

Management Perceptions of Factors Associated with Food Safety Culture in UK Food-Service Small and Medium-Sized Enterprises.

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Introduction

Food safety compliance in food-service small and medium-sized enterprises (SMEs) is essential for minimising the risk of foodborne disease (FBD). Compliance can be influenced by a multitude of characteristics including business size, organisational structure, physical design, resource availability, inspection frequency and factors associated with food safety culture (FSC). Food-service SMEs are common settings for food poisoning outbreaks in the UK (Gormley *et al.*, 2012; Griffith, 2000; Jones *et al.*, 2008) It has been suggested that in food-service outlets where FSC is 'enhanced', food-handlers are likely to make fewer violations, thus reducing the risk of FBD.

FSC as defined by Griffith (2010) can be defined as 'the aggregation of the prevailing, relatively constant, learned, shared attitudes, value and beliefs contributing to habits used within a particular food handling environment'. Studies into food poisoning outbreaks have identified FSC as a contributory risk factor, hence FSC assessment may help in assessing the likelihood of an outbreak occurring (Griffith, *et al.*, 2010). FSC research in food-service is lacking in amount, depth and validity (Taylor & Forte 2008) the sector is diverse and includes a variety of businesses (Griffith, 2000).

Whilst there are variable views regarding the relationship between food safety performance and FSC, it has been proposed that determination of FSC should consider food safety performance (Nyarugwe *et al.*, 2016). The current indicator of food safety performance in UK-based food-service SMEs is the National Food Hygiene Rating Scheme (FHRS).

The development of sector specific FSC assessment tool will be beneficial in the determination of factors that contribute to FSC in UK food-service and the development of suitable targeted interventions to improve FSC and reduce the risk of FBD.

Purpose

This study aimed to develop an understanding of FSC in food-service SMEs, identify key factors that influence FSC to inform the development of a sector specific assessment tool.

Methods

- A review of previous food safety, food-service and FSC literature (De Boeck *et al.*, 2015; Ungku-Fatimah *et al.*, 2014) in conjunction with findings from previous research studies comprising focus group of Environmental Health Officers (EHOs) and the analysis of FHRS inspection reports (Irawo *et al.*, 2022) informed development of the interview schedule.
- The interview schedule was designed to capture food-service manager awareness and perceptions of food safety, the FHRS, FSC and factors that influence FSC, such as leadership, commitment to food safety, communication, provision of resources, training, and risk awareness. The interview schedule was piloted prior to use.
- In-depth, semi structured interviews (n=10) using a face to face or telephone approaches were conducted with owners, managers and head chefs from food-service SMEs.
- Data analysis: A thematic analysis of transcribed interviews was carried out using NVivo 1.3 (QSR International).
- This research has received ethical approval from the Cardiff Metropolitan University Health Care and Food Ethics Panel (Reference PGR-4497).

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Results & Discussion

- Qualitative data was captured from in-depth interviews conducted with 10 food-service managers to explore factors that influence FSC in UK based food-service SMEs including restaurants, cafes, pubs and takeaways.
- Overall findings indicated that food-service managers' background and past experience may influence attitudes to food safety, management style and perceptions of FSC. Whilst managers had no prior awareness of the concept of FSC, setting clear expectations, leading by example, a positive working environment, communication and training all emerged as factors that may influence FSC.
- Use of FHRS to determine food-service FSC has been considered, with findings suggesting alignment with confidence in management performance indicators.

Factors influencing food safety culture in food-service SMEs

Food Safety Protocols

- All managers recognised a personal legal and moral responsibility for food safety, and expressed confidence in knowledge of food safety measures and legal requirements.
- Documentation was predominately based on 'Safer Food Better Business' (SFBB) packs (Food Standards Agency, 2013), but in-house monitoring forms were also reportedly used.
- Communication included a combination of verbal management instruction and expectation for staff to read through required food safety procedures.
- There was a reliance on EHO based food safety training for updates in food safety legislation. All reported awareness of the new UK allergen legislation 'Natasha's Law' (Food Standards Agency, 2021).

"I know that Natasha's Law has come in, it's essential that...if we're making sandwiches to take away or anything, everything needs to be labelled".

"Above anything else is to serve someone something that it's safe for them to consume in a way that it's, you know, safe for them to sit in and enjoy".

"In my cafe, I would say that all decisions that are relevant to food safety, for me to put in place and make sure they're adhered to by all other staff".

Leadership

- Managers indicated that setting clear expectations for food safety standards was important in determining business FSC.
- All food-service managers reportedly believed that FSC was about leading by example.
- Food-service managers did not typically set food safety related goals or targets with some indicating there were no objectives or targets at all. Head chefs reported wastage targets linked to bonuses.
- The desire to have good food quality, achieve and maintain a 5 star Food Hygiene Rating was reported as a desire amongst owners/managers and head chefs.

"So I won't expect someone to do something that I wouldn't do myself, but I do expect them to do things that I will do".

"But mainly my mission statement is that I want to serve good food and good price, with great service. That's me all in in one sentence".

"A mutual understanding within everyone in the team of like, exactly what your responsibilities are, you know, the standard that we expect as a business to be, like, fully understood".

