Abstract

Objectives: To determine dietitians’ knowledge and perceptions of the nutrition-related labelling requirements of the new Food Standards Code for Australia and New Zealand.

Design: A 20-minute telephone survey assessed dietitians’ knowledge and perceptions of the new requirements for nutrition-related information on food labels.

Subjects: Clinical, community, private practice and industry-based dietitians.

Setting: Study participants included all dietitians working in a region of NSW, together with a purposive sample of dietitians from specialty areas of dietetics from outside this region.

Main outcome measures: Knowledge questions were assessed for correct answers, attitudes were assessed using a six-point scale.

Statistical analysis: No statistical analysis other than frequencies were reported because of the small sample size.

Results: Of the 42 dietitians eligible to participate in the telephone survey, 39 agreed and participated. Just over half (23 of 39) of the participants said they had received information on the new Food Standards Code. Having had access to the new code did not equate to dietitians knowing details of the code (mean knowledge score 1.85 of 6, highest score 4 of 6). However, overall the surveyed dietitians supported the changes to nutrition labelling. Most had favourable attitudes to changes including the mandatory nutrition information panel detailing seven nutrients, percent of key ingredients and warning and advisory statements.

Conclusion: Dietitians lack knowledge of the labelling requirements in the new Food Standards Code and hence are limited in their capacity to assist communities or clients make more informed food choices through better use of food labels. (Nutr Diet 2002;59:181–6)

Key words: food labelling, knowledge, attitudes, practice, dietetics, patient education, telephone survey

Introduction

The food label plays an important educative role for consumers. Consumers are generally aware of food label information and report reading food product labels (1,2). Food label reading occurs most frequently when a consumer is considering buying a new product or alternative brands (1). The food label can inform consumers of the nutritional qualities of food, provide information to make healthy food choices and offer protection from foods that may cause harm (e.g. food allergy information) (3–5). For health professionals the food label has the potential to be an effective medium to convey nutrition messages, provide nutrition guidance and highlight the nutritional attributes of foods (4,5).

A new Food Standards Code, gazetted in December 2000 with full implementation in December 2002, makes it mandatory for most food labels to carry specific nutrition information (exemptions include, for example, food sold in a small package, food packaged in the presence of the purchaser, alcoholic beverages and coffee). Overall, the code is less prescriptive about food constituents, offering greater flexibility to the food industry in producing innovative food products. However, this flexibility can make it more difficult for consumers to make informed food choices. The labelling requirements were developed in an attempt to meet consumers’ need for greater information and to decrease inconsistency of the information on food labels (6).

The new Food Standards Code requires that most packaged foods carry a minimum amount of nutrition information on the label (Table 1 summarises the nutrition labelling requirements of the new code). It will be mandatory for food labels to have a nutrition information panel that includes the amount of total fat, saturated fat, protein, kilojoules, carbohydrate, sodium and sugars in the food. Prior to the implementation of the new code specific nutrition information, including macronutrients and micronutrients, was required on the food label only if a nutrition or nutrient claim was made. Declaration of the percentage of key ingredients or characterising components will also be mandatory. Prescribed warning, mandatory advisory and mandatory declarations will also be required on the labels of food products that have components that can cause allergies and severe reactions in sensitive individuals (8).

Health professionals will play a critical role in ensuring the nutrition information provided on food labels is understood and used by consumers. Dietitians’ knowledge of diet and disease and their regular contact with individuals and community groups places them in an excellent position to educate consumers. It is important to determine the extent to which dietitians are able to assist their clients take advantage of the nutrition information that will shortly be available. The aim of this study was to investigate dietitians’ knowledge and perceptions of the
new Food Standards Code, specifically in relation to nutrition labelling, in a small sample of dietitians.

