Kitchen Life 2

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Kitchen Life 2 (KL2) used motion-sensitive cameras to explore food safety behaviours in 70 households and 31 food business operator (FBO) kitchens. It also captured data using surveys, interviews, and fridge and freezer thermometers. KL2 was commissioned in February 2021 and completed in June 2023. The aim of KL2 was to identify the key food safety behaviours that occur in household and business kitchens and understand the factors influencing these behaviours.

KL2 was commissioned by the FSA and delivered by Basis Social, with support from Leeds University Business School. This unique and innovative research project won the Analysis in Government 'Innovative Methods' award in 2022.

Research reports

The findings from this study are detailed across seven separate reports, each focusing on a behaviour of interest to the FSA.

Each report explores the behaviour in detail and uses behavioural analysis to identify the factors influencing the behaviour.

The 7 reports are:

1. Not washing hands with soap after touching meat, fish and poultry
2. Reusing a chopping board after preparing meat, fish and poultry
3. Reusing a tea towel or cloth for multiple purposes
4. Storing chilled foods at incorrect temperatures
5. Not reheating leftovers until steaming hot throughout
6. Not checking use-by dates and consuming foods past use-by dates
7. The creation of food waste

Key insights

KL2 demonstrates how food safety risks occur in kitchens. By looking at whole events (such as the preparation of a whole meal), it enabled us to identify all the behaviours conducted by an individual or multiple people within a cooking event. Kitchen Life 2 showed us that it is often the sequence or combination of these behaviours which lead to a food safety risk. For example, a tea towel could be used by multiple people within the same household for various activities across a cooking event.

The analysis in KL2 focused on identifying the influences on 7 specific risky behaviours (each detailed report is linked above). Analysis showed that an individual's behaviour is informed by numerous factors; both internal to them (such as beliefs, knowledge, skills, motivation) as well as

external (like social norms, the physical space they have to prepare a meal, the time they have).

Key insights across these reports are:

1. Behaviour is not always the result of conscious thought and is often the result of habits and routines.

Behaviour in FBOs and households was often a result of established habits and routines, which could have a positive or negative impact on food safety practices. It was common for FBOs to have policies and procedures in place, which supported good habits and explicit routines. Some habitual behaviours were positive, for example, in FBOs, established routines for handwashing and reducing food waste. In other cases, established negative patterns of behaviour (such as individuals in FBOs and household kitchens reusing a tea towel) had a negative impact on food safety practices.

2. For households, there were knowledge gaps about best practice.

In households, out of the 7 behaviours we analysed in depth, there were clear knowledge gaps in relation to three behaviours: using food past its use-by-date, not re-heating food properly and storing foods at incorrect temperatures. In general, gaps in knowledge occurred less in FBOs. It is important that people know what the correct practice is, but knowledge is not always sufficient to enable the desired behaviour, as other factors may also have a strong influence.

3. Beliefs were a strong motivator for certain behaviours

An individual's motivation to do a behaviour could be influenced by their beliefs. For instance, even participants who knew that food should not be consumed past the use-by date, often did so. Individuals would make their own appraisal as to whether they felt the risk of food poisoning applied to them; informed by beliefs about likelihood of food poisoning occurring and/or how severe the consequences would likely be.

4. Ease and convenience were prominent influences, especially when time demands were strict, or the effort required was high.

Ease was often prioritised over good food-hygiene behaviours, particularly when good practice was more time-consuming or effortful. This was done unconsciously and consciously. For example, chopping boards used for meat/ fish/ poultry were reused as a surface area for placing kitchen utensils and plates, and tea towels were reused for multiple tasks including wiping the hands (particularly in FBOs), as they were easy to grab in a hurry and were often left around the kitchen.

When the individual had less resource to do the behaviour, for example, because of lack of time, or because they were tired or distracted, ease became even more of an influence on their behaviour. For example, in FBOs, busy periods of service (such as Friday and Saturday evenings) often resulted in poor food hygiene practices becoming more common. In households, participants being tired or distracted (for example when children, pets, or other activities were taking place in the kitchen) made poor food hygiene practices more common.

5. Behaviour was affected by the physical environment: the design of equipment and the space available in the kitchen.

In households the overcrowding of fridges was a barrier to checking use-by dates on food and household fridges typically did not have a clear mechanism for alerting the user to an unsafe temperature. Further, small spaces in general hindered stock-checking, which was a factor in increasing food waste. FBOs were more likely to have modernised equipment and considerable space (although this is not always the case). Where there were cluttered kitchens (in FBOs and

households) this enabled poor food hygiene practices.

6. For FBOs, kitchen culture was particularly important.

In FBOs the culture within the kitchen was an important factor. In many cases, a ‘compliance culture’ had a positive impact on food hygiene; businesses wanted to avoid making customers ill, to abide by the law, and to maintain a positive business reputation. This culture was facilitated by clear policies and procedures in place to support staff with good food hygiene. There was also a culture of deference to the chef, where their knowledge or experience was assumed by FBOs owners, managers, and staff, and therefore not challenged even when their practices were high risk. For example, one chef had full authority to make ad hoc decisions about using food past the use-by dates. Business culture also had an impact on other practices in the kitchen, for example, whether it was common practice (or not) to carry out handwashing or attempt to reduce food waste.

Conclusion

The findings from KL2 have identified multiple behaviours, conducted in household and business kitchens, that present an elevated food hygiene risk. Having insights into these behaviours and the factors that influence these behaviours, will inform FSA policy decision making, guidance and risk assessment processes. KL2 also outlines several behaviours that could be the focus of future behavioural interventions research.

Technical details

Overall, 101 kitchens participated in KL2: 70 households and 31 food business operators (FBOs) across England, Wales, and Northern Ireland.

Methodological details about this study are available in the Technical Report, and a raw dataset can be downloaded for the KL2 study via the **FSA’s Data Catalogue**.

Kitchen Life 2 Literature Review

At the start of the Kitchen Life 2 research project, the FSA commissioned Basis Social and the University of Leeds to conduct a literature review, to inform the scope and design of the Kitchen Life 2 project. The full literature review can be accessed via the Kitchen Life 2: Literature Review webpage.