Consumer Forums Outcomes: Perceptions of Food Safety Risk

Contents

Introduction

FSS has a duty of care to support consumers in Scotland to understand foodborne risks and how to control them. However for FSS to be able to perform this function we need to understand and measure the level of consumer knowledge, concern and awareness of the risks.

The aim of this project was to conduct qualitative analysis to ascertain knowledge, perception of risk and level of concern about issues related to food safety (such as, unpasteurised dairy products and rare burgers). This is to help FSS identify if known risks and consumers views of a food risk are the same, or where they differ. The results from the Food in Scotland consumer tracking survey report that about three quarters of consumers are concerned about food poisoning however a significant proportion do not report following good hygiene practice (average of 11/20). As FSS has a role in ensuring that consumers have advice and guidance to inform food choices and undertake good food hygiene in the home, this work will help FSS identify where further work needs to be undertaken possibly through the development of new guidance or the refinement of existing advice.

This report is based on results obtained by research undertaken in December 2017 by Kantar TNS.

Objectives

The objective was for analysis of consumer awareness and perception of different food safety risks and why some risks are perceived as more concerning than others. Consumer forums were conducted as a snapshot of views which is a useful tool to inform us of motivations and why consumers act to food risks the way they do. This research is about the 'why' not the quantitative aspect.

There were three core objectives that were addressed in this report.

- What is consumer awareness and perceptions of different food safety risks?
- What is consumer awareness and perceptions of different food safety risks amongst particular food groups?
- How can FSS communications be optimised?

Within these objectives there were 4 specific food safety risks that were asked of the participants:

- Undercooked meat/burgers
- Undercooked chicken
- Unpasteurised cheese

- Chemical contaminants

Figure 2.1 Kantar TNS research objectives

Method

For stage 1 Kantar TNS conducted 18 in-depth interviews between 20th-30th November 2017 in Aberdeen, Glasgow and Edinburgh; each participant completed a pre-task over one week prior to the research beginning to document their food safety behaviours in a diary.

For stage 2 the participants were then invited to attend a group session in one of the locations to discuss the research with others.

The sample was segmented based on age / life stage and socio-economic group (SEG). Therefore, in each location we spoke to:

- 2 x Pre Family – aged up to 30 with no kids
- 2 x Family – aged 25-50 with children at home
- 2 x Empty Nester – aged over 50 with no children at home

Additional recruitment criteria:

- Mix of ABC1C2DE across life stage
- 50/50 gender split across each life stage
- Mixture of urban / suburban / semi-rural
- 3 participants from BAME backgrounds across the sample
- Range of level of interest in food issues
- Range of attitudes towards food risk - behaviour around 'use by dates' as a proxy for approach to risk

What is consumer awareness and perceptions of different food safety risks?

For most, the top priorities with regards to food were:

- Quality
- Freshness / appearance / smell
- Price
- Taste

Secondary to these, were:

- Healthy eating – when possible and only for some
- Safety / risk of illness
- Waste

Lower down and much less top of mind were:

- Authenticity
- Provenance

However, for a minority Safety was a stated and important priority. This was driven by a few different factors; a desire to not become ill, particularly if they had family responsibilities and time off could impact on childcare or finances., if there were affected by a health problem leading to general caution e.g. stomach ulcer that meant generally anxiety towards preparation and consumption as did not want to exacerbate the problem by getting sick, and had previous exposure to how some out of home food is prepared and have a negative view of it.

However, when we looked at 'real' behavior in the diaries (rather than claimed behavior) there was little difference between those that stated that food safety / risk management was a priority and those who stated it was mid-range. They were, in the main, behaving in similar ways and following similar basic food hygiene practices. Although there were attitudinal differences to safety these did not manifest in any significantly distinct behaviours when it came to food. We found that basic food hygiene appeared to be an unconscious and ingrained behaviour for most, that did not require much consideration.

"*I'm not sure why but chicken has always had the worst rep, hasn't it*." – Empty Nester, Glasgow

"*You can't be too careful with meat, especially chicken. You would get very sick if you didn't cook properly or didn't wash things up thoroughly"* – Family, Aberdeen

"*I'd cook a lot of vegetarian foods because I think it is hard to get food poisoning from vegetables*" – Glasgow, pre-family

The cooking and handling of raw meat, particularly chicken, was of the biggest concern. This was particularly observed in the preparation and cooking of raw chicken meat because it was perceived there would be a more severe effect on health although they were unsure

exactly what. The participants seem to relate raw chicken meat to be most likely to make you unwell and this dominated risk mitigation behaviour.

