

The role of perceived risk and trust  
in the conceptualisation of packaged food consideration sets  
by consumers managing severe food allergies.

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A thesis submitted  
to The University of Gloucestershire  
in accordance with the requirements of the degree of  
Doctor of Philosophy  
in the Business School

March 2018

Word Count: 81,094

## **Abstract**

The study focuses on the role of perceived risk and trust in the conceptualisation of consideration sets. The research is situated in the context of consumer households managing life-threatening food allergies.

This qualitative research is guided by an objective relativist epistemological perspective. In-depth oral history style interviews were used to generate data from 30 consumers divided into three cohorts. The three cohorts are: adults with allergies; parents of adolescents with allergies; and parents of children with allergies. The thirty consumers were responsible for packaged food shopping for their household, and were supported in the interviews by nineteen additional family members. All interviews were transcribed and the data analysis was conducted based on a narrative approach and coding was done in the NVivo software tool. Key themes and subthemes relating to perceived risk and trust were then identified.

This study explored three research questions on the role of trust, the role of perceived risk and the interrelationship between perceived risk and trust. From the themes identified in the research, it was found that trust and perceived risk play an important role in the conceptualisation of packaged food consideration sets.

Contributions of this study include the identification of the interrelationship between perceived risk and trust in the conceptualisation of packaged food consideration sets, as displayed in a revised conceptual model that shows a relative inverse relationship between perceived risk and trust in this context. This revised conceptual model can be situated within the strategies of the food choice process model, and with this extends the use of food choice theory and models in consumer marketing. Finally, personal relationships were found to be important to the conceptualisation of consideration sets and based on the data generated from the interviews, a visualisation of the role of these relationships is presented. A methodological contribution of the study is expanding the use of oral history methods in the consumer marketing discipline.

## **Keywords**

perceived risk, consumer trust, consideration sets, food allergy, food choice

## **Declaration**

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire and is original except where indicated by specific reference in the text. No part of the thesis has been submitted as part of any other academic award. The thesis has not been presented to any other education institution in the United Kingdom or overseas.

Any views expressed in the thesis are those of the author and in no way represent those of the University.

Signed:

Date: 19 March 2018

## Acknowledgements

When I set out to do this research I couldn't have imagined that my participants would be so amazing. They welcomed me into their homes to share their most terrifying experiences, greatest fears and hopes for the future. I took receipts of what they had purchased, looked through their cupboards, sat at their kitchen tables, drank their tea and met their children, siblings, parents, partners, dogs, cats and birds.

I wish to thank the following:

- My supervisors Dr. Sarah Maddock and Dr. Philippa Ward
- University staff including Sue Turner, Julie Doran, Jane Nicholls, Jane Robinson, Matthew Kidd, and Jane Donne
- Prof. Ros Jennings
- My loves, Sean Walters and Effie MacDougall Walters
- Dr. James MacDougall, Mary MacDougall, Leah Wlodarek and Catherine Walters

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## List of abbreviations

AA	Adult with peanut Allergy (study cohort)
AC	Anaphylaxis Campaign (UK)
AQAA	Association québécoise des allergies alimentaires (Québec, Canada)
BMI	Body Mass Index
BSE	Bovine Spongiform Encephalopathy
EPIT	Epicutaneous immunotherapy
EU	European Union
FAC	Food Allergy Canada (Canada), formerly Anaphylaxis Canada
FAAN	Food Allergy & Anaphylaxis Network (USA), now called FARE
FARE	Food Allergy Research & Education (USA)
FSA	Food Standards Agency (UK)
HC	Health Canada (Canada)
OH	Oral History
OIT	Oral immunotherapy
NFP	Nutrition Facts Panel
NIAID	National Institute of Allergy and Infectious Diseases (NIAID)
pbcc	perceived behavioural control
PCRT	Product Choice Reasoning Task
PA	Parent of Adolescent with peanut allergy (study cohort)
PAL	Precautionary Allergy Labelling
PC	Parent of Child with peanut allergy (study cohort)
PR	Perceived Risk
PDO	Protected Denomination of Origin
RAA	Reasoned Action Approach
SCAAALAR	Surveying Canadians to Assess the Prevalence of Common Food Allergies and Attitudes Towards Food Labelling and Risk
SIE	Self-Injecting Epinephrine
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
WAO	World Allergy Organisation

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# **1 Where it begins**

## **1.1 Introduction**

Over 2.6 million Canadians are living with food allergies (Gerdt, 2018). These consumer households have seen a mixed response from food manufacturers and have received little attention in the marketing literature. This research examines perceived risk, trust and the interrelationship between perceived risk and trust. In doing so, it contributes original knowledge to the literature, relevant to both marketing academics and practitioners.

## **1.2 Background and motivations as a researcher**

The widely used definition of anaphylaxis is “a serious allergic reaction that is rapid in onset and may cause death” (Simons & Sheikh, 2013, p. 31). Major food allergens include milk, egg, peanut, tree nuts, shellfish, wheat and soy, with fatalities occurring primarily from reactions to peanuts and tree nuts (Scott H. Sicherer & Sampson, 2010). In addition to the multi-organ system reaction that may include cardiovascular collapse, one of the symptoms of an anaphylactic reaction is a ‘feeling of impending doom’ (S.H. Sicherer, 2002). Given the speed and severity of anaphylactic reactions, that ominous feeling may be justified.

I have anaphylactic allergies to peanuts and shellfish. I have had terrifying anaphylactic reactions to food on five occasions. My first reaction was when I was four years old, after eating Reese’s peanut butter chocolate pieces while watching Toronto’s Santa Claus Parade from my father’s office building. As I quickly turned blue my previously unknown allergy became apparent and I was very lucky to be saved by the Hospital for Sick Children, located directly across the street from my father’s office. Other near-fatal reactions have occurred at a childhood friend’s birthday party (caused by peanut butter in the Rice Krispie squares), on a transatlantic flight (caused by a plain lettuce salad lined with peanuts), and at a work function (caused by noodles tossed in a peanut sauce unbeknownst to the server). In all of those reactions I was able to determine the cause and administer my lifesaving EpiPen auto-injector in enough time to stop the reaction. My most recent reaction was when I was in Paris, at a beautiful boutique hotel near the Champs-Élysées. Before I went out to dinner the hotel offered some delightful macarons,

which I declined due to an egg white allergy. Instead we were offered a chocolate truffle and I dutifully read the ingredients. The stated ingredients were cocoa and cocoa butter with no nuts listed. However, there was a 'May Contain' statement for nuts underneath the ingredients. Eating that chocolate led to a full anaphylactic reaction on the Paris Metro a short time later. During that incident, when I couldn't breathe (swollen throat, mouth, body) or see (my vision went white), I certainly felt that feeling of impending doom.

Experiences like the ones I've just shared are why I want to explore how other anaphylactic consumers perceive risk involving their food, how (or if) trust is a part of that and how it all comes together in the products that fall under consideration when they are buying food.

With legal liability of great concern to food companies, 'May Contain' or 'produced in a factory that processes nuts' or 'cannot guarantee nut-free' statements are seen on a wide variety of consumer food products. The information (or lack of) found on some food labelling can also make it difficult for consumers to assess the true level of allergenic risk from the food they eat; instead they must rely on their own perception of the level of food allergy risk when they purchase and consume food.

In 2002, I was hired by Kraft Canada for a sales role through their university graduate recruitment programme. I promoted the Kraft product portfolio, including Kraft Peanut Butter (its top-selling product), in a variety of sales and marketing roles over the following seven years. Working in the food industry for a top consumer packaged goods company has given me greater insights into the challenges faced by companies in making the declaration to go 'nut-free'. At Kraft Canada, I participated in many operations meetings with long arguments over whether the Lakeshore Biscuits Bakery (Toronto) should declare their products 'nut-free' and the risks involved with taking on that liability. The Lakeshore Bakery was Kraft Canada's largest biscuit factory with 550 employees, producing OREO cookies, Dad's Oatmeal cookies and other biscuits for sale across Canada. When I left in 2009, Lakeshore Bakery had banned all nut products from its premises; in early 2012 the products from the factory still did not have 'nut-free' labelling on their packaging. In November 2012 it was announced that the Lakeshore Bakery was to close with production moving to other factories in Canada and the USA (Pagliaro, 2012). From a brand management perspective, it has been a prudent choice to not declare the

products nut-free knowing that the claim may not be maintained should production move elsewhere. From an allergic consumer's perspective, it reduces the amount of certainty about food choice options.

From 2010-2011, I worked for Kraft Foods Europe designing marketing plans for biscuits and Cadbury chocolate. This business also faced challenges on how to manage the risks to its consumers presented by allergenic foods, both as intentional (such as the Cadbury STARBAR with a peanut and caramel centre) and unintentional (cross-contamination on lines) ingredients (Cadbury, 2012a, 2012b). I later worked in Marketing Strategy for Hershey's Canada, the company responsible for the Reese's Pieces chocolate and peanut butter products that nearly caused my death by anaphylactic reaction over thirty years ago. This experience in the corporate world of consumer food products has given me a unique perspective and stirred a genuine curiosity about how food allergic consumers form their snack food consideration sets and a desire to examine the factors that relate to these choices.

#### 1.2.1 Public response to anaphylaxis and desensitization research

The news media, particularly in North America and Europe, have actively reported deaths from anaphylactic reactions and the research on allergen desensitization being undertaken on both sides of the Atlantic (Hall, 2017; Hussain, 2017). The peanut allergy deaths reported spanned age ranges from schoolchildren to college students and adults and often involved the consumption of food outside the home where there is less control over food ingredients and less visibility on how the dish is prepared (A. Harris, 2014; Rutter, 2017; The Yorkshire Post, 2014). Medical trials conducted at Addenbrooke's Hospital in Cambridge and reported in the Lancet that found that some peanut allergic individuals could have the severity of their reactions minimised through the gradual and increasing regular exposure to small amounts of peanut protein taken orally in powdered form (Boseley, 2014; J. Gallagher, 2014).

This phase of the Cambridge-based UK trials with 104 peanut-allergic children participating represents a significant scale improvement since the earlier 2011 trial by the same researchers with 22 peanut-allergic children (K Anagnostou et al., 2011; Katherine Anagnostou et al., 2014). The process of peanut desensitization does not work for all children and can have side effects ranging from nausea and vomiting to reactions requiring Self-Injecting Epinephrine (SIE) (H. A. Sampson, 2013). Research in the area has found that oral immunotherapy for peanut allergies

results in a significant improvement in the reported food-related quality of life measures by providing a level of confidence and reassurance to peanut-allergic individuals that a major reaction can be avoided in the case of accidental exposure to peanuts (Factor, Mendelson, Lee, Nouman, & Lester, 2012; LeBovidge et al., 2017). However, reactions are frequent and some patients cannot be desensitised (MacGinnitie et al., 2017).

While oral immunotherapy (OIT) is the most active area of peanut immunotherapy research and the one most visible in the media, other areas of research include epicutaneous immunotherapy (EPIT) and subcutaneous immunotherapy (Casale & Stokes, 2014; L. Cox, Compalati, Kundig, & Larche, 2013; S. M. Jones et al., 2017). In EPIT, a skin patch containing the allergenic food proteins is applied to the skin for a specified time period, typically 24-48 hours at a time, in progressively higher dosages in order to increase tolerance to the noted allergen in a manner similar to OIT (Mondoulet et al., 2010). EPIT has attracted attention as potentially being safer than OIT as there is a longer exposure for the allergenic food protein to be delivered into the bloodstream of the allergic individual (Agbotounou et al., 2013). A medical trial titled The Arachild Study is currently underway in France involving 54 children from ages 5-17 years old, with early results showing some promise, especially for treating the younger children in the 5-11 year-old cohort (Dupont, 2014; Dupont et al., 2014). To date however, the OIT testing has produced better results in building tolerance to the allergenic protein while EPIT testing remains in its earlier stages. Subcutaneous or “rush” immunotherapy involves the injection of a solution containing the allergenic food protein into the food-allergic individual. This practice must be done in a medical setting due to the high risk of anaphylactic response to the injection, unlike oral immunotherapy that is primarily done in a home setting following confirmation tests on each dosage (Oppenheimer, Nelson, Bock, Christensen, & Leung, 1992; Zuidmeer-Jongejan et al., 2012). Beyond the immunotherapy approaches, food science is looking directly at the peanut crop while investigating novel ways to grow and process this legume using methods that decrease the allergenicity of the peanut protein (Khamsi, 2016; White et al., 2014).

The increasing prevalence of food allergies in children and media attention on anaphylaxis has driven a strong public response. Heightened vigilance within communities where children are exposed to food including schools, restaurants, camps and infant day-care establishments has been seen. This research is timely

and will help respond to this public interest by furthering the understanding of trust and Perceived Risk (PR) in sharing the stories of the participating families with food allergies.

### **1.3 Research questions**

This research investigates the role of PR and trust in the conceptualisation of packaged food consideration sets by consumers managing severe food allergies.

The investigation of this topic is framed through the following research questions:

- 1) What is the role of PR in the conceptualisation of packaged food consideration sets by consumers managing severe allergies?
- 2) What is the role of trust in the conceptualisation of packaged food consideration sets by consumers managing severe allergies?
- 3) What is the interrelationship between PR and trust in this context?

### **1.4 Research contribution**

This research contributes to knowledge in the following ways:

- 1) Identified and described the interrelationship between PR and Trust in the conceptualisation of packaged food consideration sets
- 2) Expanded the strategies of the Food Choice Process Model within consumer marketing
- 3) Modelled the role of relationships in the conceptualisation of packaged food consideration sets for consumers managing severe allergies

A methodological contribution of the study is expanding the use of oral history methods in the consumer marketing discipline.