Methods

Sample selection

All clinical, community, private practice and industry-based dietitians working in a region in NSW and representing the main areas of dietetic practice were selected to participate in the study. In addition, a purposive sample of dietitians from speciality areas of dietetics, not practised widely in the study area, was selected from outside the region. The additional dietetic specialties included paediatrics, HIV/AIDS, food allergies, burns and psychiatric management. Two dietitians from each specialty group were invited to participate in the study, thereby making the sample more representative of dietitians who use food label education as a part of their dietary counselling.

Contact details of dietitians were obtained from the head dietetic manager at the central hospital in the region. Dietitians in private practice were identified by looking under the D listing ‘dietitian’ of the 2001/2002 edition of the ‘Yellow Pages’ telephone directory in the regional area. Specialist dietitians from outside the region were selected by identifying relevant hospitals or clinics that provided a particular specialty area of dietetics and then approaching the dietetic manager to obtain contact details of the specialist dietitians. A list of 42 dietitians was compiled. These dietitians were then invited to participate in this study.

The survey instrument

A 20-minute telephone survey was used. The survey instrument included three questions on participants’ demographic characteristics, one question regarding access to the Food Standards Code, six questions testing dietitians’ knowledge of new food labelling laws and 11 questions examining their attitudes to, and opinions of, the new food labelling laws. The format of the questions varied. Knowledge questions used a closed answer format. For example, ‘does the new Food Standards Code include changes to the nutrition information panel on food labels?’ Answers were ‘yes’, ‘no’ or ‘don’t know’. If the participant chose a ‘yes’ response they were asked to identify the specific changes. Likert scales were used to assess dietitians’ attitudes and opinions. For example, participants were asked, ‘do you consider the new food labelling laws in Australia are an improvement on the current situation?’. They were asked to choose from six responses ranging from ‘much improved’, ‘no change’ to ‘markedly worse’. A ‘don’t know’ option was also included. Participants were then asked to give reasons for their opinion.

The survey procedure

The survey was trialled on a sample of dietitians (n = 6) working in a different region to the study region. The procedures used to collect the data were the same as those used for the primary study. These participants were sent an information sheet telling them the nature and aims of the study and the procedures involved in data collection. The accompanying letter stated that the researcher would telephone them in one week to ask if they would like to participate in the study. If so, a convenient time would be arranged to complete the telephone survey. The larger study was undertaken during March through May 2001 following receipt of ethics approval from the University of Wollongong Human Research Ethics Committee.

Survey analysis

Responses to survey questions are described and responses to attitudinal questions were analysed for common themes.

Results

Participant demographic information

Of the 42 dietitians eligible to participate in the telephone survey, 39 agreed to participate. Table 2 outlines the
Table 2. Demographic profile of study participants

<table>
<thead>
<tr>
<th>Type of dietitian</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical</td>
<td>35</td>
</tr>
<tr>
<td>Community</td>
<td>4</td>
</tr>
<tr>
<td>Industry-based</td>
<td>1</td>
</tr>
<tr>
<td>Nutritionist</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
</tr>
<tr>
<td>Accredited Practising Dietitian</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Years since graduation</td>
<td>Less than 5 years</td>
</tr>
<tr>
<td></td>
<td>5 to 10 years</td>
</tr>
<tr>
<td></td>
<td>More than 10 years</td>
</tr>
</tbody>
</table>

(a) n = 39
(b) Dietitians could nominate more than one dietetic field. ‘Type of dietitian’ was self-described by survey participants.

Access to nutrition labelling information

Just over half of those surveyed (23 of 39) said they had been provided with, or had access to, the new Food Standards Code or information materials on the new label requirements. Of the 16 who had not received or accessed information about the new code, three said they were familiar with the changes and 13 said they were not familiar with the changes. Of this group, 14 were clinical dietitians, one was a nutritionist and one had more than one dietetic role. Seven members described themselves as community nutritionists.

Knowledge of nutrition labelling laws

Only those participants who had indicated they had received information regarding the new Food Standards Code and those who had not received information but said they were aware of the changes, answered the knowledge questions (n = 26). Table 3 shows participant responses to the knowledge questions.