Consumers were consistently undertaking a number of food safety behaviours. This included using different chopping boards for meat compared to vegetables and fruit, cleaning chopping boards after using for preparing meat, cleaning knives / utensils during food preparation or using designated knives for raw meat preparation. Customers also reported they undertook handwashing before handling food and during preparation if handling chicken but did this less urgently with other meats.

Chicken was the key concern regarding hygiene and hand / equipment washing. This was noted as when the customers handle chicken meat they wash their hands immediately after handling. As for other meat this was less stringently observed – e.g. may not wash hands straight away. Raw meat *sometimes* kept separately in fridge – eg. Different shelf / not open / no contact with other items in fridge – although not all were doing this by any means. When asked about vegetables, carbohydrates, dry food and fruit there was much less likely to be a concern or result in handwashing. Fruit and vegetables are often washed / peeled (71% always/mostly).

Correct cooking and risk of undercooked chicken or meat was a concern, particularly chicken, however the risk was mitigated through visual assessment.

In the home behaviours

- In general consumers seemed to be over-cooking chicken
    - Following instructions and adding 5 or 10 minutes 'to be on the safe side'
- But checking that food was cooked was not a particularly scientific process
    - Consumers relied on: look, feel, following cooking instructions – none using meat thermometer
- Always cooking at a high temperature i.e. > 180 degrees, grill on high / medium, hob high / medium
- Carefully follow the on-pack instructions regarding cooking times and temperatures

Out of home behaviours

- Putting trust in establishment and its practices – that the chefs / cooks are professionals who know what they are doing
    - Visual assessment of how clean or well maintained an establishment is - does it look safe?
- Most commonly check chicken (and meat to some extent) to look for:
    - Visual assessment: does it looked cooked?:
        - Pink flesh
        - Gelatinous
        - Cold middle
        - Red or pink juices

- Consumers not sure what else they could do

"No, I've never been given undercooked chicken. If I was I would send it back. Although I don't often take chicken when I'm out because I'm not sure I would trust them cooking it. I've not thought about it much before but I guess that is what I do. I would eat rotisserie chicken because I can see how it can been cooked." – Empty nester, Glasgow

"I worry about cooking chicken so I overcook it, everyone says I overcook chicken" – Empty Nester, Glasgow

"I won't eat chicken at takeaways or restaurants because I have family in the restaurant business and I know that the meat is pre-cooked in the morning and then sits out all day. The only way I would eat chicken is if it was a grilled selection or something where you know it has been cooked fresh." – Pre-family, Edinburgh

In the main, attitudes and behaviours towards food risk were learned from family or parental influence over a number of years. That is generally where they learned that chicken is a key risk and should always be handled correctly and safely. Experience was also gained through trial and error, thus, as cooking competence increases exposure to risk decreases.

There were some mentions of external information also influencing attitude and behaviour towards food risk. Some recall of advice of not washing chicken before cooking, others cited Home Economics at school as playing a role, particularly younger consumers. A Minority had been more active in seeking out information regarding risk from Google, food website e.g. BBC, FSS (1 x respondent). Media coverage can also play a role for some through documentaries / exposés, TV chefs (although can lead to some confusion around rare meat and what is safe or not e.g. pork loin being served pink on TV) and online recipes.

Research insights / Conclusions

Consumers generally felt safe and in control with regards to food risks and food safety / risk of illness was a mid-range priority when thinking about food. Attitudinal differences to safety are not reflected in actual behaviours, where basic food hygiene appeared to be an unconscious and ingrained behaviour for most that did not require much consideration. Other insights captured were:

- Chicken, and to a lesser extent other meat products, were the main concern
- Consumers were consistently following a number of food safety behaviours in the home
- Undercooked chicken / meat was a concern but risk mainly mitigated through visual assessment
- Family / parental influence cited as origin of attitude to and behaviour regarding food risk
- Media also had an impact but less than family / parental influence

What is consumer awareness and perceptions of different food safety risks amongst particular food groups?

Undercooked meat / burgers

Beef, but particularly steak, was commonly perceived as a meat that can be eaten rare. This is a cultural norm that is discussed openly in restaurants / between peers / in families / TV chefs / media / film / TV. For example you are asked "How do you like your steak?" when ordering steak, so it is not a new concept, it's been around for a long time. Therefore it is not seen as being a high risk and is more a taste preference.