### **1.5 Food allergen labelling and basing the research in Canada**

The regulatory environment regarding food allergen labelling differs greatly by country and region. Legislation has been adopted in the USA and in the European Union (EU) to mandate the declaration of known common food allergens in the ingredients labelling of food products. Yet, these laws only pertain to known ingredients and do not protect consumers from allergen contamination or warn consumers of this risk (van Hengel, 2007). Within the EU, it has been found that packaged confectionary food products have the highest risk for contamination by food allergens. In Europe, allergen contamination for products with 'May Contain' labelling has been found in 33% of cases for peanut contamination, while

comparable studies in the USA have found the prevalence of peanut contamination at between 6% and 11% of products (Marrs & Lack, 2012). The uncertainty as to whether a product contains a food allergen can cause anxiety and add to the complexity of the food product search process for consumers looking for foods free from specific food allergens.

This uncertainty led Canada to announce significant changes to the federal food allergen labelling regulations, which came into effect in 2012 after having been announced the year prior (Health Canada, 2012). The 'hidden' allergens, which frequently cause the allergen contamination noted above, found within other ingredients such as spices or flavours are now subject to heightened scrutiny and labelling. The labelling will have more accurate information for consumers in the form of 'Contains' statements including for trace allergens not in the main food product ingredients list. The 'Contains' line will also clearly identify any of the 10 priority food allergens in plain language rather than the sometimes confusing or lesser-known terms used in the list of ingredients. This improved information will help consumers minimise their risk of a food allergic reaction and will serve to help manufacturers prevent recalls due to allergen contamination. Canada's leadership on food allergen labelling has been driven by a policy environment that is very aware of the public concern over food allergy and anaphylaxis, along with lobbying work by allergy stakeholder groups including Food Allergy Canada (FAC) (Food Allergy Canada, 2016).

Because the Canadian food labelling system identifies whether the product contains a physical risk or low degree of physical risk, such as in the case of 'Peanut Free' products, the research will be conducted in Canada.

## **1.6 Methodology**

This research is rooted in the constructivist paradigm. My ontology can be located in objective relativism leading to a relativist epistemology, a subjectivist axiology follows. Given this philosophical positioning, a qualitative methodology was well suited for this study.

### **1.6.1 Qualitative methods**

This study involves three cohorts of ten participants. The participant is the consumer who doing the main shopping for their household. Each household has

at least one person managing a severe allergy within it. The cohorts are adults with allergies, parents of adolescents with allergies and parents of children with allergies. The thirty main participants were joined by nineteen other family members for their interviews. A pilot study was done with four exploratory interviews conducted with consumers managing severe allergies, all three cohorts were represented with two having children with allergies. Pre-interview contact was made with the participants who answered a number of questions before becoming eligible for the study. Participants completed a six-week purchase log and/or provided receipts from a six-week period, in advance of the main interview. The main interviews were typically 90-120 minutes. These interviews used an interview guide, but relied on oral history methods to keep the interview flowing and flexible. The resulting interviews were deeply personal with the transcripts covering both a breadth and depth of responses. The interviews included a cupboard analysis where the participant's cupboard was photographed and discussed, in addition to the three packaged food items taken from the cupboard for further discussion.

#### 1.6.2 Analytical approach

The analytical approach involves a combination of narrative analysis (Labov & Waletzky, 1997; Mishler, 1995; Riessman, 1993) and thematic content analysis (Braun & Clarke, 2006; Joffe & Yardley, 2003; C. P. Smith, 1992). The approach to narrative is informed by Jerome Bruner's "The Narrative Construction of Reality" (1991) incorporating a functional view of narrative as a way of constructing and making sense of reality from what are otherwise chaotic or disparate events. Transcribe software was used for the interview transcriptions, NVivo software was then used as a tool for the coding and to facilitate analysis.

### **1.7 Thesis structure**

The dissertation is organised into seven chapters. The first two chapters set out the background for the subsequent research and analysis sections of the dissertation. The first chapter, "1-Where it begins", serves to situate the research by first presenting my background and motivations as a researcher. Detailed accounts are included in this section, as personal and professional experiences have shaped the approach to this research in many ways. The research questions are then presented along with the research contribution. This chapter also provides a first look at the research framework that is expanded upon in Chapter 3. For Chapter "2-The story so far", a literature review is presented that begins with a survey of the literature

pertaining to food choice and consideration sets. The literature encompassing perceived risk and trust and their interrelationship is then reviewed. The chapter closes by considering how the literature supports the exploration of the study's research questions before presenting the conceptual framework used as a foundation for the research section to follow.

The methodology chapter, "3–How it will be investigated", starts off with a discussion of my philosophical position with ontology, epistemology and axiology. With the philosophical grounding of the research stated, the chapter goes on to look at the research approach with the pertinent literature on qualitative methodologies. The design of the research is next, along with the data collection procedures employed. This includes perspectives on oral history and narrative approaches to research. The chapter ends with a consideration of the techniques that used to analyse the data and the ethical considerations that pertain to both the research and analysis sections of the dissertation.

The analysis and discussion section is the next part of the dissertation and includes Chapters "4–Food choice", "5–Perceived risk" and "6–Trust". In these chapters, the results from the research will be analysed in relation to the constructs of food choice, consideration sets, PR and trust. Following the oral history research tradition there is an emphasis on sharing the individual and collective voices of the participants and also incorporating a narrative thematic approach to the analysis.

The results chapter, Chapter "7–Contributions and conclusion", begins with an overview of the research and then presents the major results and contributions from the research. I then share reflections on the philosophical approach, research design and methods employed in this dissertation. These lessons lead to proposals of future areas for research and implications for policy and practice.

## **1.8 Conclusion**

In presenting this study, I share the exploration of the research questions and the resulting contributions. The chosen methodology leads to sharing the voices of the thirty participating households and generating data from the transcripts of their interviews. Building from the responses of participants, key themes and subthemes of trust and perceived risk are generated. NVivo is used as a tool to code and organise the data from the transcripts along with photographic and audio data. The

study was framed by the research questions and had to be limited as the concepts of risk and trust have expansive literature across many disciplines. Locating the research in the consumer marketing tradition followed a rich literary tradition enhanced by direct research with consumers. Applications for practice emerged from the study—including for many departments, especially marketing—and for shaping government policy around allergen regulation and labelling requirements.

## **2 The story so far**

### **2.1 Introduction**

This literature review shares an overview of the most relevant literature to the research in the areas of food allergy, PR, trust, and consideration sets. With the expansive nature of these subjects, this chapter is a curated collection of the seminal and recent works pertaining to the study.

The literature is organised in a narrative review format to facilitate the inclusion of topics from multiple disciplines and examine broader, more abstract questions. The narrative approach also better appreciates methodological diversity, which is important as the study's qualitative approach is informed by predominantly quantitative research in relevant fields (Baumeister & Leary, 1997). A systematic approach as often seen in quantitative work where research papers answering a specific question are collected was not chosen as this research has inputs from across disciplines and the exclusionary choices required would hinder presentation of the breadth of research papers that inform this work (Grant & Booth, 2009). A narrative review is aligned to the narrative approach to this study as introduced in section 1.4.2. With this choice, I am responsible for possible bias in this review as the papers were selected without the use of set inclusion, exclusion, and quality criteria as would be used in a systematic review.

Food allergy is the specific context for the study and is presented first to orient the reader with the necessary background to the research. An overview of the food choice models and factors affecting choice is then provided as a basis for the further discussion. Consideration sets are then addressed. The areas of PR, trust, and their interrelationship are then presented. There are significant differences in the literature regarding the order of PR and trust with some researchers placing one construct as an antecedent of the other—as discussed in more depth later in this chapter, in section 2.4 The Interrelationship of PR and trust (Koller, 1988; V. W. Mitchell, 1999). For this study, the choice was made to explore PR and trust as interrelated concepts, without assuming a causal basis. Accordingly, the sequencing of their presentation within this chapter is done alphabetically and without any prioritization or prejudice towards either factor.

The research into PR, trust and consideration sets is restricted to the food allergy context for this study. However, it is potentially applicable to other food-related health conditions such as diabetes, coeliac disease and obesity. This will be discussed in the areas for future research.

The role of food is within the broad context of this research, and the sections of this chapter are organised to first review the major contributions and thought in the literature on the noted construct. The subsections then address the evaluation of the construct and then the key literature about the construct, specifically as it relates to food and food products. This approach serves to organise a broad set of literature spanning multiple disciplines into a strong foundation for the study. This chapter finishes with a presentation of the conceptual model to communicate a representation of the relationship between the factors leading to consideration set formation for households managing severe food allergies and then follows up with a conclusion to the chapter.

## **2.2 Food allergy**

Anaphylaxis is a severe, systemic allergic reaction. First described over 100 years ago and one of the most alarming disorders found in medicine, a failure to quickly diagnose and treat anaphylaxis can result in grave outcomes including death (H. A. Sampson et al., 2006). The lifetime prevalence for anaphylaxis is estimated at 0.5%-2.0% while the rate of occurrence is increasing (Simons & Sheikh, 2013). Foods are primary trigger allergens for anaphylaxis and food-induced anaphylaxis hospitalizations are reported to have increased by 350% during the last ten years (Ben-Shoshan et al., 2010). Given the severity of these allergies, consumers making food choice decisions for severely allergic individuals could put those allergic individuals' lives at risk – leading to a decision context that has 'risk'.

### **2.2.1 Food allergy definitions**

There is no universally accepted definition of food allergy. This research uses the definition from the National Institute of Allergy and Infectious Diseases (NIAID) as an “adverse immune response that occurs reproducibly on exposure to a given food and is distinct from other adverse responses to food, such as food intolerance, pharmacologic reactions, and toxin-mediated reactions” (Chafen, Newberry, Riedl, & et al., 2010). The key differentiation between food allergy and food hypersensitivity is the presence of an immune reaction in food allergy, while the food hypersensitivity

encompasses all reactions to food including intolerances. Allergies to food involve an IgE immunological reaction, as detailed in section 2.2.4 and are also described as an IgE-mediated food allergy. The World Allergy Organization (WAO) defines anaphylaxis as “a severe, life-threatening generalized or systemic hypersensitivity reaction” (Johansson et al., 2004). Food induced anaphylaxis caused by an IgE-mediated reaction can be described as IgE-mediated allergic anaphylaxis. This study uses the term anaphylaxis to represent allergic anaphylaxis as this description is appropriate for the context being investigated.

### 2.2.2 Food allergy in the population

The impact of food allergy on quality of life is pervasive, potentially impacting on every aspect of the food allergic individual’s life and that of their wider social circle, including their household and family (Fernández-Rivas & Miles, 2004). The food allergy rates remain low as a percentage of the total population as noted in Table 1 below, although the rate of food allergy for infants and children to peanut specifically, which frequently involves anaphylaxis, does require attention.

Estimated food allergy rates in North America		
Prevalence	Infant/child	Adult
Milk	2.50%	0.30%
Egg	1.50%	0.20%
<b>Peanut</b>	<b>1%</b>	<b>0.60%</b>
<b>Tree nuts</b>	<b>0.50%</b>	<b>0.60%</b>
Fish	0.10%	0.40%
Shellfish	0.10%	2%
Wheat, soy	0.40%	0.30%
Sesame	0.10%	0.10%
Overall	5%	3% to 4%

Table 1 Estimated food allergy rates in North America.

Source: Scott H. Sicherer and Sampson (2010, p. S117)

While the estimated actual food allergy rates remain low, the self-reported food allergy rates can be up to 35% of the population (Rona et al., 2007). This disparity in figures shows a level of misunderstanding about the existence of some food allergies and could be driven, in part, by the news media as introduced in 1.2.1. The

increased attention by governmental policy makers, media and the public to food allergy has not gone uncontested with some dismissing the attention as unnecessary panic and a constructed 'epidemic' driven by population hysteria (Davis, 2013; Waggoner, 2013). This backlash has been seen in the stigmatization of those with anaphylactic peanut allergies, where parents reported being regarded as 'faddy', demanding and neurotic, while the children faced teasing and exclusion by their peers (McNicol & Weaver, 2013; Pitchforth et al., 2011).

### 2.2.3 Food allergen exposure

There are many ways in which allergic individuals can be exposed to allergens. Common factors associated with fatal food-induced anaphylaxis include age, with most victims being teenagers or young adults; a known food allergy to peanuts or tree nuts, and asthma; and the failure to immediately administer epinephrine (Pumphrey & Gowland, 2007; P. Smith, Hourihane, & Lieberman, 2015). A Canadian study identified that of the 48% of food-allergic respondents who had experienced an accidental exposure to a food allergen, 47% attributed the event to inappropriate labelling, 29% to failure to read a food label, and 8% to ignoring a precautionary statement (S. S. Sheth et al., 2010). Even with the advances in food labelling, as discussed in 1.5, there remain a variety of opportunities for exposure to food allergens.

### 2.2.4 Food allergy etiology and diagnosis

The term food allergy is used when the reaction to food has an immunological basis. The two main groups of immune reactions are IgE-mediated and non-IgE mediated reactions. IgE-mediated reactions can be divided into immediate onset reactions (immediate in time) and immediate plus late-phase reactions (immediate onset following by prolonged or on-going symptoms). Non-IgE reactions are delayed in onset, with symptoms presenting 4 to 28 hours after ingestion of the allergen. Food-induced anaphylaxis is an IgE-mediated food-related disorder. Coeliac disease is an example of a non-IgE-mediated reaction, these disorders predominately impact the gastrointestinal tract and are believed to be T-cell-mediated (Motala, 2000, 2002).

Diagnosis of IgE-mediated food allergies, including those leading to anaphylaxis, typically involves the analysis of symptoms, screening tests for food-specific IgE and tests of reactivity through elimination diets and food challenges (Gharfeh,

Rogers, Platts-Mills, & Erwin, 2015; H. A. Sampson, 1999). The analysis of symptoms usually involves a medical history of the patient with the intent to establish whether a food-induced allergic reaction has occurred, which food was involved and what allergic mechanism was most likely involved. Diet diaries may be used as a supplement to the medical history, especially with complex cases (H. A. Sampson, 2004). Once a food allergy is diagnosed, the treatment and management of the allergy will follow.