The overall knowledge score of participants regarding changes to the nutrition labelling was low (mean score 1.85 of 6, highest score 4 of 6). Participants were most aware that the new Food Standards Code included changes to the nutrition information panel on food labels (21 of 26 correct). Of those who stated that there were changes to the nutrition information panel (n = 21) only four correctly identified all the changes (three clinical dietitians and a nutritionist, all were APDs).

There was an overall lack of knowledge regarding other changes to food labelling. Only ten respondents were aware the new Food Standards Code included changes to prescribed warning, mandatory advisory and mandatory declarations, and only one respondent correctly identified the changes. Ten respondents were aware the new code included changes to the ingredient list, but only four of these respondents were aware of the changes that had been made. Respondents incorrectly stated that changes to health claims had occurred, and only two respondents were aware that no changes had occurred to country of origin information on food labels.

Only five respondents correctly identified the seven mandatory nutrients that are to be included on the nutrition information panel. The respondents, who correctly identified the seven nutrients, included four clinical dietitians (two of the four had a combined role) and a nutritionist.

Perceptions of the new food labelling laws

Most of the participants familiar with the Food Standards Code (23 of 26) believed the new food labelling laws represented an improvement on the current situation. The basis of this view was supported by the belief that the new requirements would allow consumers to make informed choices. They were also supportive of the inclusion of the percentage of fat and saturated fat in the nutrition information panel. However, some respondents expressed concern over the lack of consumer education in relation to reading and using food labelling. A majority (20 of 26) believed the mandated changes to the Food Standards Code are positive and would be somewhat useful in the education of their clients. However, as knowledge of the specific changes to the code was poor, the basis of this view is uncertain.

Of all the participants contacted, the majority of respondents agreed that having a nutrition information panel on most food labels (33 of 39), information on the seven nutrients in the nutrition information panel (32 of

Table 3. Knowledge questions and responses among participants who had received information on the new Food Standards Code or had reported being aware of the changes

<table>
<thead>
<tr>
<th>Does the new Food Standards Code include changes to:</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The nutrition information panel</td>
<td>21</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2. Health claims</td>
<td>15</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>3. Country of origin information</td>
<td>6</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>4. Mandatory and advisory statements</td>
<td>10</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>5. Ingredients list</td>
<td>10</td>
<td>2</td>
<td>14</td>
</tr>
</tbody>
</table>

Identify the seven mandatory nutrients in the nutrition information panel:

<table>
<thead>
<tr>
<th>Are able to identify all seven nutrients correctly</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>5</td>
<td>21</td>
<td>N/A</td>
</tr>
</tbody>
</table>

(a) n = 26
(b) Changes are included in the new Food Standards Code, correct response is yes
(c) Changes are not included in the new Food Standards Code, correct response is no
(d) Not applicable
Changes to food labelling

39), percent of key ingredients (23 of 39) and extended warning and advisory statements (28 of 39) would assist consumers in food selection and dietary choice (see Table 4). Respondents varied in their confidence in consumers’ abilities to understand and interpret nutrition information on food labels (18 agreed, 13 disagreed) and health claims (17 agreed, 12 disagreed).

Mixed reactions were given regarding the perceived usefulness to consumers of label information on genetically modified components (16 agreed, nine disagreed), information on country of origin of the primary food components (12 agreed, 15 disagreed) and the use of health-related claims (17 agreed, 12 disagreed) to assist consumers in their dietary choices. Respondents had mixed views on whether these were dietary issues and if they would assist consumers in making healthy food choices. One respondent stated the country of origin of the primary food component was important due to nutritional differences in food from country to country and seven respondents were concerned about food safety issues. Many of those who expressed concern with the use of health claims did so believing the claims would be confusing and misleading. Support for genetic modification and country of origin information was based on the belief that it allowed consumers to make informed choices. Country of origin information was also thought to be important as it enabled consumers to purchase Australian-made products. Respondents expressed support for consumers’ abilities to interpret nutrition information on food labels in the belief that, with education, most people would be able to understand and use this information. Support for health claims was based on the belief that it would be an effective way of providing nutrition information to consumers, assuming that claims were closely regulated.

