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| <b>Institution: BRUNEL UNIVERSITY (H0113)</b>  |
| <b>Unit of Assessment: 4 – Psychology, Psychiatry and Neuroscience</b>   |
| <b>Title of case study: Changing labelling policy for food allergic consumers in Europe</b>  |
| <p><b>1. Summary of the impact</b> (indicative maximum 100 words)</p> <p>A 14 month research project funded by the Food Standards Agency (FSA) has informed national policy on allergens and food labelling, EU negotiations by DEFRA on Food Information Regulation and Food Standards Agency advice to industry. The project involved the development of a novel method for eliciting consumer views about food labels, the details of which have been communicated by the FSA to relevant government departments. The results of the project have been presented to FSA, at industry events, within academia and allergy charities, while references to the project have been widely circulated on social media and appear on policy and industry websites.</p>   |
| <p><b>2. Underpinning research</b> (indicative maximum 500 words)</p> <p>Recent estimates suggest that over 120,000 children aged 13-19 suffer from challenge-proven food allergy in the UK. The incidence of anaphylaxis over all age groups has been estimated as high as 103 episodes for 100,000 person years, with food causing at least 30% of these (ref). In the light of this the Food Standards Agency needed to better understand the dietary patterns and food choices of food allergic consumers in order to contribute to policy relating to thresholds of allergens in food and the labelling that would need to accompany this [1]. Food allergy limits quality of life and impairs psychological well-being (ref)</p> <p>Through a competitive tendering process FSA awarded the project to a team led by Julie Barnett – initially based at the University of Surrey (Feb 2009 – Sept 2009) and then later at Brunel University (Oct 2009- April 2010). Whilst at Brunel as Reader in Healthcare Research Dr. Barnett collected more than two-thirds of the data, led the compilation of the final report, the submission of all of the publications reporting the data collected in the study and X gave associated conference presentations</p> <p>This study investigated how people with peanut and tree nut allergies use food labels and other pack information when making choices about what food to eat and buy, and what types of strategies they adopt when selecting foods (shopping and eating out) to minimise the risk of triggering an allergic reaction. The team led by Dr Barnett (Brunel University) included Prof Shepherd and Dr Raats (University of Surrey) and Dr Lucas (University of Southampton) and an independent consultant (M.H.Gowland).</p> <p>Thirty-two adult volunteers with a doctor diagnosed peanut and/or tree nut allergy were recruited to the study from 5 sources across the UK (recruited participants had no other food allergies). The study protocols were developed in close consultation with the FSA in a series of bi-lateral meetings. Following significant challenges to recruitment due to the stringent recruitment criteria the project was extended and the increased costs this involved were met by the FSA.</p> <p>Each participant took part in three tasks which were designed to gather qualitative information on how food allergic consumers make their food choices and food purchasing decisions. These tasks were:</p> <ol style="list-style-type: none"> <li>1. An accompanied shop in their usual supermarket where participants were asked to talk aloud about what they were thinking when they chose each food product (methodology for this ‘think aloud’ task was trialled and refined prior to use)</li> <li>2. An in-depth semi-structured interview which followed on (on the same day) from the accompanied shop and was conducted in each participants own home</li> <li>3. A Product Choice Reasoning Task (PCRT) designed specifically for this study with input from the FSA and food allergy experts. Each participant was given 13 packaged food products (these were real and mainstream foods sold through major retailers) chosen on the basis that allergy experts believed that they would pose particular dilemmas for nut allergic consumers. Participants were asked to ‘think aloud’ and say if they would be happy to buy the product and</li> </ol> |

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how they reached their decision

Participants used a range of strategies (rules of thumb) to make choices about what foods to eat and buy when food shopping and eating out. These included 1) personal experiences, preferences and sensory judgements (participant based characteristics), 2) product based characteristics, and 3) characteristics of the food producer, including trust accorded to brands and supermarkets

- Food labels were used as well as previous experience of eating a product e.g. particular brand names they trusted more in terms of quality of products and labelling [4, 6].
- Most relied on the allergy advice box over and above the ingredients list. However they did not understand the voluntary nature of allergen advice boxes. Expressed and revealed preferences for ingredients lists or allergy advice boxes did not seem to relate in any systematic way to allergy severity, and absence of an allergy advice box was wrongfully interpreted by many as an indication of absence of allergens. [4, 5]
- Participants had a complex and detailed range of views about 'may contain' labelling. Although many participants chose to respond in consistent ways to may contain labelling, most participants considered that the underlying message of 'may contain' labelling was not credible or desirable, and many discounted the 'may contain' label in their decision making [5].
- Nut allergic individuals tended to adopt an avoidance and communication strategy to manage the risk of triggering an allergic reaction when eating outside the home. Particular problems when eating abroad were identified and translation cards were reported as useful.[2]
- Participants generally asked restaurant staff whether a dish contained nuts or not or asked them to inform the chef they had a nut allergy. The most helpful scenario for eating out in restaurants was when staff were responsive and when the allergic consumer was recognised and known by restaurant staff – many participants reported embarrassment at drawing attention to their allergy in a restaurant setting [2].