#### 2.2.5 Treatment and management of food allergy

The prevention of food allergies has received much attention by allergists but no conclusively effective measures have been found (H. A. Sampson, 2004). Research into the protective effects of maternal diet and breastfeeding against allergy remains controversial (Friedman & Zeiger, 2005; Machtinger & Moss, 1986; Zeiger et al., 1989). While breastfeeding in early life remains a recommendation for some mothers of high-risk babies, related studies have been found to have conflicting results (Chafen et al., 2010)

There is no cure for a food allergy or “safe” levels of food allergens (S. L. Taylor, Gendel, Houben, & Julien, 2009). Instead, there is a need to prevent food-induced reactions by eliminating and completely avoiding the allergen in the diet. Compliance with an avoidance diet can be time-consuming, inconvenient and difficult to manage. Food labels must be examined to ensure avoidance of the allergen (Mills et al., 2004). Doctors, nutritionists and food allergy organisations can be supportive to the allergic individual and their family in adjusting to the vigilance required. Accidental ingestion of an allergen can come from cross-contamination of foods, mislabelling of foods and the failure to correctly read food labels (Joyce et al., 2006; Vander Leek, Liu, Stefanski, Blacker, & Bock, 2000). To treat reactions from exposure to the allergen, self-injecting epinephrine (SIE), must be used immediately to treat food-related anaphylaxis. The EpiPen™ and EpiPen Jr™ auto-injectors are popular SIE for adults and children respectively; they function by delivering a fixed dose of epinephrine in a self-injectable device administered with a needle intramuscularly, typically into the upper thigh (L. A. Lee & Burks, 2006).

Dietary management of food allergies should involve planning of a nutritionally balanced diet. Foods to be avoided are the allergen even in trace quantities, food at high risk for cross-contamination, oils from allergenic food and food of an uncertain

origin. Nutritional deficiencies in food-allergic individuals can result from the elimination of multiple foods or key nutritional foods (Venter, Laitinen, & Vlieg-Boerstra, 2012). It is essential that the food allergy involves an accurate diagnosis and supervised dietary planning to prevent the imposition of unnecessarily restrictive diets on young children (Noimark & Cox, 2008). Adults do not experience the same nutritional deficiencies as seen in children but long-term avoidance of important food groups can increase the risk for health consequences (Skypala, 2011). Additionally, adults and children with food allergies may develop food aversions and anxiety that can lead to inadequate dietary intake or replacement of allergenic foods with others of lesser nutritional value (Venter et al., 2012). For these reasons, the choice of food for allergic individuals is a very important decision affecting their health and wellbeing. The different modalities of peanuts as nuts, powder, peanut butter and peanut oil present a risk of cross-contamination from many other foods. The uncertainty caused can lead parents to restrict foods from their allergic child's diet and lead to anxiety about food choice.

There is limited research available on allergy and food choice. One notable study by Sommer, Mackenzie, Venter, and Dean (2012) examined differences in approach to food choice between food-allergic and non-food-allergic individuals. This research found that compared to individuals without food allergies, those with diagnosed food allergies reported less satisfaction and pleasure from foods, that they had experienced difficulty in finding safe foods as well as needing to be more organised with their eating plans. The literature on food choice is discussed in more detail in the next section.

### **2.3 Food choice**

The choice of food may appear like a simple decision but is actually a very complex behaviour influenced by numerous factors which belong to the traditional domains of a diverse range of scientific disciplines including biology, physiology, economics, consumer research, sociology, food science and psychology (E. P. Köster, 2009). The sheer number of disciplines examining food choice behaviour demonstrates both its complexity and importance (Falk, Bisogni, & Sobal, 1996). Food choice is studied in order to better understand and predict human dietary behaviour. It is necessary that PR is examined as a decisional factor within food choice models as it is important in the context of food purchase and choice (Knox, 2000).

### 2.3.1 Food choice models

Early investigations into the question 'Why do we eat?' led Kurt Lewin (1943) to devise his 'channel theory' a process wherein biological, economic, psychological and cultural channels bring certain foods to the table. More recently, the concept of "eating" has been reframed as food-related decision-making (Doucerain & Fellows, 2012) Today, there are three main models that look to understand consumer behaviour in relation to food are presented by Gorton and Barjolle (2013) to be as follows:

- 1.) Economic models such as household and random utility;
- 2.) The theory of planned behaviour and/or the theory of reasoned action and
- 3.) The food choice process model.

While none of the food choice models explicitly include the concepts of PR and trust, the concepts fit into each of the models. For some models, they share the attitude toward a behaviour, while in other models, they could be classed under 'personal factors'.

#### 2.3.1.1 Economic models

Economic models, such as the random utility model (also called the discrete choice model) are based on mathematical equations that measure the utility associated with a decision. The random utility model is based on the idea that an individual derives utility by choosing an alternative (Walker & Ben-Akiva, 2002).

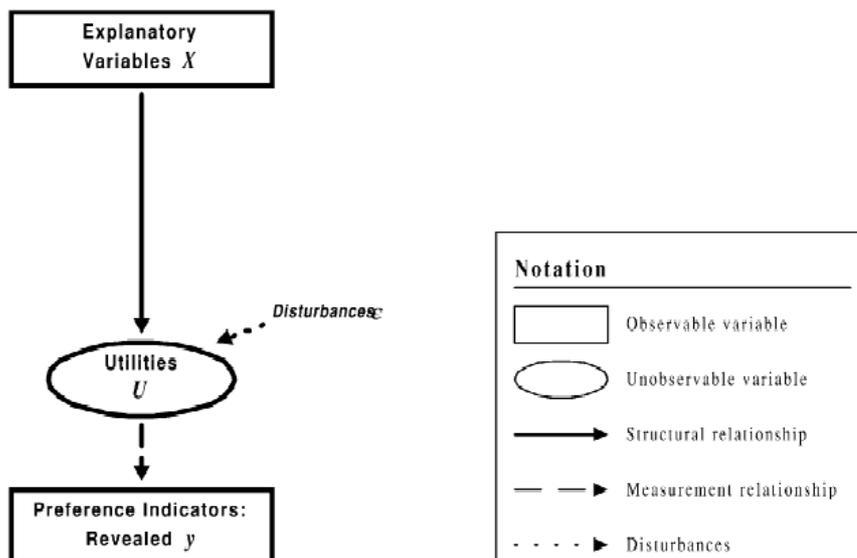


Figure 1 Random utility model.

These quantitative economic models are outside the scope of this research, as in the qualitative approach for the study maximizing utility is not necessarily the objective of the food choice process.

#### 2.3.1.2 Attitude models

There is no general consensus about a definition of attitude (Mwanatena, 2007). However, this study uses a popular definition of attitude from Fishbein and Ajzen (1975, p. 6) as “a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object”, as this definition best represents my understanding and usage of the term.

Two of the main attitude models are the tri-component model and the multi-attribute model. The tri-component/ABC model assesses a person’s attitude to only one attribute of the attitude while the multi-attribute model assumes that attitudes can have many attributes that influence them. The tri-component model, also called the ABC model, is a hierarchy of effects attitude formation theory model, presenting Attitude, Behaviour/Conation and Cognition in attitude formation. Figure 2 shows attitude broken down into its three components where the affective component is based on physiological reactions, the cognitive component is what a person believes to be true and the conative component is the observable reaction, such as to purchase a specific brand (Webb & Hertz, 2005). The three components can also be illustrated as a cycle or as a pie chart with three sections. The model shown below was chosen because it incorporates attitude in the illustration, not just the components, although a problem with this model is that it does not show the interaction between the components.

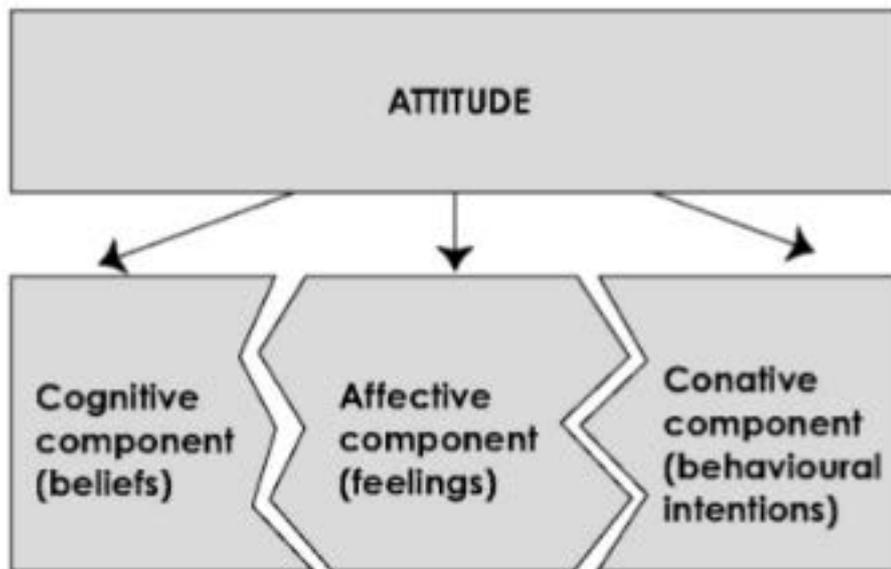


Figure 2 The tri-component model of attitudes  
 Source: Engel, Miniard, and Blackwell (1995, p. 364)

In the tri-component model, the three components that comprise attitude can occur in different orders, leading to differences based on attitude, this is illustrated in Figure 3 below. The standard learning hierarchy (high involvement) has the attitude based on cognitive information processing, while the low involvement hierarchy forms attitude based on behavioural learning processes. The experiential hierarchy forms attitude based on experiential consumption. While all three components of attitude play a role in these hierarchies, the relative importance varies depending on the consumer's level of motivation towards the attitude object (Solomon, Bamossy, & Askegaard, 2013).

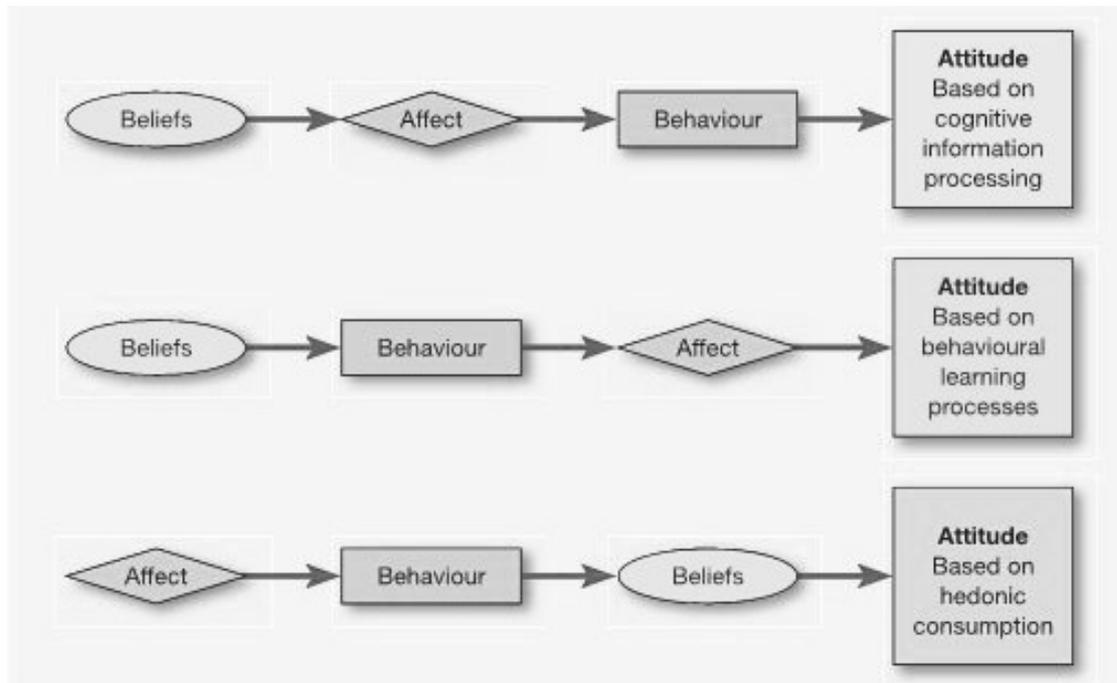


Figure 3 Three hierarchies of effects.  
Source: Solomon et al. (2013, p. 295)

The multi-attribute attitude model is an approach to understand how an overall evaluation of a product or service is derived from a consumer's beliefs and has three elements – attributes, beliefs and weights (Pousttchi, 2009). The most influential version of the of multi-attribute model is called the Fishbein model after from the work of Martin Fishbein who proposes that an individual's attitude towards an object is a function of the strength of the beliefs about an object and the evaluative aspect of those beliefs (Fishbein, 1967). The three components of attitude used in the Fishbein model are (1) salient beliefs that a person may gain when evaluating a product or service, (2) object-attribute linkages indicate the probability of importance for an attribute associated with an attitude object and (3) measurement of importance for the attributes. The Fishbein model aims to reduce overall attitudes into a measurable score (J. R. Smith et al., 2008).

Attitudes play a fundamental role in the food choice process and the conceptualisation of consideration sets. While direct use of the attitude models and measurement of attitudes are beyond the scope of this research, the research discusses attitudes along with attributes, weight and beliefs shared by participants, and is thusly guided by these models.

### 2.3.1.3 Theory of reasoned action and theory of planned behaviour

The theory of reasoned action (TRA) was developed by Fishbein and Ajzen through the 1960's and 1970's, before being introduced to the field in 1975 (Fishbein & Ajzen, 1975, 2010). The TRA is a refinement of the multi-attribute attitude model discussed in 2.3.1.2, that clarifies the relationship between attitude and behaviour (Pousttchi, 2009). The TRA states that the individual performance of a behaviour is determined by a conscious intention to perform the behaviour, and this intention is predicted by attitude and subjective norms (Ajzen & Fishbein, 1980). These relationships were represented in a schematic model of the theory (Figure 4) by solid lines with directional arrows between the elements.