Commitment to Food Safety

- Food-service managers reported verbal acknowledgment of a job well done and implementation of good food safety behaviours.
- Managers opinions were divided regarding rewarding good food safety behaviours as this was considered an expectation of working as a food-handler.
- Where rewards were given, this typically involved a drink after work or a meal. Additional payment or provision of bonuses as a reward was reportedly very rare for food-handlers. However, bonuses were reportedly paid to head chefs for meeting targets associated with waste.
- Managers widely acknowledged that wages were the primary reason for staff coming to work, but recognising a job well done in periods of high pressure or stress was seen as important to make the staff feel valued.

"Making people feel valued, is essential in any business, but especially within the kitchen".

"I took two of my staff to the football on a Saturday as a reward for all their hard work that they've put in in the previous few months".

"If you have to reward someone for following food, safe hygiene, then part of me thinks that I really want them here".

Communication

- Communication of tasks and expectations, in addition to communication of when expectations have or have not been met, were considered important and impact on FSC.
- Verbal, informal modes of communication were most commonly reported, with bi-weekly formal meetings common among head chefs.
- The use of WhatsApp was common among the food-service managers in this study, used to communicate new menus, legislation updates and praise for a job well done.
- All managers reported that staff were free and encouraged to raise any concerns or issues.

"It's the communication and the expectation that you have from the highest level within your business in a few. That's what creates a food safety culture".

"I can communicate with staff, on a general level, for example, in my last two places [of employment, I used] WhatsApp, not only would I be able to communicate with staff individually, but I could also communicate with the entire team".

"It's their working environment, their direct working environment. So personally, as their manager, I would always want... a member of staff to feel free to discuss their personal working environment".

Resources

- Widespread shortage of staff was reported in this sector with most managers in this study reporting a lack of staff to cope with the demands.
- Whilst most managers and head chefs admitted that food safety standards may slip during busy periods with cleaning being the most common malpractice. Some managers were also adamant that food safety standards were maintained even if it meant delayed service.
- Structural improvements and broken equipment were the most commonly reported issues.

"You know, there could be a 10 minute period where things look a little bit up in the air, but I can guarantee after that 10 minute period was gone. Everything was back to normal, again, clean, tidy the way it should be".

"I'm sure if I had a big walk in fridge, I could do a better job of cooling things".

"Equipment. Yes, we haven't had any equipment for quite a while stuff breaking by the day".

Training / Risk Awareness

- Prior food safety training was considered desirable but not essential when employing new staff, as irrespective of prior training and qualifications, further in house training in the business' way of doing things will be given to staff.
- Head chefs were more likely to report achievement of a Level 3 qualification in food safety whilst most owners / managers reported having a Level 2.
- All managers expressed confidence in awareness and understanding of risks associated with food handling. Temperature monitoring activities were mostly frequently cited, as well as examples including cooking, cross contamination and stock rotation.
- Managers rated confidence in the risk awareness of staff highly, this was mostly based on the training or experience of staff.

"We don't cook that much fresh meat, we don't cook that much fish. And if we do I stick to ways of doing things that I am comfortable with".

"Within my own cafe... there would be certain ways that... storage and hygiene [requirements]... that are specific to here that I would need to obviously point out".

"But the minimum they must have to be in my kitchen is Level 2, because Level 1 is... basic; and we're not basic rocket ship".

Food Hygiene Rating

- Management perceptions regarding the purpose of the FHRS included assuring customers of food safety, checking documentation, cleanliness, safe working practices, and staff knowledge.
- Mixed views on the usefulness of the inspection to achieve the FHRS were determined. Some managers found the EHOs helpful and pragmatic, whilst some deemed expectations unreasonable e.g. suggesting hands free taps.
- Common grievances about the FHRS was that structural issues and lack of documentation can result in a poor rating which may not be a true reflection of the standards of the business.
- There was a general consensus that FHRS was a good indicator of FSC, however reservations provided due to personal experience of a lower rating due to minor structural issues.

"We've got the five stars great. We're safe... place we follow the industry... we're less likely to give you food poisoning".

"Yes. It's a great indication... if you can see somebody who's got five stars, you are walking into that place? ...Yeah, they're doing everything correctly. No cause concern in terms of food safety culture".

"we had some minor tears in our flooring, and because of that we lost a star of the door. And I just think that that is for a business owner, that's very hard to swallow".

Awareness of FSC and factors

- None of the managers reported prior awareness of the concept of FSC.
- Background and experience reportedly shaped food safety behaviour and management style. Managers reported leading by example, creating a positive environment with family values.
- Most managers reported specific procedures for staff to follow, acknowledgment of the impact of peer pressure, work pressure, communication and training.

"I've worked in some kitchens where temperament is very high. And if you came and observed me in my kitchen, you'll see that everyone is so calm. I didn't raise my voice".

"everybody working together to assure that the food is done correctly and safely. It's a communal, it's very much a communal effort into ensuring that it's done correctly".

"having like a mutual understanding within everyone in the team of like, exactly what your responsibilities are, and what, you know, the standard that we expect as a business to be, like, fully understood".

"Culture is something that comes down from senior members of the team to the ones below and not learned from books".

Significance of study

- Leadership setting clear expectations and leading by example, a positive working environment, communication, training, risk awareness, background and experience of management emerged as factors that may influence FSC in SME food-service establishments.
- Improved understanding of FSC dimensions in the food-service sector will assist in the development of targeted interventions to improve FSC and reduce the risk of FBD. Further research is required to utilise data to inform the development of a sector specific quantitative assessment tool for FSC.