Discussion

This is the first study in Australia to assess dietitians’ knowledge and perceptions of nutrition-related food labelling requirements in the Food Standards Code. The small sample of dietitians used in this study was not meant to be representative of the entire dietetic population. It included all dietitians in a region of NSW and is therefore indicative of the situation in this location. In comparison with the profile of members of the Dietitians Association of Australia (DAA), dietitians who work in clinical settings were over-represented and dietitians working in industry and ‘other’ positions were under-represented in the study population. Those working in the community setting were represented proportionally (9).

The implementation of the new Food Standards Code in Australia and New Zealand provides an important opportunity to promote public health. For this to be fully realised, consumers require assistance to understand, interpret and read information provided on food labels (2,5,10) and to increase their confidence (1). Health professionals have an important role in consumer education regarding the use of food label information. In particular, dietitians are reported to be trusted and important sources of nutrition information (11), particularly among those consumers with special dietary requirements (1). Hence they can play a pivotal role in realising the public health benefits of the changes in the code.

The results of this study indicate knowledge of the new food labelling laws is poor among this study population. Few dietitians were aware that changes were being made to mandatory declarations, advisory statements and the ingredient list. While most participants were aware that changes were being made to the nutrition information panel, participants had poor knowledge of which nutrients are to be mandatory. Although most participants had poor knowledge of the new code, many believed that the changes represented an improvement, enabling consumers to make more informed choices about the foods they consume. However, as most participants had little specific knowledge of the new Food Standards Code the validity of their beliefs regarding the value of the new code is sus-

<table>
<thead>
<tr>
<th>Do you agree…</th>
<th>Agree</th>
<th>Neither agree or disagree</th>
<th>Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>That having a nutrition information panel on all food labels will assist consumers in food selection and making better dietary choices?</td>
<td>33</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>That information on the seven nutrients in the nutrition information panel will assist consumers in food selection and making better dietary choices?</td>
<td>32</td>
<td>5</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>That information on the percent of key ingredients will assist consumers in making better dietary choices?</td>
<td>23</td>
<td>8</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>That the labelling of genetically modified components in foods will assist consumers in food selection and making better dietary choices?</td>
<td>16</td>
<td>12</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>That the extended warning and advisory statements will assist consumers in making better dietary choices?</td>
<td>28</td>
<td>6</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Information on the country of origin of the primary food components would assist consumers in their dietary choices?</td>
<td>12</td>
<td>11</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>Consumers have the ability to understand and interpret the nutrition information that will be provided on food labels?</td>
<td>18</td>
<td>4</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>Consumers will use the nutrition information panel that will be provided on food labels in the future when making their dietary choices?</td>
<td>34</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Health-related claims would assist consumers in their dietary choices?</td>
<td>17</td>
<td>6</td>
<td>12</td>
<td>4</td>
</tr>
</tbody>
</table>

(a) n = 39

Table 4. Questions and responses regarding the perceived usefulness of new food labelling requirements

Dietitians’ lack of knowledge regarding changes to the Food Standards Code was an unexpected finding given the significant discussion that has occurred in the public media (13–16). While the survey was conducted only six months after the code was gazetted, it followed five years of public consultation and involvement of their professional association, the Dietitians Association of Australia (DAA), in the review of the code.

Dietitians’ attitudes to the changes to the Food Standards Code were mixed. Changes to the food labelling requirements most directly related to nutrition generally received positive support. When informed of the detail of the changes, over half of the respondents agreed that changes to the nutrition information panel, mandatory and advisory statements and the inclusion of percentage of key ingredient labelling would assist consumers in making food selection and dietary choices. Participants were satisfied with the nutrients that had been included on the nutrition information panel. This is consistent with the results of Osborn et al. (17) who also identified positive attitudes of nutrition professionals regarding changes to food labels in the US, in particular the inclusion of energy, total fat and sodium on the food label.

