

The Food Safety Knowledge, Attitudes and Training Experiences of Trainee Dietitians in Wales, UK

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Introduction

Dietitians provide food related information and dietary interventions to vulnerable patient groups and are identified as trusted, credible and preferred source for food safety information by patients¹.

Delivery of food safety advice by adequately trained registered dietitians can inform vulnerable patients of increased foodborne illness risks and enable risk-reducing food safety practices².

However, gaps in practicing registered dietitians food safety knowledge have been identified³.

Dietitians need appropriate and adequate knowledge and skills to deliver effective food safety advice, which can be gained as trainee dietitians⁴.

Consequently, there is a need to determine the food safety knowledge, attitudes and training experiences of trainee dietitians².

Aim

The aim of the study was to assess the knowledge, attitudes, and training experiences of trainee dietitians regarding foodborne illness and risk-reducing food safety practices.

Methods

A questionnaire was designed, developed, piloted, evaluated and amended to enable determination of knowledge, attitudes and training experiences of trainee dietitians.

The paper-based self-complete questionnaire was distributed and completed by consenting trainee dietitians at Cardiff Met. School of Health Sciences.

Sample

Thirty four trainee dietitians participated in the study. The majority of which were female (79%) and aged 18-29 years old (76%). All participants were full time Human Nutrition & Dietetics BSc (Hons) degree students in their second year (44%), final year (32%) or Dietetics MSc Post graduate students (24%).

Acknowledgement

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References

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Results

Food safety knowledge of trainee dietitians:

Foodborne Pathogens

The majority 74-97% of trainee dietitians indicated awareness of common foodborne pathogens, however awareness of associated food products or related malpractices were lacking 35-88% (See Figure 1). Greatest reported awareness was for *Salmonella* (97%) and associated foods (88%). Less than half 35-48% were aware of food products or malpractices associated with the other five most common foodborne pathogens.