There is high awareness that pork and chicken cannot be eaten pink / rare (81% would never eat – from FSS consumer trend survey, wave 5). It was associated with a high risk of severe illness but a minority claim pork can be eaten rare via TV chefs which is confusing for customers. A minority of customers were aware of lamb, venison and game as being other meats that could be eaten rare. However, our customers had low exposure to these types of meats as eaten very rarely.

In regard to rare steak, many admitted to having a poor knowledge of why it can be eaten like this raising questions:

- "How does the bacteria actually get onto the steak / meat?"
- "Where does it come from?"
- "Is it always there?"
- "How can it be reduced?"
- "Why is it different from other meats?"

However there was some awareness that searing steak / high temperature kills bacteria.

"I think it is pretty safe to eat red meat raw from what people say. My mum has it rare so I think that's OK. Red meat generally I don't see it as much of an issue. Chicken I would though" – Pre-family, Glasgow

There was some awareness of the trend to serve pink burgers, however, experiences of this varied. Those who chose / preferred to eat pink burgers (in and out of home) tended to be younger customers, and did so for the following reasons:

- Better taste
- Like pink steaks so choose the same for burgers
- How it is served in 'good' restaurants

Others have been served pink burgers and have been uncertain what to do but have trusted that the restaurant are experts and this is how it should be served. Others would never eat a pink burger because they; know that mince should never be pink (these people tended to be older), or do not like pink meat generally.

"*I thought that was how you are meant to do it, that's what you see in these fancy burger places now"* – Family, Aberdeen

It was found that there was very low awareness / understanding of the difference between having burger vs steak rare. Burgers were perceived as the same as a steak, therefore logically it can be eaten in the same way i.e. pink. The minority were aware or guess correctly that it has to do with bacteria on outside being minced / mixed into the whole burger. There was some indication that high end out of home eateries have credibility serving pink burgers as they are professionals that know what they are doing and know how to intentionally serve a rare burger. Therefore potentially customers may feel less confident to send it back in these establishments.

"I know you shouldn't eat rare burgers but I don't know why."

"*I would never have thought of that with the burgers. Because of the food standards I'd imagine that the nice places will follow the procedures to do that but I think if I was having one or cooking it now I'd make sure it was cooked all the way through"* – Pre-family, Edinburgh

Information was provided to the participants on the risks of eating rare burgers, this included; pathogens, symptoms, difference between restaurant and shop bought burgers being eaten rare, and why some rare beef products can be eaten safely. The information provided good clarification of rationale but also raised some questions:

- What about other beef practices? e.g. steak tartare

The information had a significant impact on those that currently ate pink burgers, they claimed that they would be less likely to do in the future as they were worried by the risk. They would also think twice when out of home and only consume rare burgers in better quality establishments and they would not cook pink burgers at home. In the main, consumers believed they would be more vigilant towards pink burgers.

However, there was a potential issue with the takeout from the information, which was overly negative and caused confusion as to whether a pink burger can ever be safe. The message of 'it is possible to produce pink burgers safely' did not really land and this mixed message caused confusion.

"How am I as the consumer supposed to know if it's safe and the establishment has put in extra checks etc? I'll never know! What can I do?"

"Why is this legal if it's unsafe, just ban it."

"*I would never have thought of that with the burgers. Because of the food standards I'd imagine that the nice places will follow the procedures to do that but I think if I was having one or cooking it now I'd make sure it was cooked all the way through"* – Pre-family, Edinburgh

Overall, pink burgers felt like a potentially significant problem because burgers are very popular and this could make people very ill or could be fatal. However, without incidence data, probability or level of risk it was difficult for some consumers to make conclusions. Most tended to lean towards being overly cautious and perceiving it as high risk. Consumers may be slightly more careful when eating out to check it is cooked through (but doing this anyway quite often).

Research insights / Conclusions

Beef steak is commonly known to be eaten rare but knowledge around why it can be eaten rare is limited. There was some awareness of the trend to serve pink burgers but experiences of this varied, however, difference between rare burger and rare steak is unclear. The information provided good clarification of rationale for advice but fell short of providing reassurance, thus potentially a significant issue due to popularity of burgers but difficult to gauge true risk.