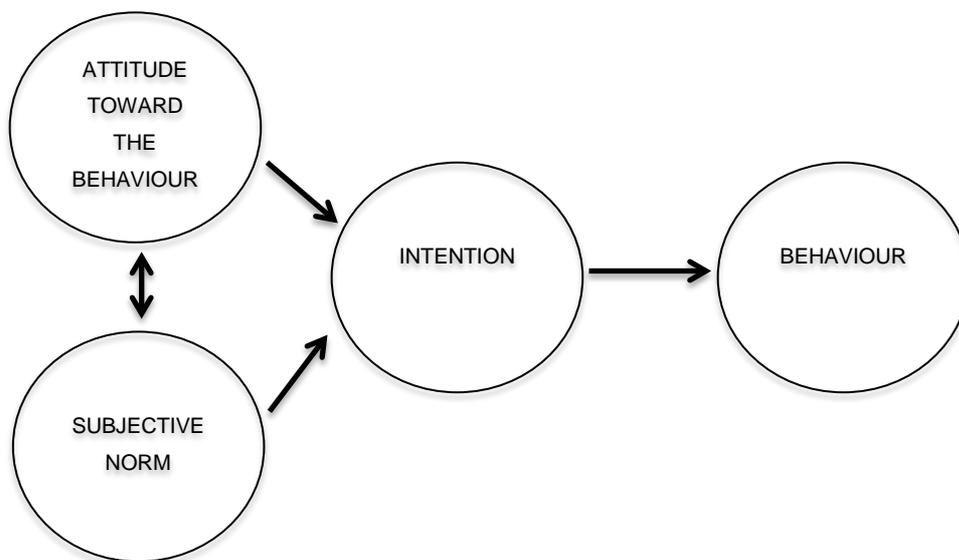


Figure 4 Theory of reasoned action.

Source: Ajzen and Fishbein (1980)

Ajzen (1991) expands the TRA to the theory of planned behaviour (TPB) with the inclusion of the construct of perceived behavioural control (pbc). Self-efficacy belief or perceived behavioural control is the perceived ease or difficulty of performing the behaviour. In the TPB model pbc is represented as a variable that, together with behavioural intention, can be used to predict behavioural achievement (Ajzen, 1985, 1991).

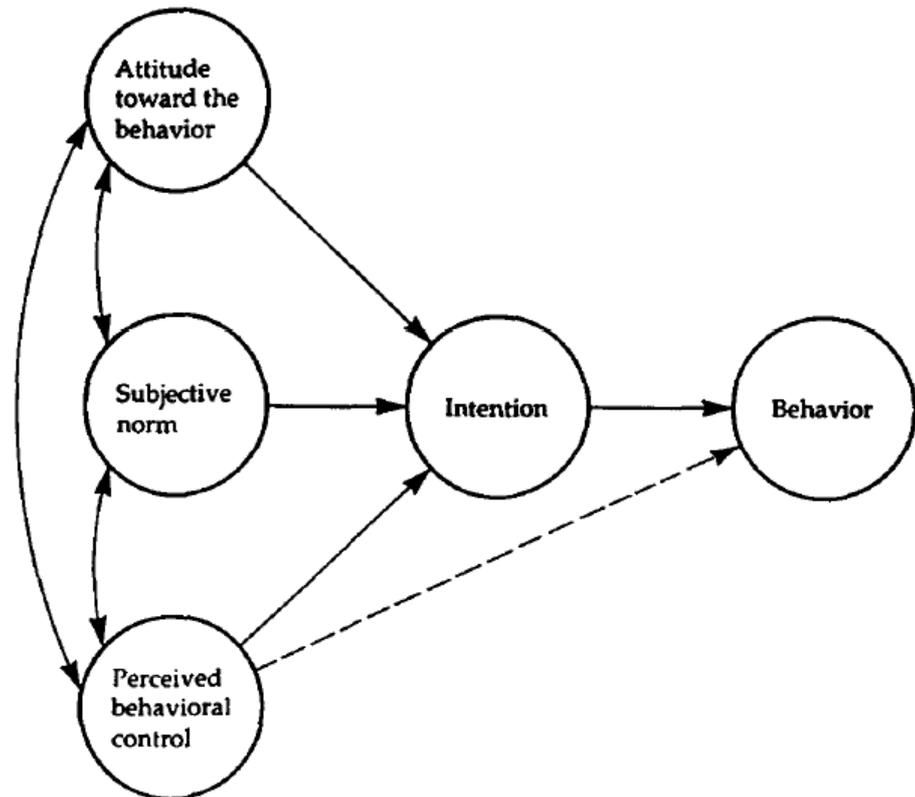


Figure 5 Theory of planned behaviour.

Source: Ajzen (1991, p. 182)

On the 30-year anniversary of their 1980 book introducing the TRA model, Fishbein and Ajzen (2010) propose an updated approach (Figure 6). This model incorporates both the original representation of the TRA along with the subsequent TPB model. It then expands on these models to provide a conceptual framework to accommodate the multitude of theoretical constructs used to explain behaviour across the social science domain (Fishbein & Ajzen, 2010).

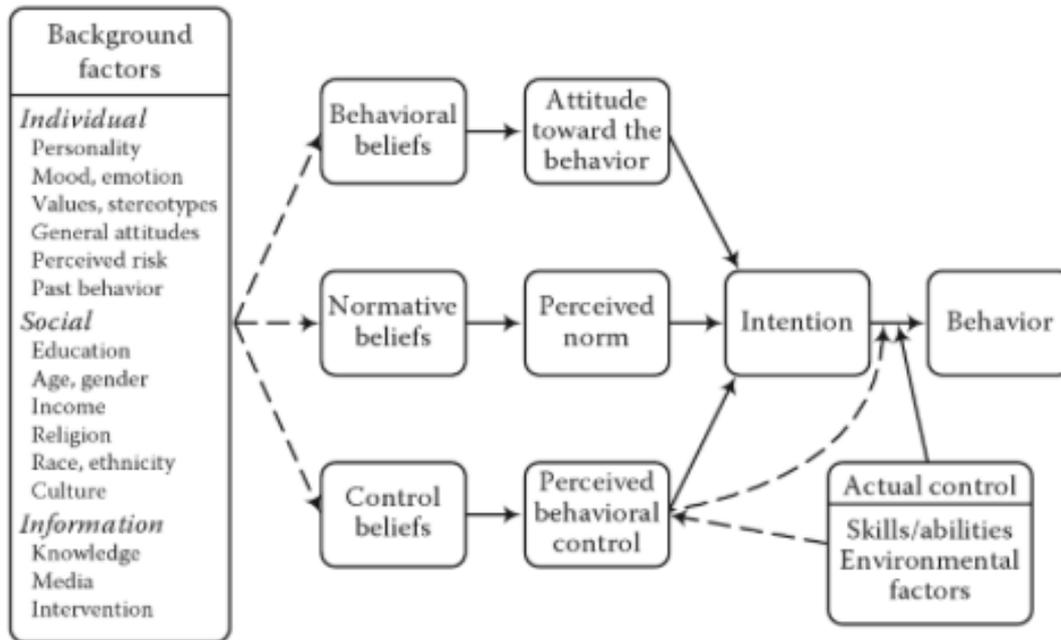


Figure 6 Schematic presentation of the reasoned action model.

Source: Fishbein and Ajzen (2010, p. 22)

The theory of reasoned action has been examined in over one thousand empirical studies (Fishbein & Ajzen, 2010). Similarly, the theory of planned behaviour has been tested over a large number of quantitative studies and is believed to be validated through these and subsequent investigations (Gorton & Barjolle, 2013). Indeed, the TPB eclipses the TRA with over 4500 citations, becoming one of the most frequently cited and influential models for the prediction of human social behaviour (Ajzen, 2011). The effectiveness of the TRA and TPB is demonstrated by the frequent and continuing use of these models in published behavioural studies. The TRA and TPB models extended the earlier Fishbein model by examining intention versus behaviour and capturing the role of other people in influencing behaviour (Solomon et al., 2013). These improvements drive the wide applicability of these models to consumer research. The TPB is one of the models most commonly used to study consumer food behaviour (Silva, Canavari, & Wander, 2017).

However, for food choice behaviour, the TRA and TPB have been severely criticised for their low predictive validity, strong theoretical bias and weak methodology. Past behaviour, hedonic appreciation and habits are typically better predictors of actual food choice behaviour than attitudes or intentions. (E. Köster, Mojet, Frewer, & Trijp, 2006; E. P. Köster, 2009)

For this research, these models inform the exploration of the constructs of PR and trust in the formation of food consideration sets. The psychological inputs of beliefs, subjective norms and attitude may have some role in the process but are not directly investigated in this work.

#### 2.3.1.4 Food choice process models

There are numerous frameworks and models proposed to help understand food choice behaviour (Connors, Bisogni, Sobal, & Devine, 2001; Contento, 2007, p. 30; Furst, Connors, Bisogni, Sobal, & Falk, 1996; Sobal & Bisogni, 2009; Story, Neumark-Sztainer, & French, 2002; Wetter et al., 2001). This section concentrates on the work of a group of academics with links to Cornell University, including Furst, Falk, Connors, Sobal and Bisogni, who have been involved in the development of the food choice process models (Cornell University, 2015). These models have been developed using inductive qualitative research methods and relate most closely to the research.

Furst et al. (1996) first presented a conceptual model of the food choice process with the main components of life course, influences and personal system (Figure 7). This model was later verified by Falk et al. (1996) in a qualitative investigation into the food choice process in adults.

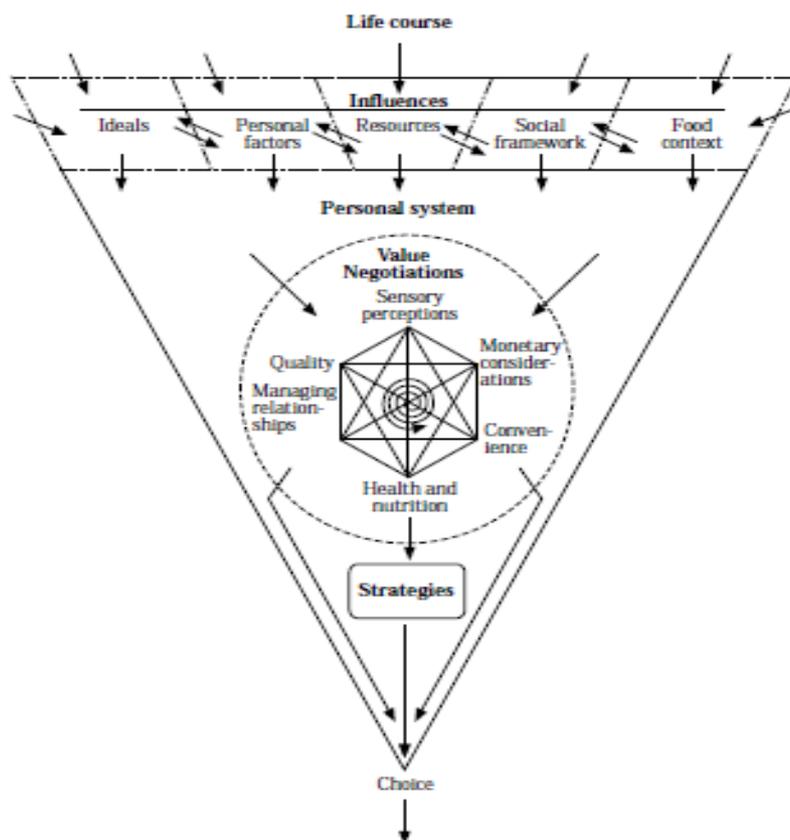


Figure 7 A conceptual model of the components in the food choice process.

Source: Furst et al. (1996, p. 251)

Within the model, life course represents the personal role and the social, cultural and physical environments that have shaped and shape a person. The funnel shape used represents the multiple personal and environmental inputs that collectively inform a food choice event. Life course leads to a set of influences includes conscious value negotiations and unconsciously operationalized inputs that may occur when choosing food. These influences include ideals, personal factors, resources, social framework and food context. The influences interact and shape each other as represented by the multi-directional arrows. Of the influences, personal factors are most relevant to the study as physiological factors including allergic response to food are included.

The personal system represents the value negotiations of the considerations involved in making a choice and the choice strategies of previous negotiations that are now habitual. There are six main values of: sensory perceptions, monetary considerations, convenience, health and nutrition, managing relationships and quality. In these values taste, as a part of the sensory perceptions, is the most prominent. However, for this research health and nutrition is an important value as it relates to the management of health conditions, such as food allergy (Furst et al., 1996).

Connors et al. (2001) presented a revised version of this model (Figure 8) that incorporates the argument that consumers prioritise conflicting values depending on the specific eating situations and that there are attempts to balance priorities against personally defined time spans.