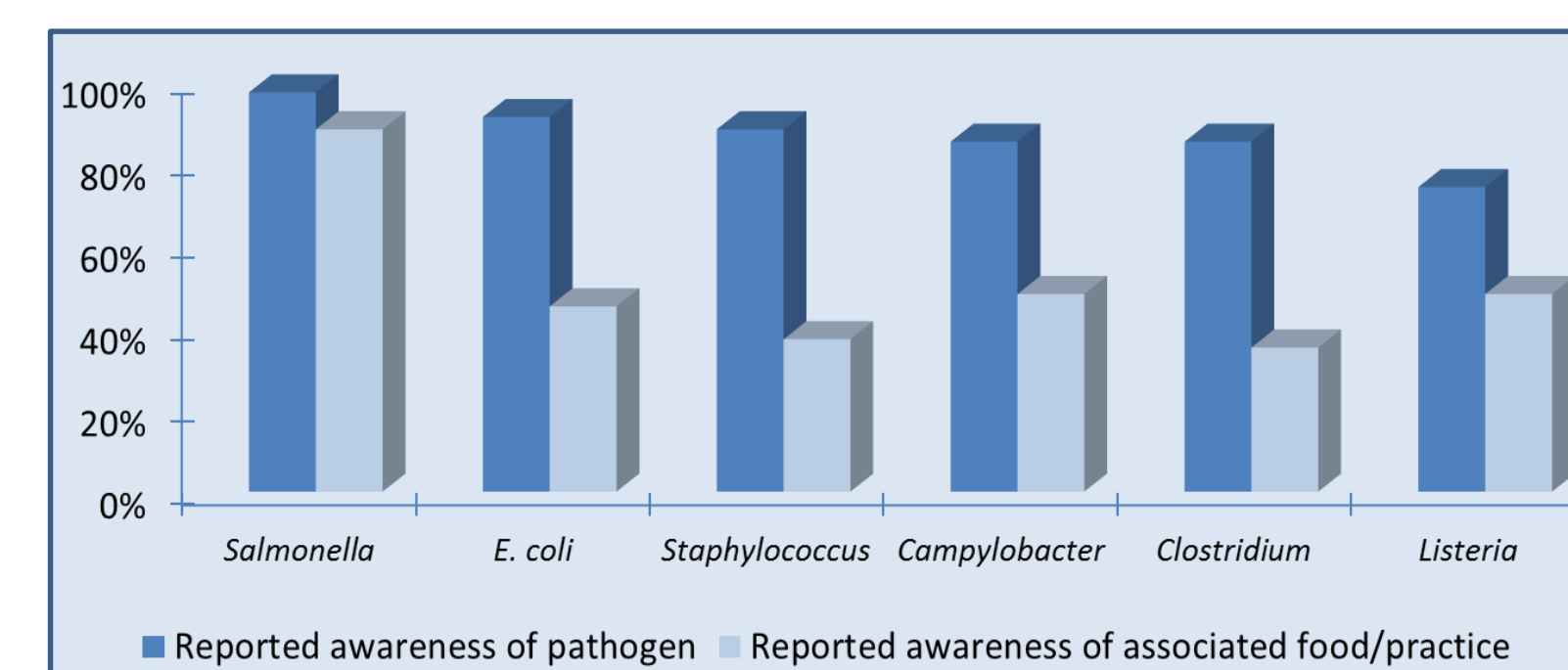


Figure 1 reported awareness of foodborne pathogens

Cross contamination

Over a quarter (27%) were unaware that washing raw meat increases the risk of cross-contamination.

Refrigeration

Although 79% were aware of the need to check the temperature of the refrigerator, 47% believed this could be achieved by ensuring the dial is on the correct number, only 50% were aware of the need to use a refrigerator thermometer to check the operating temperature. Overall, 68% knew the recommended refrigeration temperature ($\leq 5^{\circ}\text{C}$).

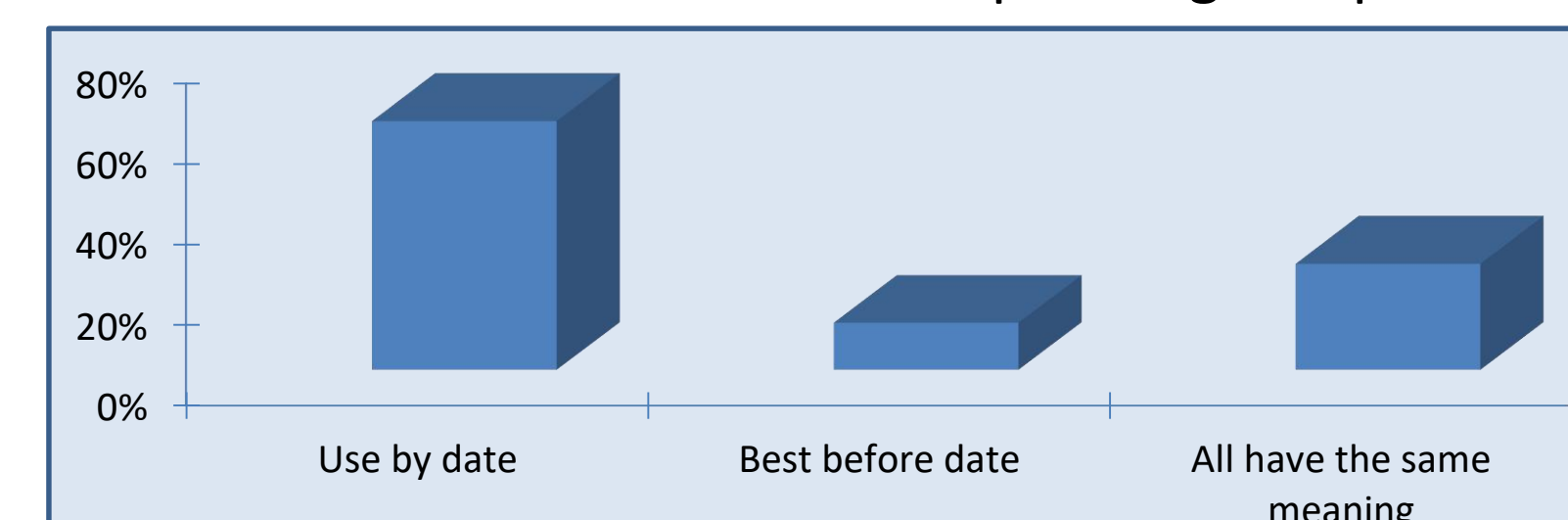


Figure 2 knowledge of date label indicating food safety

Date labelling

Less than two-thirds (62%) were aware the 'use-by' is the date label indicating food safety, the remainder believed it to be the 'best before' date or that both date label had the same meaning (see Figure 2).