### 3. References to the research (indicative maximum of six references)

[1] Competitive research tender - Research Project T07058

<http://www.food.gov.uk/science/research/allergy-research/allergy-labelling/t07058/>

[2] Leftwich, J and Barnett, J., et al., The challenges for nut-allergic consumers of eating out. 2010. Clin. Exp. Allergy, 41: 243-249 <http://dx.doi.org/10.1111/j.1365-2222.2010.03649.x>

[3] Barnett, J., et al., The strategies that peanut and nut-allergic consumers employ to remain safe when travelling abroad. 2012. Clin Transl Allergy. Jul 9; 2(1):12. <http://dx.doi.org/10.1186/2045-7022-2-12>

[4] Barnett, J., et al., How do peanut and nut-allergic consumers use information on the packaging to avoid allergens? 2011. Allergy. Jul; 66(7):969-78. <http://dx.doi.org/10.1111/j.1398-9995.2011.02563.x>

[5] Barnett, J., et al., Using 'may contain' labelling to inform food choice: a qualitative study of nut allergic consumers. 2011. BMC Public Health. Sep 26;11:734 <http://dx.doi.org/10.1186/1471-2458-11-734>

[6] Barnett, J., Vasileiou, K., Gowland, H.M., Raats, M.M.& Lucas, J.S. (2013) Beyond Labelling What Strategies Do Nut Allergic Individuals Employ to Make Food Choices? A Qualitative Study, PlosOne 8(1): e55293. <http://dx.doi.org/10.1371/journal.pone.0055293>

### 4. Details of the impact (indicative maximum 750 words)

#### Impact on Agency policies/policy development/advice:

This research has had a substantial impact on health and welfare, helping in particular vulnerable patient groups and informing decisions by relevant regulatory bodies and industry. Food Standards Agency says that this project (Source [S] 1) has provided them with 'a wealth of new information' [S2] regarding how nut allergic consumers use the food label and other information to inform their decision making and about what the issues are for them when eating out. This was identified as a contribution to the evidence used by Defra in conducting EU level negotiations. This research has

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also had impact on public policy and services. Sue Hattersley, Head of Food Allergy at the FSA, said: 'This research shows the importance of clear allergy labelling on food products' [S3]. This evidence informed the development of regulations that will affect the practice of all food manufacturers and retailers as well as the purchasing practices of nut allergic consumers. Specifically, in the FSA summary of the project, sent to all delegates in of the Food Allergy and Intolerance Research Programme Review meeting (November 2012)[S2], the FSA states that:

1. They regard the methodology developed in the shopping basket task as novel and say that this method is likely to inform future research on consumer decision making in relation to pre-packed food. Accordingly, they have shared details of this methodology with other relevant Government Departments
2. The findings have informed work to develop management thresholds/action levels for cross-contamination of pre-packed foods with allergenic foods – the research has informed the Agency's thinking further regarding the likely need to try and move away from the phrase 'may contain' if and when such thresholds are rolled out because of the preconceptions regarding interpretation of the phrase in addition to many disregarding it entirely.
3. The work has been used to inform EU negotiations on the new Food Information Regulation (FIR). The findings of the research were shared with DEFRA who are leading on the UK negotiations on the FIR, highlighting the need to ensure consumers are pointed towards the ingredients list as the primary source of allergen information because other information (e.g. the allergy advice box) is not always present. The FIR (now published) [S4] has included a requirement for allergens to be in highlighted text in the ingredients list so this should help to address this issue.
4. The work has been used to inform EU negotiations on the new Food Information Regulation (FIR). The findings of the research were shared with DEFRA who are leading on the UK negotiations on the FIR, highlighting the need to ensure consumers are pointed towards the ingredients list as the primary source of allergen information because other information (e.g. the allergy advice box) is not always present. The FIR (now published) has included a requirement for allergens to be in highlighted text in the ingredients list so this should help to address this issue.
5. The results of the 'eating out' part of the research will inform the Agency's guidance to UK industry regarding provision of allergen information for foods sold non-prepacked which is a new requirement of the FIR.
6. The finding that many nut allergic consumers refer to the allergy advice box as the first point of allergen information has informed the Agency's correspondence with industry where we now specifically emphasise the importance of manufacturers ensuring that the allergy advice box matches the ingredients list as regards allergens present.