Undercooked chicken

As discussed in section one, undercooked chicken was high on consumers' radar in regard to food risk and safety behaviours. Undercooked chicken meat is a concern that consumers were highly aware of and believed they were mitigating against because it is common knowledge that chicken is dangerous. Consumers were much more confident dealing with undercooked chicken in a restaurant than they are with a slightly pink steak i.e. would always send back / complain. The risks with chicken and awareness of what the risk indicators were felt to be more black and white i.e. it was either safe or unsafe – there's no middle ground. Consumers also felt clear knowing the signs of chicken being undercooked:

- Pink flesh
- Gelatinous
- Cold middle
- Red or pink juices

Although there is good understanding of how to handle chicken safely there is a limited grasp of why they need to do this. For example there was very low awareness of campylobacter across the sample, most associate chicken with salmonella and E.coli poisoning.

A minority were still washing chicken due to habit and belief that it washed off any dirt because it was a behavior learned from a parent or they had not got sick so believed they were following safest behavior.

"*I do wash chicken, it's not that I think I am washing off germs, it's more that I think in the butchers and stuff that it gets dirty so I'm washing that off. My mum used to do it so I guess I got it from her*" - Pre-family, Edinburgh

Generally there is good awareness that risk with chicken is not just it being undercooked, it is also the way that chicken is handled in and out of the home too. Some were so

concerned about chicken that they would not order it eating out of the home as unable to see preparation or trust in it being cooked properly.

Additional information was provided to the customers on campylobacter, how campylobacter gets into chickens, and how the risk is managed by processors, retailers and consumers. The information provided had a high impact on everyone. They were very shocked that 54% of retail chicken is infected with campylobacter (this signified a substantial problem) and that illness could be so severe to cause hospitalization (severity of risk to young or elderly).

However, even though it was considered potentially scary, shocking and serious, most consumers felt they were currently doing all they could to deal with the risk and ensure they were not exposing themselves or family to illness, such as:

- Washing hands, utensils and chopping boards is the main weapon against illness
- Cooking properly – in many cases overcooking as a precautionary measure
- Some aware of the advice from FSS not to wash raw chicken

In general, chicken safety was felt to be well promoted by:

- Common practice nowadays
- Mentions of cookery programme coverage, online recipes or advice, adverts that feature chicken as potential contaminant

> "*I didn't realise the 54% of chicken was infected and how common it was, obviously you need to cook it properly. Also how damaging it can be I didn't know that*" – Empty Nester, Glasgow

Research insights / Conclusions

There was high awareness that under cooked chicken is a risk and perception is that they were doing what they can to reduce risk. There is good understanding of how to handle chicken safely although limited grasp of why. The information provided had a high impact due to incidence level statistics, but consumers were confident they were already adopting correct behaviour.

Unpasteurised cheese

Most were aware of what pasteurisation was and could 'work out' what unpasteurised meant but had not generally come into contact with the term in relation to any food that they bought or consumed. For some, unpasteurised cheese was associated with 'fancy' cheeses like soft cheese, blue cheese and goats cheese. However these are quite far outwith the samples typical cheese purchasing habits with most buying pre-packed, processed cheddar or spreadable cheese. There was no particular desire expressed to eat unpasteurised cheese in the future, there were no advocates, as no one felt it was in line with their general approach to food and it felt quite specialist, niche and even described as "posh". Nonetheless, there was also a feeling that other consumers can and should be allowed to eat it if they want to (just not me) so it should be up to personal choice.

"*Ok, it's those funny cheeses, the blue mouldy ones. I'd expect that, we don't eat them, just [spreadable cheese] or cheddar"* – Family, Glasgow

As this was such an unfamiliar food there was no real perceived risk even after reading the supporting information as consumers struggled to relate to this food choice. The main concern consumers had was whether labelling was sufficiently clear or not. For example the issue of loose cheese not being individually labelled was an issue for some who felt that it probably should be labelled to make sure people remember or others in household know it is unpasteurized. Labelling unpasteurised cheese as 'raw milk' was perceived as confusing as it added another description. However, the term 'raw' was actually off-putting and unappealing language as associated with a potential food hazard and therefore, most were even less likely to try this.

Consumers struggled to assess whether this was a major risk or not without incidence data, therefore it was hard to judge whether to be concerned or not. Even the news story failed to illustrate how widespread this issue was, although it did convey that the impact can potentially be serious. Nonetheless, the prevailing view was: 'this is not for me / not going to affect me'.