Storage duration

Awareness of appropriate storage duration of ready-to-eat food products associated with listeriosis was lacking, 53-70% were unaware of the recommendation to consume ready-to-eat food products within two days of opening.

Cooking

The majority (94%) had positive attitudes towards the association of inadequate cooking and illness and 85% were aware of the need to use a thermometer to check the temperature when cooking raw meat/poultry, however, only 41% knew the temperature ($\geq 70^{\circ}\text{C}$) that should be achieved to ensure safety.



Figure 3 Frequency distribution of food safety knowledge scores

Handwashing

Although 97% recognised the need to implement hand washing prior to commencing food preparation, 15% were not aware of the need to wash hands before handling ready-to-eat foods. The majority (71-94%) were aware of required steps to implement an adequate handwashing attempt.

Food safety knowledge scores

Cumulative food safety knowledge scores ranged between 30-81% with an average score of 62% (see Figure 3). It was determined that no significant differences ($p > 0.05$) in knowledge scores existed between gender, age-group or year of study for trainee dietitians.

Attitudes of trainee dietitians towards the need for food safety information provision:

Trainee dietitians were aware that those with compromised immunity were at a higher level of risk than the general population, and believed foodborne illness to be more likely of resulting from the domestic environment than in hospital. Positive attitudes were expressed towards the importance of food safety information provision and the role of dietitians in reducing foodborne illness risk (see Figure 4).

- 100% believed vulnerable patient groups needed to be given food safety information.
- 79% disagreed that the role of the dietitian is to only provide nutritional advice, not food safety information.
- 79% disagreed that the delivery of food safety information is not a priority for dietitians.
- 76% agreed the provision of food safety information should be a standard procedure for dietitians.
- 97% believed educating dietitians to inform vulnerable patient groups of food safety may reduce the risk of food poisoning.

Figure 4 Attitudinal responses of trainee dietitians regarding the role of dietitians in the delivery food safety information to vulnerable patient groups

Food safety training experiences of trainee dietitians:

Although all reported working with vulnerable patients on placement, only 9-21% recalled food safety information being provided to vulnerable patient groups, most frequently given to pregnant women (recalled by 38% of those that worked with pregnant women).

All trainee dietitians reported completing a one-day food safety programme, many considered training to be insufficient to enable them to adequately inform vulnerable patients (see Figure 5), indicating a lack of confidence as training was not reinforced in lectures (see Figure 6).

- 100% had completed the Royal Society for Public Health Level 2 Award in Food Safety (one-day food safety programme).
- Only 50% considered the food safety training received during the dietetics degree to be adequate to inform patient about food safety.
- Only 35% indicated they would be confident to give an immunocompromised patient food safety information.
- 91% would like to learn more about food safety for immunocompromised patients.
- 100% agreed a continual professional development (CPD) course would ensure dietitians are knowledgeable of food safety.

Figure 5 Trainee dietitians attitudes towards food safety training experiences

- "Only had food safety from the level 2 training, not during lectures."
- "I wouldn't feel confident to inform patients about food safety."
- "Could have refresher as only received one-off training."
- "I have some knowledge but not confident."

Figure 6 Attitudinal responses of trainee dietitians regarding their food safety training experiences

Conclusions

- The research has determined that although trainee dietitians indicated awareness, food safety knowledge does not equate to ability to disseminate food safety advice. Many trainee dietitians reported insufficient training and lacked confidence to deliver food safety advice.
- Findings suggest a one-day food programme (intended for food industry staff) is not suitable or clinically applicable for trainee dietitians.
- The exploration of the need for specifically tailored degree level training for trainee dietitians on the delivery of food safety information to vulnerable patient groups is required.
- Findings also identify the need for research to determine the food safety awareness of registered dietitians in the UK, assess the adequacy of food safety resources utilised by dietetic departments and explore the need for a food safety CPD course for dietitians.