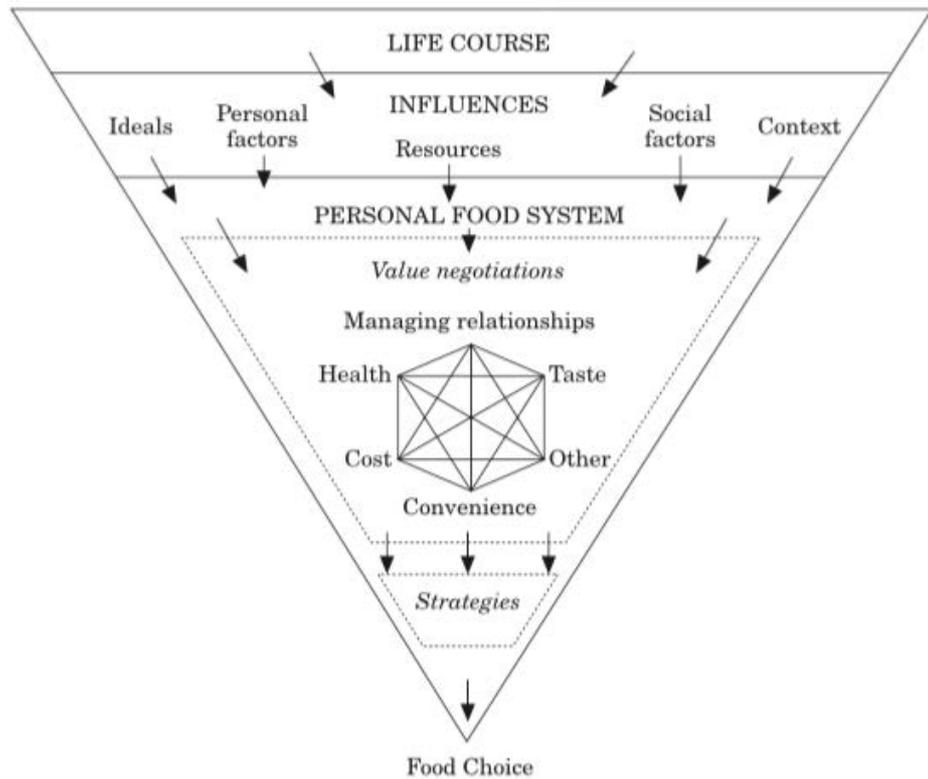


Figure 8 The food-choice process model.

Source: Connors et al. (2001, p. 190)

In a departure from the other food choice process models, Sobal and Bisogni (2009) changed the model to feature food behaviours and details the actions of food usage therein (Figure 9).

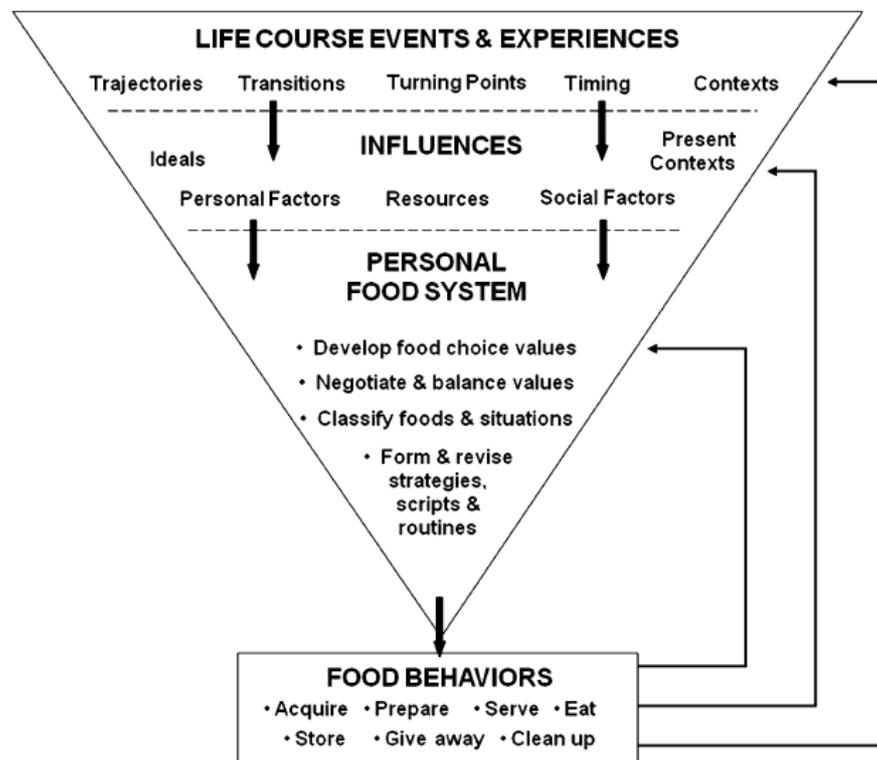


Figure 9 The food behaviours choice process model.

Source: Sobal and Bisogni (2009, p. S41)

They propose that it is through the food behaviours, where people interact with food, that in turn shape the life course experiences, influences and their personal food system. Health, identity and nutritional status can be shaped through eating, while food acquisition and preparation bring new knowledge. New experiences with shopping, cooking and eating lead people to discover novel strategies and revise their food choice scripts. The previously structured value negotiations and resulting strategies within the personal food system are slackened in this model.

A limitation of these models is that PR and trust are not specifically addressed. In commentary by the authors, they also note this lack of depth on the factors as a weakness. Additionally, the model has been designed and used in Western cultures and with adults only, results may differ when in other cultures or for children (Sobal, Bisogni, Devine, & Jastran, 2006). In the conclusion of their paper, Sobal and Bisogni (2009) note that there is no single theory that can fully explain food-related decision-making and instead many perspectives, including constructionist thinking, should be used. In recent work, Sobal, Bisogni, and Jastran (2014) concede that it may not be possible to integrate multiple perspectives into a unified approach to understanding food choice.

### 2.3.2 Consumer food behaviour and consideration sets

How consumers search for the foods they will eat and serve to others is a complex process that can involve many unique factors based on the food product or person for whom it is targeted. Food choice is defined by the Food Standards Agency UK (FSA) as 'the selection of foods for consumption which results from the competing, reinforcing and interacting influences of a variety of factors' (Fitzgerald, Heary, Nixon, & Kelly, 2010, p. 291). These factors range from the sensory, physiological and psychological responses of individual consumers to the interactions between social, environmental and economic influences, and include the variety of foods and the activities of the food industry to promote them (Buttriss et al., 2004). Consumer food behaviour is a very broad research discipline with the sub-area most relevant to this research being consumer marketing - food consideration sets.

#### 2.3.2.1 Consumer food behaviour

Consumer food behaviour has been extensively studied in the marketing discipline. A traditional model of the stages of consumer behaviour is seen in Figure 10. There

are typically five or six stages to the model, which sometimes combines the purchase decision and purchase. As this study focuses on the conceptualisation of packaged food consideration sets, consumer behaviour in this context is relevant. The consideration set falls under the evaluation of alternatives in this model.



Figure 10 Six fundamental stages of consumer behaviour.

Source: Adapted from Terpsidis, Moukas, Pergiodakis, Doukidis, and Maes (1997)

However, numerous arguments exist in the literature about where the consideration set sits in relation to the consumer decision process. It is argued by some that the consideration set functions as an antecedent to the consumer decision process (W. Kim, Di Benedetto, & Hunt, 2012) and also as an antecedent to brand choice (He, Chen, Tam, & Lee, 2016), while it is alternatively presented as part of a two-step decision process consisting of first a pre-screening and subsequently a choice (John R. Hauser, 2014; Irwin & Naylor, 2009; Payne, 1976). Still others propose that models of consumer behaviour argue for the positioning of the consideration set as a preceding state of choice which would then mediate the antecedents of choice including knowledge and attitude (Rortveit & Olsen, 2009). Within these varying approaches to positioning consideration sets, it is understood that for the consumer, it would be impractical to rationally evaluate all possible alternatives available so a subset is selected to facilitate the consumer food decision process to follow (Manzini & Mariotti, 2014). In the next section, consideration sets are discussed.

### 2.3.2.2 Consideration sets

When consumers decide what food they will purchase or eat, they make a choice amongst a set of considered alternatives. This research uses Nedungadi's (1990, p. 264) definition of a consideration set being "the set of brands brought to mind on a particular choice occasion". These brands are the ones that a consumer seriously considers when making a purchasing and/or consumption decision (John R Hauser & Wernerfelt, 1990). The consideration set comes from the concept of the 'evoked' set introduced by Howard (1963) later detailed in by Howard and Sheth (1969) in their Theory of Buyer Behaviour that examined the brand choice behaviour of buyers. The conceptualisation of a consideration set is a distinct phase from the

ultimate choice and purchase decisions (Irwin & Naylor, 2009). The distinction between consideration set and the choice/purchase is important when trying to understand consumer behaviour.

#### 2.3.2.2.1 Consideration set formation

Consideration sets are often formed by consumers purchasing non-durable goods, like food products, on a frequent basis as a way to manage the large array and variety of product choices available. The composition of a consideration set is determined by personal and situational factors and interaction between those factors (Garber Jr., Hyatt, & Starr, 2003).

The formation of consideration sets often involves the use of decision heuristics, such as a recognition heuristic for products seen in advertising, to consider the benefit vs. cost trade-offs between the available alternatives (Brandstätter, Gigerenzer, & Hertwig, 2006; Hogarth & Karelaia, 2005; Lichtenstein & Slovic, 2006). The formation of a consideration set based on “must have” and “must not have” criteria is a conjunctive decision heuristic rule (John R. Hauser, 2014; John R. Hauser, Toubia, Evgeniou, Befurt, & Dzyabura, 2010). For example, in this research participants may use “must be high in fibre and must not contain peanuts” as a conjunctive decision rule thus including fibre rich foods while excluding peanut-containing products from the consideration set. Variables such as usage situation, assortment size and pioneering advantage can affect consideration set formation (Irwin & Naylor, 2009)

Consideration sets may be formed by the inclusion or exclusion of certain factors. The goal of the exclusion mode is to show which alternatives a consumer does not want to consider further, while the goal of the inclusion mode is to show in which options a consumer is most interested (Irwin & Naylor, 2009) Exclusion modes typically lead to larger consideration sets than do inclusion modes (Heller, Levin, & Goransson, 2002; Hensher, 2006; Levin, Huneke, & Jasper, 2000). It is suggested that the inclusion modes lead to smaller consideration sets as consumers screen out more alternatives when including than when excluding (Levin, Jasper, & Forbes, 1998; Yaniv & Schul, 2000).

Within the marketing literature, there are two main constructs for consideration sets being the recognition-based and recall-based measures. These two approaches

have notable differences between them and can lead to differences in the size of the consideration sets generated. There are two main ways to enter into a consideration set with the first being to have preference and the second being to be recalled. Whether the preferred or recalled heuristic has prominence in the consideration set formation is dependent on how the consumer uses either memory or external stimuli when they make their decision. The recall-based measure tends to have higher loyalty, strong brand presence and less price sensitivity than compared to the recognition-based measure. The recognition-based measure typically produces larger consideration sets while requiring less cognitive effort by the consumers than the recall-based measure (Nordfält, Hjalmarson, Öhman, & Julander, 2004).

Consideration set formation for brands is theorised to go from the Brand-Consideration Stage to the Brand-Evaluation Stage. The Brand-Consideration Stage starts with the activation of the brand node and is dependent on the strength of that activation. The strength of the activation is correlated with the frequency, recent experience, and salience of the brand with the evaluator. The evaluator's perceived association between the brand and the activated factors then follows. The next step is dependent on the availability of the retrieval cues that could include information on the category, brand and attribute. The Brand-Evaluation Stage follows from the Brand-Consideration Stage and takes the recalled consideration set of brands and assesses these to come up with a 'shortlist' to choose between. The Brand-Evaluation Stage involves a process of decision-making and judgement to narrow the available choices into a realistic set of viable choice options (Nedungadi, 1990).

When considering the Brand-Consideration Stage as outlined above, there are many factors that may influence brand salience, brand node activation and whether the brand information is retrieved by the evaluator. Advertising, especially for food brands, is big business for the major food manufacturers, but if and how a brand can break through the mass of advertising clutter while knowing that consumers are busier than ever is a complex consideration. The effects of incidental advertisement exposure influencing consideration set formation exists, even if the consumers do not have a specific memory of the ads that influenced them (Shapiro, Macinnis, & Heckler, 1997).

#### 2.3.2.2.2 Consideration set size

Researchers have developed empirical models to predict, measure and evaluate consideration set sizes (R. T. Carson & Louviere, 2014; John R Hauser & Wernerfelt, 1990; Mehta, Rajiv, & Srinivasan, 2003; Trinh, 2015). Further research has focused on the “subjective” number of options worth considering for the consideration set from psychological and neuroscientific perspectives (H.-y. Kim, Shin, & Han, 2014; Niewiarowski, Karyłowski, Szutkiewicz-Szekalska, & Cypryńska, 2014). Large consideration sets can lead to more difficulty for the consumer in the decision-making process. Small assortment sets often lead to smaller consideration sets and ease the decision-making process. (Goodman, Broniarczyk, Griffin, & McAlister, 2013). In the United States, it is noted that consideration set sizes for most consumer packaged goods categories are approximately 1/10<sup>th</sup> of the total number of brands that are available for purchase in the product category (John R. Hauser, 2014). Consideration set size is an area of attention for this study.

#### 2.3.2.2.3 Consideration set contexts

The situation and social contexts of food choice consideration have been found to influence how consumers relate to product characteristics. Consumers incorporate these external contexts into the formation of their considerations sets within food choice behaviour. The eating occasion context and the complexity of the food choice behaviour plays a role in the construction of the consideration sets for the respondents (Jaeger & Rose, 2008). Much of food choice decision making occurs at a non-conscious level with elements such as past behaviour, habit and hedonic appreciation often being a better predictor of actual food choice behaviour than constructs from psychology such as attitude and intention (E. P. Köster, 2009). This non-conscious processing and multiple situational factors fostering an inability to accurately predict food choice is demonstrated as Wood (2010) found that despite lay beliefs about comfort foods, consumers in situations of life upheaval may choose novel food products over familiar favourites even when they predict that they would choose the comfort food except in the case of high involvement.

Accordingly, situations that isolate elements of the consideration set formation to attribute factors such as taste, may fail to reflect the true likelihood of a positive consumer response to the food product. Garber Jr. et al. (2003) propose that the high profile failures of new food products such as New Coke and the new Burger

King French fries were due to the overreliance on taste tests by food scientists that did not incorporate the marketing context and purchase behaviour considerations of consumers. In the branded cases noted at Burger King and Coca-Cola, they suggest that the companies narrowly focused on the product attributes of crunchiness and sweetness levels with effervescence respectively, to the exclusion of other product attributes. Product perceptions are influenced by more than singular factors such as an element of taste instead the food product's full marketing activation including branding, packaging, price and promotional strategy can drive overall product perception.