Again, as we saw with the pink burger discussion the potential positive is hard to see or believe from the information presented. The message regrading that unpasteurised cheese can made safely was not landing and was overshadowed by the illness, death and risk narrative. Consumers were uncertain how they would know if a producer has put in the additional safety practices. However, they were reassured that at least FSS is regulating

"I think we are not as bug resistant now and we have haven't got the same resistance. I think it is worrying that people will read this and worry about it. Our ancestors ate it, I ate it as a kid, drank raw milk and I was fine" – Empty nester, Edinburgh

and checking this, thus not overly concerned about this as an issue.

Research insights / Conclusions

There was no experience of (knowingly) eating unpasteurised cheese among the consumers and this was regarded as a food that was extremely 'niche'. Due to unfamiliarity with unpasteurised cheese and difficulty in relating to it, consumers struggled to perceive any real risk for themselves.

Consumers failed to takeout any positive messages from the supporting information in regard to cheese and were uncertain how they would know if a producer had the additional safety practices in place. But they were reassured that FSS is regulating and checking this risky food and this resulted in the customer being not overly concerned about it.

Chemical contaminants (caveat that less time was allocated to this versus other topics)

In an intangible way chemical contamination did seem to matter to people at a broad level. However, consumers had very little idea of what they could do to impact or mitigate this as the general feeling was that knowledge or understanding of the risk was insufficient.

The main associations with chemical contaminants were pesticides, packaging (i.e. tins kept in the fridge 'reacting' or water in plastic bottles stored in warm places) and burnt meat (i.e. BBQ meat, toast or chips). Consumers felt that they did what they could to acknowledge this by them washing and / or peeling vegetables to reduce pesticides or buying organics to avoid this as best they can.

> *"It's a worry because you just don't know anything about it or the effect*" – Empty nester, Aberdeen

For consumers to interpret the potential risk of chemical contaminants was the area of greatest ambiguity, with many questioning whether in fact it was a risk at all. This was due to:

- Too long term a risk, no incidence levels so it does not feel like a serious acute risk
- Supermarkets must sell broadly safe foods, they must be part of the checks and balances involved in this and I trust the shops I buy my food from
- What can I realistically do about it? - "If I can't kill it when I cook it then what can I actually do about it?"
- Minority raised questions regarding credibility of claims and whether noise and hysteria was created around something that is of minimal risk or turns out to be false e.g. salmonella on egg shells in 80's

> *"I think it might be a bigger issue for me if I knew more about it. It's not really spoken about in the media, like 'oh someone got sick from eating it' so I don't really know."* – Family, Glasgow

Chemical contaminants was perceived as an area for experts more than consumers as sometimes consumers failed to see how this was relevant for them rather than the people who do the checks (i.e. the producers or manufacturers). Generally, consumers felt that this type of risk was the reason that organisations like FSS exist:

- They need to keep what they are doing
- They are the experts
- They are there to keep us safe
    - E.g. Egg recall – a sign / proof that the government agencies are working well (here and in EU)
    - Crisis averted therefore proof that FSS is working effectively

> *"I don't really worry about this, what can you do? You trust the powers that be are keeping us safe*" – Family, Aberdeen

How can FSS communications be optimised?

Undercooked chicken

Although risks associated with chicken were regarded as potentially very serious, and were relevant to most people, it would appear that consumers were adopting several behaviours to mitigate risk and were aware of the need to do so. However, perhaps not in as much detail as FSS may ideally desire. For many consumers, chicken was actually seen as low risk or concern as they felt in control of this issue.

Undercooked meat / burgers

Whilst pink burgers were not universally eaten by the sample there was a general awareness for most that this was a trend. Additionally the risks of eating pink burgers were not well known and there was potential for confusion with rare beef or steak. The information provided had an impact on the sample however there was ambiguity about consumer action and the ability to know whether a burger has been prepared 'safely' when eating outside the home. Therefore there was a polarised response when ranking against other risk areas:

- Some felt very low risk as would never eat or prepare burgers in this way
- Others felt this was a much greater concern when eating outside the home and whether establishments were safe or not

Unpasteurised cheese

Unpasteurised cheese was regarded as not relevant for the sample as none had experience of the product. Therefore it was typically ranked lowest in terms of perceived risk as it 'doesn't affect me'. Some of the sample suggested that if they did come into contact with unpasteurised cheese they would not believe the risk was significant enough for them to be overly concerned.

