concurrently examined self-perceived dietary behaviour with actual measures of dietary and lifestyle behaviour among the same people. There is also a paucity of research attempting to characterise and compare both perceived and measured dietary behaviour. In the North–South Ireland Food Consumption Survey (NSIFCS), data on self-perceived diet and lifestyle behaviour and objective measures of dietary and lifestyle behaviour were collected. Therefore, the aim of this study was to examine self-perceived healthy eating behaviour and to determine how these perceptions differ according to dietary, lifestyle and socio-demographic correlates, among a representative sample of Irish adults.

Methods

Survey details

The NSIFCS was a randomised cross-sectional study of food and nutrient intakes in a representative sample of adults aged 18–64 years from the Republic of Ireland and Northern Ireland (1997–1999). Detailed descriptions of the sampling protocol (Kiely, Flynn, Harrington, Robson, & Cran, 2001) and methodology have been previously described (Harrington, Robson, Kiely, Livingstone, Lambe, & Gibney, 2001). In brief, the dietary survey was completed by 1379 respondents (662 males and 717 females), with an overall response rate of 63%. Food intake data were collected using a 7-d diet record (DR). Respondents were required to record the amount of each item of food and drink consumed. Food and nutrient analysis was conducted using WISP© (Weighed Intake Software Program; Tinuviel Software, Warrington, UK). WISP© uses data from McCance & Widdowson's The Composition of Foods (Holland et al., 1995), plus supplemental volumes to generate nutrient intake data (Chan, Brown, & Buss, 1994; Chan, Brown, & Church, 1996; Chan, Brown, & Lee, 1995; Holland, Brown, & Buss, 1993; Holland, Unwin, & Buss, 1988, 1989, 1991, 1992; Holland, Welch, & Buss, 1992). The food intake database consists of approximately 250,000 rows of data that detail the weight and nutrient breakdown of every food and drink item consumed by each respondent.

Weight (kg) and height (m) were measured by standard procedures (McCarthy et al., 2001) and used to calculate Body Mass Index (BMI) (kg/m^2). BMI was categorised according to World Health Organisation (WHO) recommendations (WHO, 1998), which are 'Normal' (BMI 18.5–24.9 kg/m^2), 'Overweight' (BMI 25.0–29.9 kg/m^2) and 'Obese' (BMI $\geqslant 30.0\,kg/m^2$). 'Underweight' respondents (BMI $< 18.5\,kg/m^2$) were not included in the analyses because they accounted for less than 1% of the overall population.

Food analysis

Each food item was assigned to one of 29 food groups and a mean daily food intake file (g/d) containing these 29 groups was generated. An additional group named 'low/high calorie beverages' was created. Respondents in the 'low-calorie' category had a mean daily intake from beverages of less than the sample population median intake of 25.8 kJ (6.14 kcal) and those in the 'high-calorie' category had mean daily intakes $\geqslant$ 25.8 kJ. The % contribution of all food groups to intakes of mean daily total and food energy, carbohydrate, fat and saturated fat was also calculated.

Questionnaires

Six questionnaires were self-completed by the respondents (Harrington, Robson et al., 2001). This paper draws its analyses primarily from an 'Attitudinal' questionnaire (previously described by Kearney et al., 2001), but it also extracts information from a Health & Lifestyle and a Physical Activity questionnaire. The Attitudinal questionnaire was composed of three main sections: attitudes or motivation towards healthy eating, self-assessed adequacy of food intake (related to 18 food items) and attitudes towards physical activity. Self-perceived dietary behaviour was evaluated through examination of the responses to these three statements:

(1) 'I make conscious efforts to try and eat a healthy diet';
(2) 'I try to keep the amount of fat I eat to a healthy amount';
(3) 'I don't need to change my diet as it is healthy enough'.

The questionnaire was given to each respondent during the 7 days of the DR and was self-completed during this period. Individuals were required to select the most applicable response to each statement using a 5-point Likert scale which ranged from 'Most of the time' (1), 'Quite Often' (2), 'Now & Again' (3), 'Hardly ever' (4) and 'Don't Know' for statements 1 and 2, and from 'Strongly Agree' (1), 'Tend to Agree' (2), 'Tend to Disagree' (3), 'Strongly Disagree' (4) and 'Don't Know' for statement 3. As only a small percentage of the sample selected the response 'Don't Know' (<7%), it was not included for further analysis.

To determine the internal consistency of the healthy eating attitude scale, Cronbach's alpha was calculated (Cronbach, 1951). For scales, which are used as research tools to compare groups, alpha values of >0.7 are regarded as satisfactory (Bland & Altman, 1997). An alpha value of 0.83 was found when statements 1 and 2 were examined together, and an alpha level of 0.71 was found when all three statements were examined together. This compares favourably with a study by Stafleu, De Graaf, Van Staveren, and de Jong (1994), who obtained an alpha