Introduction

In Europe and the US, consumers see healthcare professionals such as Doctors and Dentists as the key trusted sources of food safety information. Dermatitis is perceived to be low, trusted spokespeople who deliver trusted dietary advice to the general public, which includes individuals who are vulnerable. Individuals who have a compromised immune system have an increased risk of foodborne illness. Consultants have access to scientific journals and individuals who are at risk of foodborne contamination to deliver food safety information to reduce the risk of foodborne illnesses in vulnerable populations.

Providing of food safety information by registered dietitians can inform susceptible patient groups of cross-contamination of food safety risk, resulting in reduced risk of foodborne illness. Dietitians require appropriate information and training to allow them to deliver food safety advice to susceptible patients.

Previous research has determined gaps in provision registered dietitian food safety knowledge and attitudes, which can result in patients developing foodborne illnesses. Dietitians need appropriate and comprehensive knowledge and skills to deliver effective food safety advice, which can be incorporated into their practice. Trainee dietitians are well placed to deliver food safety advice. However, the approach to the food safety aspect of training varies between institutions.

Although food safety knowledge may be inadequate, an important aspect of future dietitians is to ensure delivery of effective food safety education to those in need.

Purpose

The aim of this research was to assess and compare food safety knowledge of student dietitians in three accredited dietetics programs in different settings.

Methods

Recruitment Trainee dietitians aged ≥18 years studying at Cardiff Metropolitan University, Wales, UK; The Modern University for Business and Science, Beirut, Lebanon; and The Ohio State University. (n=197)

Data Collection

Utilised self-administered quantitative questionnaires. Questionnaires included a series of multiple choice questions to determine student's knowledge food safety, attitudes towards food safety education and training.

Data analysis

Quantitative data analysis was undertaken using Microsoft Excel 2016 (Microsoft, Redmond, WA, USA). Ethical Approval

Approval was obtained from the Health Care and Food Ethics Panel at Cardiff College (reference no 2016/02) and the Ethics Committee at Lebanon and Ohio State.

Results

Food safety knowledge

From the 210 student dietitians that participated, 70% recalled having received food safety training/education as part of their degree course. Recall differed significantly (p<0.05) between the institutions. In Cardiff, 100% of students recalled having received food safety training/education. In Lebanon, 93% of students responded. Recall differed significantly (p<0.05) between the US and Lebanon, indicating that students in Lebanon indicated a lower level of awareness of food safety training.

Cardiff (n=74), Lebanon (n=29) and Ohio State (n=102)

Table 1: Recall of received food safety training and education among student dietitians in Wales (n=74), Lebanon (n=29) and Ohio State (n=102)

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<thead>
<tr>
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<th>Cardiff (n=74)</th>
<th>Lebanon (n=29)</th>
<th>Ohio State (n=102)</th>
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<tbody>
<tr>
<td>Recall (%)</td>
<td>100%</td>
<td>93%</td>
<td>69%</td>
</tr>
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<td>p-value</td>
<td>0.000</td>
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Although all institutions provided food safety training/education, cumulative findings indicate a need for targeted training.

- 45% indicated that they would find it difficult to identify individuals at a high risk of foodborne illness.
- 45% worried that they do not know the correct food safety information to provide to patients.
- 30% of trainee dietitians reported that they would like to learn more about food safety for vulnerable populations.

On average, only 43% agreed that they felt confident to give advice on cross-contamination of food safety information. This varied significantly (p<0.05) among students in Lebanon (30%) compared to Wales (46%) and USA (80%). Although the majority (Lebanon 63%, USA 99%, Wales 89%), were aware of the risk of foodborne illness, a minority (USA 40%, Lebanon 45%) were aware of the risk of foodborne illness. Awareness was determined. Differences in knowledge between institutions may suggest that teaching approach affects knowledge retention.

Significance of study

Trainee dietitians from Cardiff Metropolitan University, Wales, UK; The Modern University for Business and Science, Beirut, Lebanon; and The Ohio State University, Columbus, Ohio, USA, indicated that food safety should be a part of dietetics education when advising patients.

In the first study that compares the food safety knowledge and attitudes of student dietitians in UK, Lebanon and USA, significant differences were determined. Differences in knowledge between institutions may suggest that teaching approach affects knowledge retention.

Although student dietitians indicated awareness of key food safety practices, a lack of confidence and a perceived lack of knowledge was indicated by students in all institutions.

In conclusion, there is a need to determine the best practices in teaching student-dietitians food safety and explore the incorporation of significant educational, curriculum requirements in institutions that deliver accredited training.

Acknowledgements

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References