Chemical contaminants (acrylamide)

Chemical contaminants created the greatest ambiguity as consumers struggled to rank against the other risk areas. This risk area raised the most questions and created confusion among consumers, with them asking:

- Who is affected?
- What should I do?
- What are the dangers?

Most were unsure how concerned they should be with this and needed more information to assess the risk. The sample was consistent on the key information they needed to be able to understand the risk, these were:

- What is the issue / problem?
- What is the health hazard? How severe can it be?
- How big a risk is it? long vs short term? How likely is it that you will be affected?
- What should people do to minimise risk?

Research insights / Conclusions

Overall consumers found it difficult to appreciate the risks of chemical contaminants in food as this was the area with greatest ambiguity regarding how to interpret the potential risk. Thus perceived as an area for experts more than consumers.

How to communicate probability

Probability was a fairly complicated area for most consumers to understand and at times a minority in each group led with regards explaining the number behind the different options. Initially most were drawn to simple headline figures that did not require mathematics or working out to understand e.g. 900% or 9 times. Examples that had '1 out of…' can initially seem more complicated, technical and require a certain level of mathematical problem solving. The use of non-food comparisons (e.g. 200 times more likely than falling down stairs) made little sense and felt irrelevant to most people. Comparisons to other foods were useful for understanding the risk level, however could erode the impact of the headline risk as everything appears risky and it required the most working out of the options.

However, on reflection the statements that gave the most information to assess risk consisted of '1 out of…', this allowed the consumer to properly make an informed judgment on how risky it was. In regard to relative compared to absolute examples, the relative figure tended to feel more scary and off putting, which was liked by those that were against eating rare meat. However, in the context of understanding what the figure actually meant via the absolute value it could seem misleading.

"*900 times and 9 times doesn't really tell you anything, it just sounds scary."* – Family, Glasgow

"*900% really hits you, puts you off, I like that one best."* – Empty nester, Aberdeen

How to communicate severity

Severity was judged as a key part of information for understanding the consequences and also understanding the risk. Consumers desired a breakdown of exactly what health effect the risk could potential have on them. Therefore there was a strong preference for removing any terms that are ambiguous, such as: severe, moderate and mild as they are subjective, open to interpretation and can signify different things to different consumers. Describing severity in terms that clearly communicate the effect are preferred, such as: death, long term illness, hospitalisation, short term incapacitation, pain, discomfort and no noticeable effect.

"That [severity – death, long term illness] tells me exactly what might happen, so I can decide 'yeah, I will give it a try or no, I won't risk it'." - Empty Nester, Aberdeen

How to communicate validity

Validity was essential for assessing how credible a piece of information is and whether to trust it. The source was deemed the most important part of validating whether to trust something or not. The most trust worthy and influential sources were perceived as independent public organisations (FSS and FSA were particularly were regarded as relevant in this area) and government or government bodies (NHS, council). Universities had credibility but less of an impact with this audience as consumers were not confident which institutions were more or less credible. Media and social media were perceived as the least trustworthy sources as they have no scientific credentials or expertise in this area. However, the media will probably play a key role in disseminating any information from the more trusted sources. An exception for some is the BBC which is perceived as being trustworthy and reliable in what they communicate.

Although it is important for the consumers to know that there is strong evidence to support advice they do not feel the need to know how that evidence was generated or the validity of it. This was considered too technical / scientific and therefore too difficult to understand and not relevant or useful to the consumer. Consumers trust that the evidence is credible before the trusted organisations (e.g. FSS, FSA, NHS, Government) communicate anything to the public.

"*I would trust any of FSS, FSA or NHS, they are there to protect and help you*." – Pre-family, Glasgow

"*Everyone sits up and listens to the NHS so NHS adverts would be good*" - Pre-family, Edinburgh

Risk framework

The sample were provided with an example (Figure 1) of a risk framework that could be used to communicate a risk assessment.