From a food allergy perspective, there are costs and potential difficulties for food retailers and other stakeholders in assisting consumers with food allergies to obtain the information necessary for consideration set formation (Cornelisse-Vermaat et al., 2008; Voordouw et al., 2012). The retail food industry communicates nutrition information on the labelling through the Nutrition Facts Panel (NFP) the contents of which may vary by region and product type. Soederberg Miller and Cassady (2012) used eye tracking to investigate the strategies that people use to make decisions based on the information found on the NFP, as well as to examine how those strategies are influenced by individual factors such as age, dietary modification status, motivation and knowledge. They found that, across age groups, participants with dietary modification goals made more comparisons between NFPs and displayed higher levels of motivation and knowledge. Dietary modification goals could include the avoidance of peanuts or tree nut products for consumers with a nut allergy. Eye tracking methods have been used previously in consumer food label research and it has been found that individuals prefer information to be central to their field of view and simple in format; the methods have proven to be a useful tool in examining how consumers use labels and other food product information (Graham & Jeffery, 2011; van Herpen & van Trijp, 2011). The wider use of eye tracking methods have been used in the advertising area of marketing in both copy testing and for print advertisements (Duchowski, 2002). While outside the scope of the research, the use of investigational approaches for studying the formation of food product consideration sets is a potential area for future research.

### 2.3.3 Food choice and children

Many factors influence child and youth food choice including genetic, familial, environmental, hormonal and physiological determinants. Parents have a high

degree of control over the experiences and environment of their children (Scaglioni, Arrizza, Vecchi, & Tedeschi, 2011). However, there are differences in the internal and external influences on food choice between young children and adolescents.

#### 2.3.3.1 Childhood food choice

Eating habits that are developed in early life can continue into adulthood. The quality of a child's diet is most strongly influenced by their mother's diet; this supersedes other maternal and family characteristics, such as income level, education attainment and body mass index (BMI) (Fisk et al., 2011). However, even young children are able to exert a significant influence over the foods they consume (Bruce et al., 2015).

Initially, the parent or caregiver makes all the food choices for a child, from the decision to breastfeed or formula-feed to the introduction of solid foods. As the child ages, they have greater influence over parental food choice. The term "pester power" was coined in the consumer behaviour literature to describe this influence (Bruce et al., 2015). Children's food likes and dislikes begin early in life and typically start with a preference for sweet and high-fat foods. This preference is part of an adaptive process where sweetness indicates desirable caloric foods, while the avoidance of bitter tastes develops from the avoidance of toxins (Scaglioni et al., 2011). Parental feeding styles may encourage negative food behaviours, such as overeating, in children; this can include parental food restriction, which prevents the development of internal eating regulation (Faith, Scanlon, Birch, Francis, & Sherry, 2004; Francis, Hofer, & Birch, 2001). Rewards and positive incentives can influence children's food liking and lead to continuing food habits even when the incentive is removed (List & Samek, 2015; Loewenstein, Price, & Volpp, 2016). Parents play a crucial role in the food choice of children and this study interviews them directly about the food consideration set formation for their household including their children, where appropriate including the children's perspectives.

#### 2.3.3.2 Food marketing and children

It has been found that even short exposure to television food commercials can influence young children's food preferences, including for specific brands (Duchowski, 2002). Children also make more bids to their parents for certain foods after watching television containing food advertisements for the items and exposure to the advertisements promotes food consumption (Borzekowski & Robinson, 2001;

Dixon, Scully, Wakefield, White, & Crawford, 2007). During programmes scheduled for children, the majority of advertised products were snack foods, followed by breakfast cereal (Brody, Stoneman, Lane, & Sanders, 1981; Halford, Gillespie, Brown, Pontin, & Dovey, 2004; Kelly et al., 2010).

Research on food marketing to children includes a focus on the impact on child obesity (J. L. Harris, Pomeranz, Lobstein, & Brownell, 2009). The presence of popular licensed cartoon characters on packaging increases the desirability of snack foods for children, compared to the same products without characters. This effect is stronger for low-nutrient snack foods than for healthier snacks (Hebden, King, Kelly, Chapman, & Innes-Hughes, 2011; Roberto, Baik, Harris, & Brownell, 2010). Similarly, children report liking cereal better when there is a popular media character on the box, over the box with no character (Lapierre, Vaala, & Linebarger, 2011). While food advertising will not receive specific attention in this study, the food categories that the advertising targets are the packaged food categories investigated.

#### 2.3.4 Food choice and adolescents

Adolescence is characterised as a period where there is a desire to break away from the family and the influence of parents. This is often expressed through a change of eating habits wherein traditional foods and eating patterns are rejected, while snacking emerges as important in the adolescent diet (Furnham, Abramsky, & Gunter, 1997). Adolescents hold autonomy over many of their food choices while parents oversee and control the environment within which the adolescents gain responsibility and independence. Strategies used by parents include coaxing and coaching, while adolescents reciprocated with a variety of negative and positive responses. While food choice autonomy can have an element of adolescent defiance, it is co-created by the parents and adolescents through responses to each other (Dennison & Shepherd, 1995). The co-creation of approaches to food between parents and adolescents, in the context of food allergy, will be a part of this research.

The family meal is noted as an important opportunity for interaction and control between parents and adolescents (Scaglioni et al., 2011). The presence of at least one parent at the evening meal correlates with a lower risk of skipping breakfast, and of poor intake of fruit, vegetables and dairy products in adolescents (Videon & Manning, 2003). The positive effect of family meals may reflect a positive home

environment with parental support for healthy eating and the presence of healthy foods in the home (Utter, Scragg, Schaaf, & Mhurchu, 2008). Parenting styles can also be a significant influence as adolescents describing their parents as being authoritative display healthier eating behaviours than those who describe their parents as neglectful (Pearson, Atkin, Biddle, Gorely, & Edwardson, 2010). It is important to note that there are potential differences in the approach to food by children, adolescents and adults in the home

#### 2.3.4.1 Food marketing and adolescents

For adolescents, food advertisements comprise over a quarter of the advertised products viewed. Advertisements for fast food, sweets and beverages were the most frequently viewed, followed by cereal and snacks. These food items are well within the purchasing power of adolescents (Bassett, Chapman, & Beagan, 2008). Factors such as race, ethnic background, household income and cultural preferences also lead to differences in adolescent television ad exposure in a market (Powell, Szczypka, & Chaloupka, 2007). This research will not directly address food-advertising affects in adolescents but this may be an area of future research in the food allergy context, as it has not yet been addressed.

Parental influence and supervision can affect food choice behaviour. Klesges, Stein, Eck, Isbell, and Klesges (1991) conducted a study with children aged around five years old and their mothers. In the first part of the study the children were given free range to choose food products for a meal, the food products were then removed for analysis. The second part of the study had similar instructions for the children but they were advised that their mothers would be monitoring their choices. In the third part, the children were told that their mothers would modify their meal choices, which then happened when they had left the room. Food choices in the second and third parts of the study, where there was parental influence on the child's food selection, had both fewer non-nutritious foods and lower total calorie content of the meals. This study presents strong evidence of parental influence on children's food choice behaviour

## 2.4 Perceived risk (PR)

Risk plays a role in all human activities (Yates & Stone, 1992). The complexity of risk has been addressed in many disciplines and from varying perspectives.

### 2.4.1 Dimensions of risk

Cunningham (1967) was one of the first to identify uncertainty and consequences as the two dimensions of risk. Cox (1967) initially categorized the consequences into performance and psychosocial. The early research in this area by Cox and Rich (1964) defined the consequences as losses but that has since evolved to consider the conceptualisation of risk as an expression and the importance of losses (Conchar, Zinkhan, Peters, & Olavarrieta, 2004). Peter and Ryan (1976) expanded upon Cunningham's work by suggesting that risk was the product of the 'probability of the consequence occurring' multiplied by the 'negative consequences of a poor brand choice'.

According to Jacoby and Kaplan (1972) there are five dimensions of risk with a sixth risk identified earlier by Roselius (1971):

Types of Risk	Risk Description (The risk that the ...)	Anchor Points
<b>Financial Risk</b>	brand/product will cause you to lose money (e.g., by not working for you or costing more than it should)	<b>Low (1)</b> = low chance of losing money <b>High (9)</b> = high chance of losing money
<b>Performance Risk</b>	brand/product will have something wrong with it or that it won't work well	<b>Low (1)</b> = low functional risk <b>High (9)</b> = high functional risk
<b>Physical Risk</b>	brand/product may result in a health hazard to the consumer	<b>Low (1)</b> = very safe <b>High (9)</b> = very unsafe
<b>Social Risk</b>	brand/product will make other people regard the purchaser in a negative way	<b>Low (1)</b> = low social risk <b>High (9)</b> = high social risk
<b>Psychological Risk</b>	brand/product will have a negative impact on the purchaser's self-perception or peace of mind	<b>Low (1)</b> = low psychological risk <b>High (9)</b> = high psychological risk
<b>Time Risk</b>	brand/product will waste time, waste effort or resulting in the loss of convenience for the purchaser	<b>Low (1)</b> = low time risk <b>High (9)</b> = high time risk

Table 2 Six Dimensions of Risk.

Adapted from: Jacoby and Kaplan (1972)

These six dimensions of risk have continued to be regularly applied to consumer research on both services and products while continuing to be upheld as the key

attributes of risk for purchasers (Garner, 1986; Peter & Tarpey Sr, 1975; Robert N. Stone & Grønhaug, 1993). Stone and Grønhaug (1993) focused on the six dimensions of risk, recognising that all of the risk dimensions are perceived and that the perception is related to the psychology of the individual; in their resulting study they found that 'psychological risk' plays an important role in mediating the other types of risk. Grewal et al (1994) related 'performance risk' to products suggesting that it is the possibility of product malfunctioning and not performing as it was designed and marketed and thus failing to deliver the desired benefits. Dowling and Staelin (1994) developed a model of the determinants of overall PR incorporating purchase goals, intended usage, prior knowledge and involvement (ego, product, purchase) as forming the constituent elements being input to the overall PR but without prescribing the relative nature, amount or force of each element on the overall PR construct. Additional risk dimensions have since been proposed, but are more localised to specific situations. These include linked decision risk, manuscript decision risk, facility risk, obsolescence risk (Justus, Sunitha, & Gnanasundari, 2017). These additional risk dimensions are beyond the scope of this study.

Within the consumer research it has been argued that that purchase of services is more uncertain than the purchase of goods/products (Guseman, 1981; V.-W. Mitchell & Greatorex, 1993; Murray & Schlater, 1990). Services have been found to fall along a continuum from search-based to credence-based, with search-based having great consistency and credence-based having a higher degree of customization and, in some cases, variability (Guiltinan, 1987; Murray & Schlater, 1990). While it is true that greater variability may be found in consumer services than in consumer goods, in some cases, such as for those with severe allergies, any mistake in product choice can have severe consequences to the consumer including death.

#### 2.4.2 PR

The fundamental assumption behind PR is that prior to engaging in a risky activity, people engage in a purposeful evaluation of costs and benefits of the potential consequences. However, PR is a subjective evaluation with most accounts for defining and measuring trust based on subjective probabilities and subjective values (Nyshadham & Minton, 2013).

### 2.4.2.1 PR across the disciplines

Research contributions to the understanding of PR come from diverse academic disciplines including geography, political science, sociology, anthropology, psychology and consumer marketing (V. W. Mitchell, 1999; Paul Slovic, 2000b). While these disciplines investigate different contexts and vary in methodological approach, the conceptualisation of PR is largely consistent across disciplines. PR differs from risk in this respect as qualifiers such as financial and physical are used to describe the different types of risk. Trust, presented later in this chapter in section 2.5.1, varies in conceptualisation across disciplines as discussed in further depth.

Discipline	Areas investigated
Geography	<ul style="list-style-type: none"> <li>• Human response to natural hazards (Paul Slovic, 2000b; K. Smith, 2013; Tsai &amp; Chen, 2011; Zhou, Wan, &amp; Jia, 2010)</li> <li>• Technological hazards (Bickerstaff &amp; Simmons, 2009; Hung &amp; Wang, 2011; Zhang, Hwang, &amp; Lindell, 2010)</li> </ul>
Political Science	<ul style="list-style-type: none"> <li>• Democracies (Paul Slovic, 1993)</li> <li>• Regulatory policy (Jasanoff, 1998)</li> <li>• Political opposition driven by the public's PR (Paul Slovic, Flynn, &amp; Layman, 1991)</li> </ul>
Sociology	<ul style="list-style-type: none"> <li>• Social identity (Earle, Siegrist, &amp; Gutscher, 2010)</li> <li>• Gender (Brent, 2004; May, Rader, &amp; Goodrum, 2010)</li> <li>• Societal acceptance of risk (Douglas, 2013).</li> </ul>
Anthropology	<ul style="list-style-type: none"> <li>• Cultural Theory (Douglas, 2013)</li> <li>• Hazards of a health or natural disaster context (Chavez, Hubbell, McMullin, Martinez, &amp; Mishra, 1995; Feldman, 2011; Oliver-Smith, 1996).</li> </ul>
Psychology	<ul style="list-style-type: none"> <li>• PR versus perceived benefit (Alhakami &amp; Slovic, 1994; Schwartz, Lerman, Miller, Daly, &amp; Masny, 1995)</li> <li>• Personal disposition for coping with PR (Schwartz et al., 1995)</li> <li>• Psychological barriers preventing action towards PR (Gifford, 2011)</li> </ul>

Table 3 PR across the disciplines

### 2.4.2.2 Outcomes of PR

The concept of PR within economics, psychology and the other disciplines noted above, relate the concept of risk to choice situations that have both potentially positive and potentially negative outcomes. However, the consumer PR research has focused almost entirely on negative outcomes, resulting in a critical distinction between how risk is understood in marketing versus the other disciplines (Robert N. Stone & Grønhaug, 1993). This focus on the risk of negative outcomes within consumer PR derives from the assumption that consumers will seek to satisfy their

needs and wants with a purchase decision, and that the consumer would hope for and expect a positive outcome. This specific bias towards negative outcomes as a frame for consumer PR is a decision-making judgement accepted within the consumer literature (Bazerman & Moore, 2008). The orientation towards negative outcomes for PR in the consumer marketing literature is further referenced by Stone and Winter (1987) who view risk as an expectation of loss. Aligned with the consumer research tradition of a focus on negative outcomes, this study uses this understanding in the design of the conceptual framework and within the investigation.