Some of the food label changes reflect issues identified as of concern to consumers. The Australian New Zealand Food Authority (11) had identified that consumers frequently consulted country of origin information. More recently, the UK Food Standards Agency (18) found consumers wanted comprehensive information on genetically modified ingredients in food and had a strong interest in country of origin. Many respondents believed these issues were not important in their practices, reporting that they did not consider that these issues affected healthy food choices.

The concept of health claims on food labels was also explored and elicited mixed reactions. Dietitians opposing health claims expressed a belief that they were confusing and misleading for consumers. This is consistent with previous research that found that consumers often are confused and distrust health claims on food labels (11,19–21). Dietitians supporting health claims stated they were a useful way to provide nutrition information to consumers provided the claims were strictly regulated. Such mixed responses are consistent with Crotty’s observation that nutrition experts are often unable to reach consensus (22). Such mixed views of professionals may reflect the need for more research to be undertaken on the effectiveness of health-related claims on foods.

Information on food labels is provided with the aim to assist consumers in their food choices. A large proportion of respondents believed consumers would use the nutrition information panel when making dietary choices, particularly if they had a specific interest, disease or disorder or condition. This belief is consistent with Worsley’s findings that consumers want to see nutrition information on all products (2). Nayga et al. (23) and Neuhouser et al. (24) also found that people with current health concerns and those with an understanding of healthful eating principles were most likely to use nutrition information on food labels. However, just under half of the dietitians in the current study believed that consumers do not have the ability to use and interpret the nutrition information that is to appear on food labels. This is consistent with previous research (2,4), for example Kristal et al. (25) found that even after label changes, consumers wanted food labels which were easier to read. This may indicate that regulatory changes to food labels may focus more on the content of the label than on how it is presented. If this is the case, the educative role of dietitians regarding use of label information is even more important.

Most respondents believed the new food labels will assist them in the education of their clients. However, concerns were raised by many respondents that label information may confuse consumers. Two previous studies found that education on food label information resulted in greater use and better understanding of the associated benefits of using food label information (21,26). Scott and Worsley (27) suggested that all food labels require explanation to consumers to be understood. The participants tended not to acknowledge their role in such general consumer education.

Professional organisations and associations such as the DAA clearly play a crucial role in professional education and development. The DAA competency standards for accreditation of entry-level dietitians do not require knowledge of the Food Standards Code (28). Changes to the code demonstrate a clear link between the code and nutrition education, therefore inclusion of knowledge of the code in the DAA competency standards should be considered. Professional organisations are also responsible for continuing education of their members. The DAA National Symposium in 2002 included a focus on the changes to the Food Standards Code, including discussion of the changes and their implications for dietetic practice and consumers (29). Professional education programs such as APD also have the potential to result in change. Those participants who had graduated in the last ten years and those who were APDs appeared to be more knowledgeable about the changes proposed for particular aspects of nutrition labelling. This may be a result of the requirement for ongoing training to qualify as an APD (30). Alternatively, it may suggest a self-selection effect whereby dietitians who elect to participate in the APD program have a greater desire to remain informed regarding developments within their professional field.

Dietitians are considered to be the leading experts on dietary advice. Given the results of this study, the ability of other health and education professionals and organisations to provide consumers with accurate information regarding changes to food labels should also be examined. Many health professionals have roles within public, private and non-government organisations that include education of consumers on food-related matters. Thus, it is essential that these professionals are aware of the changes to the new Food Standards Code and appreciate the importance of their consumer education role in relation to food labelling.

Conclusion

Further research is required before it can be concluded that the general dietetic population and other health professionals are lacking in knowledge of the new food labelling requirements. However, it may be useful to make education programs and materials regarding the changes to the Food Standards Code available to dietitians.
and other health professionals, before the full implementation of the code in December 2002. Professional organisations and associations can provide support and information to their members regarding changes to the code through accreditation programs such as the APD and competency standards, information packages and continuing education activities such as workshops and seminars.

Acknowledgments

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References