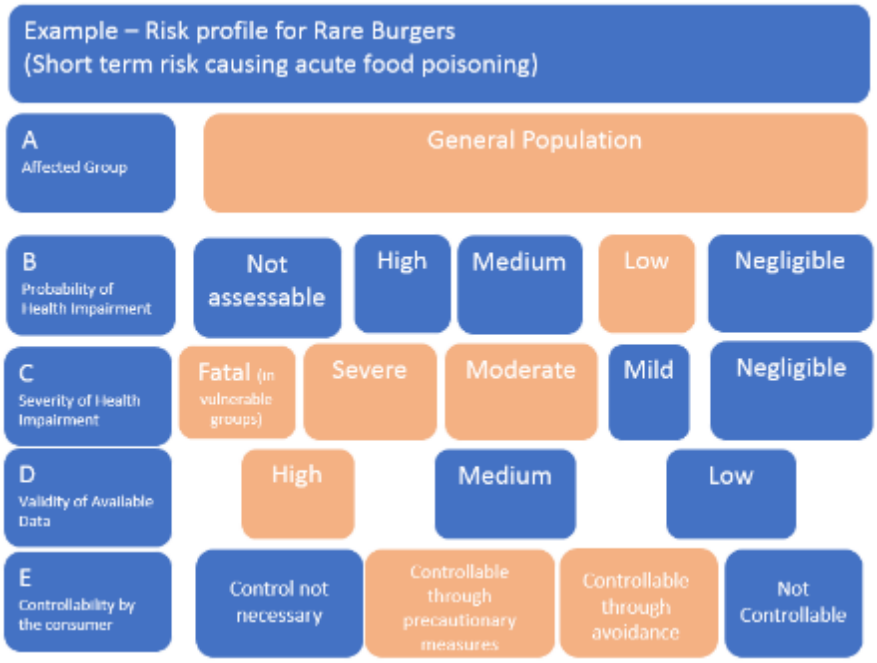

Figure 1: Risk assessment framework communication

Although we had some positivity towards the framework in collating all the different complicated areas discussed, on reflection it was not deemed to be particularly practically or useful to consumers. They found that it required intensive decoding, especially if consumers had no prior knowledge in this area (unlike our sample). The main points raised were:

- It felt too technical and scientific
- Multiple entries in a row was confusing
    - Is it fatal or moderate?
- Consumers still had questions about how to manage the risk
    - What am I meant to do?
- Probability and severity labels were too vague
- Visually unappealing
- Too much information presented at once to be able to digest

Therefore, consumers struggled to imagine how this framework would work in reality and how they would access and use it in a quick and easy way. Consumers were particularly troubled by where they would see it:

- Will this appear on food packs?
    - If it does it will make packs unattractive and too busy
- Will it appear on posters or on TV?
    - Feels too complicated and unengaging
- Will I have to try and find it online?

- Where would you go?
- What situations would you use it?

On reflection most believed they would be unlikely to use it in its current format, especially as they believed it did not address their main concern which is in regard to what to do about the risk. It felt impractical, unworkable and not really providing consumers with action-oriented advice. It lacks credibility as a real world solution and impractical to the general public.
In conclusion the framework does not currently work for consumer communications in its current format. However, the films and posters were more successful in landing the risk message and communicating what to do about it

"You would need some more information about why they were giving it out" - Family, Edinburgh

"*The bit that says how ill it can make you is a bit confusing, which is it?"*– Pre-family, Aberdeen

"*Yeah it's alright but it still doesn't tell me what to do."* – Family, Glasgow

"It doesn't tell you enough to tell you what to do about the risk, it's confusing" - Family, Edinburgh

Communication via films and posters

Two films were shown to the sample, one on acrylamide and one on burger vs steak: what's the difference, both produced by FSA to explain risk (https://www.bing.com/videos/search?q=fsa+video+burgers+vs+steak&view=detail&mid=623179F44A335480E4D0623179F44A335480E4D0&FORM=VIRE and https://www.bing.com/videos/search?q=what+is+acrylamide+&adlt=STRICT&view=detail&mid=DF5BC463CF0ADFC84EF3DF5BC463CF0ADFC84EF3&&FORM=VRDGAR) . There were also some posters shown that communicate a risk to consumers.

The Consumer reactions to the two films was very positive, they found them clear and easy to understand, engaging and enjoyable to watch, they covered most key questions, and both films landed what the consumer is meant to do to minimise the risk.