#### 2.4.2.3 Defining PR

The long and varied research tradition of PR has generated many possible definitions—this study uses the definition of PR as 'the expected negative utility associated with the purchase of a particular brand or product' (Dunn, Murphy, & Skelly, 1986, p. 205). This definition was chosen to best reflect the consumer PR of approaching the purchase of a brand or product.

#### 2.4.2.4 PR and the consumer

Consumers look to measure risk in their own way, using an understanding of the product or the possible gains and losses with the alternative. This research uses the understanding of a consumer as being involved in selecting, buying and/or using products or services for personal or household benefits (Lancaster & Massingham, 2011).

PR is a concept first presented in the consumer literature by Bauer (1960) who proposed that it is not the objectivity of risk that motivates consumer behaviour but instead the subjective impressions of it, even if consumers could correctly calculate the risk involved. Within this, Bauer emphasized that he was concerned only with subjective (perceived) risk and not 'real world' (objective) risk. How consumers attempt to calculate levels of PR will be explored in greater depth later in this literature review.

Around the time of Bauer's consumer conception of PR, Edwards (1961) contributed research activity on the area with a series of empirical assessments on behavioural decision theory focusing on probability, utility and decision-making processes. Taylor (1974) then furthered the concept of PR by suggesting that a consumer's

subsequent purchase is shaped once the risk has been perceived. Taylor's work contributes to the foundation of this area of research but has the limitation of showing only a one-way link from PR to purchase decision.

A major advancement followed with the discovery of a set of mental heuristics, or strategies, that people use to make sense out of an uncertain world (Kahneman, Slovic, & Tversky, 1982). These early developments led to a significant research tradition in consumer behaviour (Foxall, Goldsmith, & Brown, 1998; Mittal & Lee, 1989; J. Sheth, 2011). Mitchell (1999) attributes this robust level of interest to the concept's power in explaining consumers' behaviour, as consumers are more often motivated to avoid mistakes rather than to maximize utility in purchasing. This more recent work also presents a more iterative process wherein the PR informs the purchase decision, while a past purchase decision can inform how a consumer perceives future risks. This novel distinction is used within the conceptual framework presented at the end of this chapter.

On PR, Mitchell (1999) notes the construct's versatility and ability to be applied to almost any situation. Some recent research on consumer PR is published in the articles presented in Table 4.

Topic	Authors
Food Labelling	Tonkin, Coveney, Meyer, Wilson, and Webb (2016)
Health Information Search and Social Media	Deng and Liu (2017)
Mobile Shopping Applications	Natarajan, Balasubramanian, and Kasilingam (2017)
Mobile Banking	Alalwan, Dwivedi, Rana, and Williams (2016)
Personal Information Sensitivity	Milne, Pettinico, Hajjat, and Markos (2017)
Online Retail Patronage	Davari, Iyer, and Rokonuzzaman (2016)
Willingness to Buy (WTB) and Pricing for Wine	Outreville and Desrochers (2016)
Mobile Payment	de Kerviler, Demoulin, and Zidda (2016)

Table 4 Selected Articles on Consumer PR 2016-2017

The recent literature on consumer PR has a significant focus on the online space, including mobile banking, shopping and website use. However, food, drink and health PR are also noted.

Consumers' perceptions of the risks involved with product adoption and usage have been studied for many years (Bauer, 1967; Dowling & Staelin, 1994; Featherman & Pavlou, 2003). Koller (1988) suggests that the degree of importance of the situation is the main determinant for the potential effect of risk. Mitchell (1999) asserts that PR theory has intuitive appeal for consumer marketers as it helps them see the world through their customers' eyes. Product involvement is the degree to which the purchase of a product reflects the consumer's personal goals, values and needs (Bloch & Richins, 1983; Hong, 2015). It is reflected in risk perceptions, and food has been found to evoke a high degree of involvement. This can be attributed in part to the deeply embedded role that food has in the social and cultural fabric along with its assumed mechanism as a vehicle for people to express their personal, social and cultural identity (Knox, 2000).

#### 2.4.2.4.1 Inherent vs. handled risk

A consumer is faced with many different types of risks from the products they choose. The latent risk held for a consumer by a product class is called 'inherent risk' while 'handled risk refers to the amount of conflict the product class arouses when the buyer selects a brand from the product class in his/her usual buying situation' (Bettman, 1973, p. 184). This distinction has also been referred to as product category risk and product-specific risk (Dowling & Staelin, 1994). Following Bettman's (1973) constructs, the importance of loss would operate at the inherent risk 'product category risk' level and the probability of that loss would be found at the handled risk 'product-specific-risk' level (Dowling & Staelin, 1994; V. W. Mitchell, 1999). The importance of loss for the consumer can vary by market and product class; Peter and Ryan (1976) argue that it adds little to the explanatory power when used to weight probability of loss at the brand level. For the purposes of this research, there is no weighting of PR and thus product category, product and brand are explored without the prejudice introduced by differential weightings of PR.

#### 2.4.2.4.2 Buying behaviour and PR

When considering consumer buying behaviour, the elements of PR and varying levels of involvement are seen. Assael (1987) suggests that PR has a role to play in four types of suggested buying behaviour as outlined below in Table 5.

Type of buying behaviour	Key characteristics
1.) 'Complex buying behaviour'	<ul style="list-style-type: none"> <li>• High involvement</li> <li>• Financial risk</li> <li>• Social risk</li> <li>• Inherent lack of knowledge</li> </ul>
2.) 'Dissonance-reducing buying behaviour'	<ul style="list-style-type: none"> <li>• High involvement</li> <li>• Time risk</li> <li>• Social risk</li> <li>• Psychological risk</li> </ul>
3.) 'Habitual buying behaviour'	<ul style="list-style-type: none"> <li>• Low involvement</li> <li>• Few differences between competing brands</li> </ul>
4.) 'Variety seeking behaviour'	<ul style="list-style-type: none"> <li>• Low involvement</li> <li>• Significant differences between the competing brands</li> <li>• Search for novelty and excitement</li> </ul>

Table 5 Four Types of Suggested Buying Behaviour.

Source: Assael (1987)

PR is an element of the consumer's decision making process in each of these different buying behaviours and can be a powerful influence on consumer behaviour (V. W. Mitchell, 1992). However, these four types are a simplified representation of the drivers of buying behaviour and may not capture all forms of buying behaviour.

When considering problem solving behaviour, high involvement would correspond to extensive problem solving behaviour. In the visualisation of problem solving behaviour seen in Figure 11 below, high PR is seen to correspond with extensive problem solving, while low PR corresponds with routine problem solving behaviour.

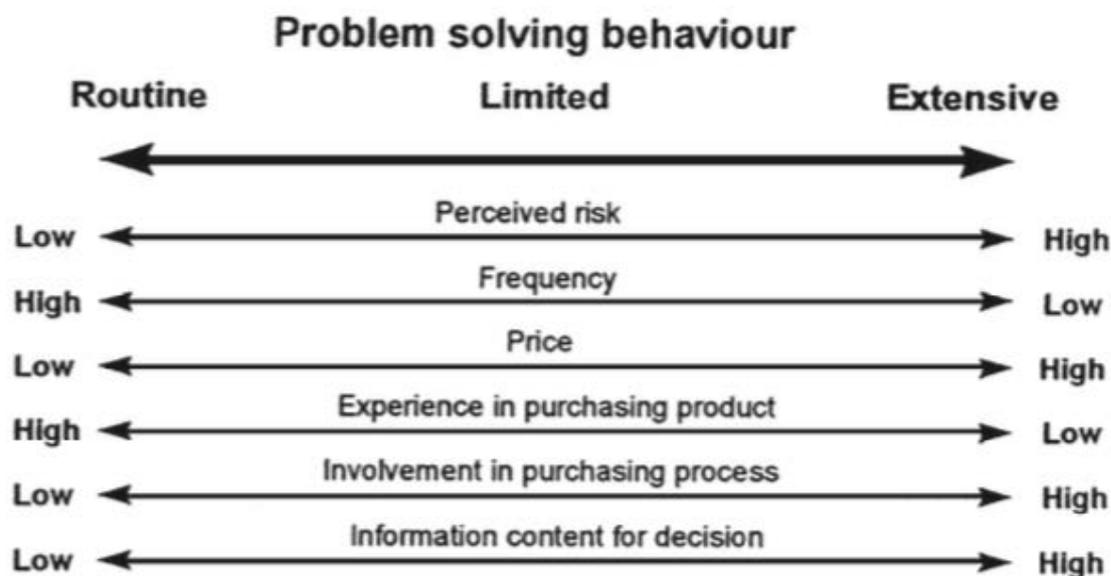


Figure 11 Consumer purchasing and characteristics of the purchasing decision.

Source: P. Butler and Peppard (1998)

This continuum views PR as a whole, but could represent the types of risk in a similar fashion. PR plays a role in both consumer buying behaviour and consumer problem-solving behaviour.

#### 2.4.2.4.3 Consumption emotion and affect

Within the links between consumer and psychological approaches to PR, many emotions influence individuals' responses to PR or are evoked when an individual faces PR. A significant portion of the variance in PR can be attributed to emotional factors even after the effects of other factors, such as product involvement and perceived differences between available alternatives are considered. Consumption emotion can be understood as 'consumer's knowledge by acquaintance of products and services during the consumption experience' (Chaudhuri, 1997). These emotional factors can be positive (such as love, happiness or joy) or negative (such as fear, anger or disgust) (Holbrook, 1986). Emotional factors can also vary significantly in strength, from very prominent emotions such as anger and fear to the calmer "faint whisper of emotion" called 'affect' (Paul Slovic & Peters, 2006). Experimental manipulation of affect has found that even this milder evocation of emotion can influence how a risk is perceived (Johnson & Tversky, 1983). Positive emotions or a positive affect can lead to a mitigation of the perception of risk in some cases (Finucane, 2013; Ma & Wang, 2009). Rhodes and Pivik (2011) have found that a positive affect can mediate both age and gender effects towards a PR.

Stronger negative emotions can include fear, anger and dread. The 'dread' dimension introduced by Slovic represented the discrepancy between 'lay' risk perception and 'expert' risk perception with this discrepancy causing the public to experience anxiety that is expressed as dread (Paul Slovic, 1987; Wynne, 1989). In some cases, such as consumers wanting to see a scary movie at Halloween, the feelings classed as negative, such as fear, are their desired state, so the title of 'negative emotion' can be inappropriate in some instances. However, 'negative emotion' is a term that appears widely in the literature and there is no apparent suitable alternative to its use, so it continues to be employed with the understanding that in some instances the emotions classed as 'negative' are actually what the consumer is seeking (Chaudhuri, 1997). This study focuses on PR, while recognising dread as being outside the scope of this research. Attributes affecting risk ratings include expected mortality, effects on future generations, immediacy and catastrophic potential but only PR ratings were found to correlate with expected mortality (Gregory & Mendelsohn, 1993). This correlation with mortality aligns to this research in exploring PR in consumers with life-threatening allergies.

In some of the literature, positive and negative emotions are regarded as opposing valences resulting in opposing reactions towards PR (Chaudhuri, 1998); however, there are also nuances between the emotions within the same valence that have differing approaches to the perception of risk, potentially relating to the strength of the negative emotion (DeSteno, Petty, Wegener, & Rucker, 2000; Lerner & Keltner, 2000). Fear is positively related to PR; it is postulated that fearful people hold a pessimistic view towards future events and that fear arises from situations of uncertainty and lack of situational control (Fischhoff, Gonzalez, Lerner, & Small, 2005; Paul Slovic & Peters, 2006). Interestingly, the strong negative emotion of anger can contribute to an optimistic view towards future events as it can arise from a situation of certainty and individual control (Lerner, Gonzalez, Small, & Fischhoff, 2003; Lerner & Keltner, 2000). A key consideration of this differential reaction is between 'integral affect', where there is the influence of subjective experiences relevant to a present decision, and 'incidental affect', where there is the influence of subjective experiences even though those experiences are not relevant to the present decision (Lerner & Keltner, 2000). The research on integral affect draws the linkage between the subjective experiences and the related choice or decision that is then made, such as the anticipation of regret, which can influence how much one is willing to gamble (Larsen, McGraw, Mellers, & Cacioppo, 2004).

#### 2.4.2.4.4 Optimistic bias and self-efficacy

A large number of studies have consistently found that people believe their personal risk to be less than the risk of others in the same situation (Roberts, Gibbons, Gerrard, & Alert, 2011; N. Weinstein, 1989; N. D. Weinstein & Klein, 1995). This optimistic bias wherein certain risks are overestimated and others underestimated has been found to apply to health risk behaviour where the danger posed to others is consistently perceived to be higher than the risk to oneself (Knox, 2000). However, it has also been suggested that optimistic biases towards risk do not serve as an impediment to adoption of precautions towards the risks (N. D. Weinstein & Lyon, 1999). In their 'mindset hypothesis', S. E. Taylor and Gollwitzer (1995) propose that optimistic biases are suspended during deliberation over new behaviours and only re-emerge later when thinking about implementing those new behaviours. In this optimistic bias, unrealistic optimism and the mindset hypothesis could help governments and health promotion agencies to understand why health messages have so little impact on the public. It can help to understand why when people have awareness of the health warnings being communicated that they do not take action in their own lives to mitigate the impact, such as obese people continuing not to diet or exercise even when they understand the risks involved' (Knox, 2000). Within this consideration of the personal approach towards risk, Cooper, Woo and Dunkelberg (1988) propose a distinction between 'risk perception' and 'risk attitude' based on their study on entrepreneurs' approaches towards risk. In their study they found that entrepreneurs did not have a greater preference towards risk but had a different attitude towards risk than other managers, with the entrepreneurs displaying an overly optimistic perception of the risks involved. Average risk ratings have been found to be significantly affected by individual perceived benefits, which suggests that perceptions of risk are net rather than gross indicators of harm (Gregory & Mendelsohn, 1993).