In an open meeting of Northern Ireland Food Advisory Committee (July 2011) the research was summarized as providing [S5] 'insight into consumer views about all aspects of food choice, labelling, and most particularly around "may contain" type labelling. It has helped the [FSA] Agency to have a better understanding of the patterns of food consumption by groups of food allergic consumers. This information is being used to inform Agency dietary advice to consumers with nut allergies and to input into ongoing European discussions on the Food Information Regulation'. Hazel Gowland, Food advisor to the Anaphylaxis Campaign, notes how the research has 'helped her campaign for easily visible understandable labels, improved information provision and better allergen controls in catering, general food allergy awareness among food handlers and clarifying the needs of food allergic people travelling. I feel more authentic and evidence-endorsed in the messages I am communicating' [S6]. Policy debate has been moved forward by the research evidence in this case. Findings appeared in the FSA survey protocol on advisory labelling [S7]. Barnett presented this work at TO7 Programme reviews for the FSA in 2010, 2011 and 2012 and as an invited speaker at the Anaphylaxis Campaign Corporate Conference (2011) [S8]. The research programme is cited by the FSA in their research specification for future research as an example of research 'informative in drafting tender documents and the conduct of proposed research' [S9] Findings of the study were reported in the leading online trade journals

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Foodmanufacture.co.uk, covering the food and drink manufacturing [S10], Food Science and Technology (published by the Institute of Food Science and Technology)[S11] and RSSL, serving the [food, drink, pharmaceutical, healthcare, biopharmaceutical](#) and consumer goods industries [S12].

**5. Sources to corroborate the impact** (indicative maximum of 10 references)

[S1] Civil Service Corroborative Evidence received from Food Allergy and Intolerance Research Programme Manager, Food Standards Agency (FSA), confirming the research impact on FSA regarding their negotiation with other EU member states on changes to food allergen labelling legislation; in addition, a full project report from FSA:

<http://www.food.gov.uk/science/research/allergy-research/allergy-labelling/t07058/#.UJfQCHhn3FA>

[S2] Delegate booklet, Food Allergy and Intolerance Research Programme Review 2012 (hard copy available). TO7 Programme Review

<http://www.food.gov.uk/science/research/allergy-research/more-allergy-research/allergy-program-review-2012#.UkLzqtKshcY>

[S3] Interview in Food Law news (23 June 2011) 'Labelling – Research on allergy labelling use' <http://www.foodlaw.rdg.ac.uk/news/uk-11030.htm>

[S4] EU Food Information for Consumers Regulation

<http://www.food.gov.uk/enforcement/regulation/fir/labellingproposals/>

[S5] Statement from the *Northern Ireland Food Advisory Committee* [www.food.gov.uk/multimedia/pdfs/papersnifac110704.pdf](http://www.food.gov.uk/multimedia/pdfs/papersnifac110704.pdf) (p. 163f)

[S6] A statement received from Hazel Gowland, Food advisor to the Anaphylaxis Campaign

[S7] A Survey of Allergen Advisory Labelling And Allergen Content of UK Retail Pre-packed Processed Foods. Survey Protocol. September 2011.

<http://www.food.gov.uk/multimedia/pdfs/allergen-survey-protocol.pdf>

[S8] Outlook: The Anaphylaxis Campaign Magazine. Spring 2011, giving conference details (p. 7) and information about the research (<http://www.anaphylaxis.org.uk/userfiles/files/Outlook49.pdf>).

[S9] "The preferences of those with food allergies and/or intolerances when eating out". Research Specification FS305013. Food Standards Agency specification document. Paragraph 1.26ff.

<https://fsa-esourcing.eurodyn.com/epps/cft/prepareViewCfTWS.do?resourceId=55671>. Detailed call document from the FSA available from Brunel on request.

[S10] News Foodmanufacture.co.uk 'Endangered consumers ignorant of allergy labelling, FSA study' (23 June 2011) <http://www.foodmanufacture.co.uk/Food-Safety/Endangered-consumers-ignorant-of-allergy-labelling-FSA-study>

[S11] Renewed risk focus is recipe for food brand protection. Food Science & Technology, vol 25, issue 4 (Dec 2011), citing Barnett et al. Allergy journal publication (2011)

<https://www.fstjournal.org/unrestricted-magazine/archive/25-04-2011/index.html#/40/>

[S12] RSSL, a specialist scientific consultancy food e-news (Edition 525: 5-19 Oct 2011), citing Barnett et al, BMC Public Health journal publication (2011)

<http://www.rssl.com/sitecore/Content/rssl/com/Website/Services/Food/Foode-news/Edition501-550/Edition525.aspx>