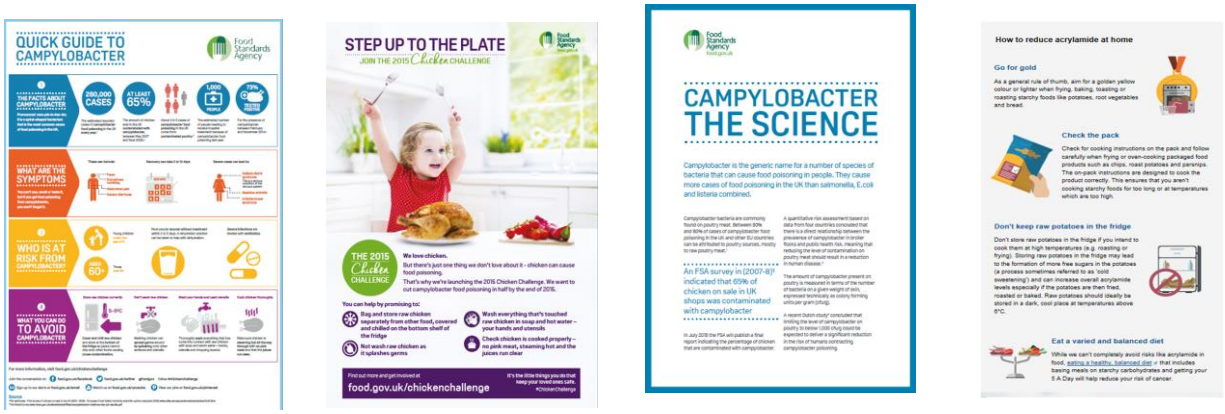

Figure 2: Some examples of the print and posters used in stimulus pack to communicate advice

Several of the print / posters were also well received for similar reasons, especially when including imagery and graphics. The print / posters were less successful when being overly detailed or technical. However, there was recognition that this was probably needed somewhere so that those who desired this level of detail could find it.

"*The videos work for me, that's good to watch, you'd take that in and I can understand what I'm meant to do"* – Empty Nester, Aberdeen

Research insights / Conclusions

The risks of undercooked chicken and unpasteurised cheese can be serious but are perceived as of low concern because people either see themselves as in control (undercooked chicken) or it is not relevant to them (unpasteurised cheese). There was a polarised response to undercooked / pink burgers when ranking against other risks depending on relevance and exposure. Chemical contaminants created the most ambiguity and confusion, thus it was difficult to assess the risk from the information provided.

Probability was difficult for most consumers to understand and at times a minority in each group led with regards to explaining the options. For probability absolute examples were more impactful and provided better assessment of the risk than relative options. Severity was judged as a key part of the information for understanding the consequences and also understanding the risk. Validity was essential for assessing how credible a piece of information is and whether to trust it, particularly the source. The risk framework was deemed too impractical for consumers as there was uncertainty around how they would access and use it in a quick and easy way. The films and print stimulus worked more successfully than the framework in landing risk message and communicating what to do.

Actions for FSS to consider

Overall the actions for FSS perceived by the sample were:

- To continue to inform and educate the public with regards to best practice, particularly the young
- Communicate any changes to current best practice or new food risks
- Provide the detailed information the public may want if they require more information on an issue e.g. FSS website
- Play a visible and active role in enforcing any risk or safety issues when they occur to reassure the public of the FSS role and effectiveness

Actions suggested from the different food safety risks amongst particular food types were:

- To educate the public on the differences between rare burgers and steaks, especially in the home
    - Greater clarity in explaining the risk to allow consumers to judge whether they want to eat rare burgers or not
    - Potentially also a role for explaining why burgers can be sold in this style i.e. why it is not illegal
- As per previous chart, continue to inform and educate the public on chicken with regards best practice, particularly the young
    - Especially around washing chickens
    - Consider a mixture of labelling and above the line advertising to successfully land key safety messages for chicken and burgers in the home and out
- Clear labelling of pasteurised vs unpasteurised cheese, including loose cheese, so consumers can understand what they are buying
- FSS to continue to invest in research into chemical contaminants to understand whether there are any long term effects and there severity
- Clearly communicate any changes to risk area and what action the public needs to take if there are any risks

How can FSS communications be optimised?

Actions to consider for FSS communicating risks:

- When communicating probability, do not use comparisons or too many numbers as it can cause confusion
    - ‘1 in 5,500’ provides more information than ‘900%’
    - Use absolute probability examples as they provide better understanding of risk assessment than relative examples

- Communicate severity in unequivocal terms like: death, long term illness, hospitalisation, discomfort etc so consumers can understand consequences
- Use trusted independent official organisations as source for information, FSS sits at the top of this
- The framework does not work in current format and requires significant revision based on the above, as well as clearer guidance on the action required (what to do)
- Develop and utilise short film and print as the most effective method of communicating risk and subsequent action to the public
    - Include probability, severity, validity and what action to take
    - Must be short, visual and in layman terms (not too scientific)