However, Bauer (1967) suggests that consumers will likely develop strategies to reduce risk in order to manage a potentially adverse situation once they perceive a risk with unanticipated outcomes. It has also been suggested that PR and self-efficacy are related and a part of self-protective behaviour wherein PR can be counteracted by an individual self-efficacy or confidence in their ability to exert personal control. People with a high degree of self-efficacy in their decisions are more certain that they will make the right purchase decisions and are also confident

that should problems arise relating to the purchase decision that they will be able to manage the issues accordingly (Luo, Li, Zhang, & Shim, 2010). The amount of 'prior knowledge' that a consumer has about the product category, noted as rational information about the attributes (such as quality, price etc.) based on their past experiences with the product, can be a determinant of PR (Dowling & Staelin, 1994). Chaudhuri (1997) suggests that consumption emotion is also a determinant of PR, as the experiential encounters of prior knowledge (search, purchase and use) may increase or decrease the perception of risk. Consumption emotion can be understood as the knowledge about the hedonic and other emotional values of the product or service in a similar manner to how a product's price or quality is knowledge of the financial or functional values of the product or service (Chaudhuri, 1997).

#### 2.4.2.4.5 Evaluating PR

PR is influenced by a broad range of qualitative factors rather than solely by probabilities and statistical rationale, and despite continuing attempts to mathematically model risk assessment it remains an elusive construct (Knox, 2000). PR has been studied with Likert scales measuring the perception of negative circumstances occurring or in the presence of an inherent attribute in the subject of interest. It is also modelled as a product of an expectancy (uncertainty component) multiplied by value (severity component) methodology (Featherman & Pavlou, 2003). Knight (1948) distinguished between the concepts of risk and uncertainty by noting that 'risk' has a known probability while 'uncertainty' exists when knowledge of a precise probability is lacking; however, consumers never really know the exact probability of an outcome. Within the consumer literature the distinction between risk and uncertainty have blurred and at times the terms 'risk' and 'uncertainty' are used interchangeably (Peter & Tarpey Sr, 1975).

Risk aversion is defined as "the extent to which people feel threatened by ambiguous situations, and have created beliefs and institutions that try to avoid these" (Hofstede & Bond, 1984, p. 419). As detailed earlier in 2.4.2.4.4 there is a difference between 'risk perception' and 'risk attitude', with this study focusing on risk perception. An individual's risk-taking attitude has traditionally been considered as a stable personality trait, either risk-taking or risk-averse (Weber & Hsee, 1998). However, more recent work has demonstrated the complexity of risk aversion, with variation based on the behaviour and situational context (Blais & Weber, 2006).

Mulino, Scheelings, Brooks, and Faff (2009) found that risk aversion is not individually constant, but it varies for the same person across decision-frames. Risk aversion is personal to the individual and is subject to variation across time, context and other situational factors. Risk aversion is beyond the scope of this study, as are personality traits.

There exist significant on-going debates in the area of consumer PR, and these include subjective versus objective risk and the differences between the concepts of risk and uncertainty. Mitchell (1999) cites Stone and Winter (1985) who assert that there is no such thing as objective risk, arguably except for physical risk. In Mitchell's (1999) discussion of the debate between objective risk and subjective risk he notes that the researcher's understanding of the objectivity of risk depends on the researcher's philosophical perspective and argues that 'objective risk' exists in theory but there is a lack of a mechanism to measure it properly. However, Slovic notes that both experts and the general public use the term risk inconsistently. It can be used to reference a hazardous activity (such as 'going skydiving is a high risk'), a consequence (our 'risk of getting caught' shoplifting) or a probability (what is the 'risk of death at age 90?'). A fourth version of this is a blend of probability and consequence which best reflects the risk perception involved when facing the many variables that contributed to subjective and actual risk, such as the risk of death from food anaphylaxis during the lifetime of a person with food allergies (Paul Slovic, 2000a). Thus, the same PR can cause different reactions from a case to another. However, this literature remains unclear about how much different these case-by-case reactions are, and thus the point-in-time PR can generally represent the PR.

#### 2.4.2.5 PR in consumers and food

Food and eating were historically perceived to have low risk but the emergence of 'food scares' in the 1990's, with divergent opinion between the experts and lay public, moved research to the area of food risk perceptions (Knox, 2000). An early study of the PR of food hazards introduced three levels of 'risk target': personal risk, risk for other people and risk for society (Frewer, Shepherd, & Sparks, 1994). This research incorporates the first two risk targets – focusing attention of those managing severe food allergies (for themselves or others). Schütz and Weidemann (1998) followed Frewer's (1994) study by comparing personal versus environmental risk, finding that food was usually perceived in terms of personal risk but that

genetically-modified foods were considered in terms of both personal and environmental risk.

To-date, food related PR has primarily been investigated in relation to perishable foods (Chung & Li, 2013; Tsiros & Heilman, 2005) and general food safety (McCarthy, Brennan, Ritson, & de Boer, 2006; Ruth M.W. Yeung & Morris, 2001). Within these broader areas, PR from a marketing and consumer perspective has been specifically applied to food in the areas of food safety frameworks (Konig et al., 2010; R.M.W. Yeung & Yee, 2011), food chemicals (Dickson - Spillmann, Siegrist, Keller, & Wormuth, 2009; Eiser, Coulson, & Eiser, 1998), expiration dates (Tsiros & Heilman, 2005; Van Wezemael, Verbeke, Kügler, de Barcellos, & Grunert, 2010), purchase behaviour (Tuu & Olsen, 2009; Ruth M.W. Yeung & Morris, 2001) and food-related hazards (Bennett, 2010; Cope et al., 2010; Frewer et al., 1994). Herrera and Blanco (2011) cite Calvo's (2001) findings that the factors that greatly condition the perception of risk and purchasing behaviour for food products are the low credibility of the media, the presence of information asymmetries regarding the health characteristics of the product and consumer fears for their health.

#### 2.4.2.5.1 PR for children and adolescents

Previous research on PR of food has been almost exclusively conducted with adults (Eiser et al., 1998). The very small amount of literature on children's PR from food has been studied from both the parents' (Birch & Fisher, 2000; Stjerna, Vetander, Wickman, & Lauritzen, 2013), and children's perspective (Coulson, Eiser, & Eiser, 1996), while the research on adolescents has been conducted with the adolescents directly (Eiser et al., 1998; C. J. Jones et al., 2013; M. A. Sampson, Munoz-Furlong, & Sicherer, 2006) and with them and their parents (Michael Gallagher, Worth, Cunningham-Burley, & Sheikh, 2012). Earlier PR research on adolescents focused on food chemical risk (Eiser et al., 1998) but has more recently explored food allergy (M Gallagher, Worth, Cunningham-Burley, & Sheikh, 2011; Michael Gallagher et al., 2012; Monks et al., 2010; M. A. Sampson et al., 2006). This emergence of allergy as an area of active food PR research activity is also seen in the research on adult subjects (Harrington, Elliott, Clarke, Ben-Shoshan, & Godefroy, 2012; Lehrer & Bannon, 2005; Van Kleef et al., 2006).

Adolescents with a food allergy are at greater risk of fatal anaphylaxis than other children. Marrs and Lack (2012) discuss the influencing factors for this heightened risk including that anaphylaxis is not well recognized among food-allergic adolescents when symptoms start to appear. Due to the speed and severity of the reaction the delay in recognizing the symptoms may delay or prevent the use of SIE while emotions also present significant challenges. While anaphylaxis itself can induce significant fear, the fear of the auto-injector needle of the SIE is also postulated to impact self-administration and may warrant preparation in the area of emotional self-management. Mackenzie et al (2010) explored this in a qualitative study with adolescent respondents, noting that the failure of adolescents to administer SIE during anaphylaxis reflects a different level of risk acceptability and not necessarily a lack of understanding or awareness of their condition.

#### 2.4.2.5.2 Optimistic bias and PR of food

There are many optimistic biases relating to PR of food, within the context of health risk behaviour, there is a tendency to view others as being more at risk than oneself (Knox, 2000). While others may be seen at higher risk than oneself, it has been found that anxiety in consumers during food search leads to a more involved search for information (Hansen, Mukherjee, & Thyra Uth, 2011). Consumers incorporate risk reduction strategies involving brand, information and quality assurance to manage their PR from food (R. Yeung, Yee, & Morris, 2010). Knox (2000) proposes that food attitudes are culturally embedded and that they are construed differently from other types of risk with consumers being suspicious of the motives of the food industry and biotechnologists. In some cases these suspicions could be misplaced as genetic modification of foods could help increase the nutrient value or eliminate known food-borne allergens (L. Jones, 1996, 1999).

## 2.5 Trust

Trust is central to relationships (Kramer & Tyler, 1996). However, it has been an elusive concept to define. Definitions vary across and within the fields that address the concept. Also, in common English usage, the word trust has a large number of meanings subject to many different contexts, leading to a familiarity with the word but not always with its application (D Harrison McKnight & Chervany, 2000). Practitioners and academics alike acknowledge the importance of trust (Anakpa & Yuan, 2013)

### 2.5.1 Trust across the disciplines

Trust is addressed in disciplines including philosophy, sociology, psychology, economics, management and marketing. Each discipline has its own perspective(s) on trust as detailed in Appendix B, with views by some disciplines being difficult to reconcile, such as the psychological and sociological viewpoints. Sociologists Lewis and Weigert (1985) argue that psychological views of trust are not valid because trust cannot be reduced to a personal characteristic. The social structure definitions of trust by sociologists are at odds with the personal expectancy definitions used by psychologists. Empirical research has driven most definitions of trust with a narrow conceptualisation of trust used to fit the research being undertaken (D Harrison McKnight & Chervany, 2000). The tensions and differences in approaches to trust across the disciplines are outside of the scope of the research, as addressed further in 2.5.2.

#### 2.5.1.1 Multidisciplinary trust

There are also attempts to adopt a multidisciplinary view of trust, yet there are still variations in definition, concept and dimensionality even within disciplines (Anakpa & Yuan, 2013; Rousseau, Sitkin, Burt, & Camerer, 1998; Tschannen-Moran & Hoy, 2000). Some of the tensions within the multidisciplinary view can be seen in Figure 12.

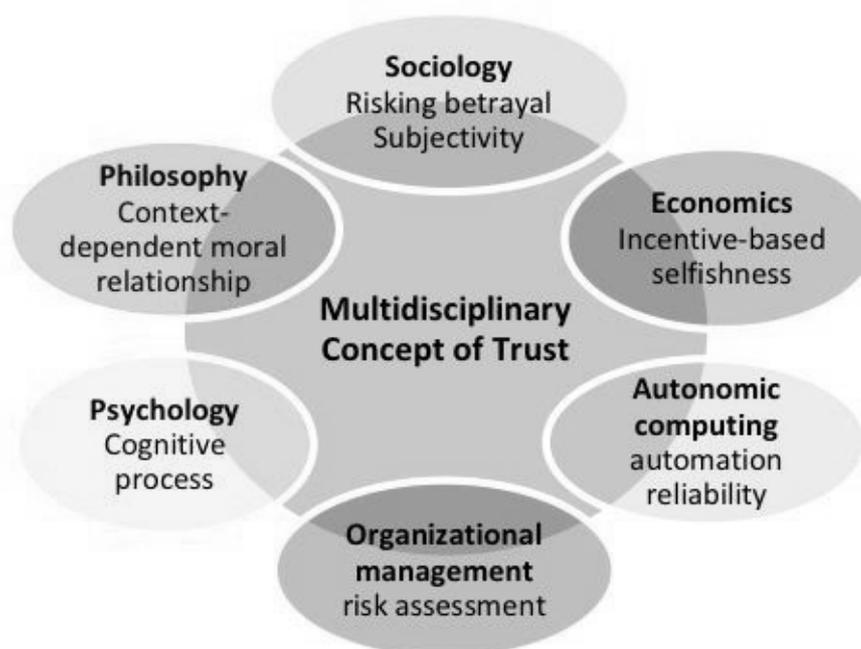


Figure 12 Multidisciplinary view of trust.

Source: Cho, Swami, and Chen (2011, p. 653)

While acknowledging the notable work in varied disciplines and of a multidisciplinary nature, this study locates the investigation of trust in the consumer marketing discipline.

### 2.5.2 Trust in the marketing discipline

In marketing, research on trust has been primarily in the context of distribution channels (such as manufacturer-retailer) and buyer-seller relationships in the consumer channel (Y. D. Wang & Emurian, 2005).

Manufacturers and retailers that act as partners who trust each other generate higher profits, serve customers better and are more adaptable (Kumar, 1996). In distribution channels, trust is examined in the degree to which trading firms believe each other to be honest and benevolent. Market orientation, where companies orient themselves to the market to gain advantage, and trust have been studied together due to the interdependent nature of firms in a distribution channel with the mutual trust required. For example, a stronger market orientation of the distributor improves the level of trust the supplier has in the distributor as there is a closer sharing of information and co-creation of business gains (Bigne & Blesa, 2003; Loe & Ferrell, 2015; C. L. Wang & Chung, 2013). The role of distribution channels and the trust engendered therein is outside the scope of this research.

The concept of trust has attracted much attention within the consumer marketing literature and is recognized an essential ingredient in the success of relationships (Herrera & Blanco, 2011). The consumer marketing literature has moved towards a relationship perspective replacing the prior short-term exchange viewpoint. This move from a transactional product basis to a greater focus on dynamic relationship marketing through the establishment, maintenance and enhancement of deeper trust-based connections has been a significant shift (Selnes, 1998). Spekman (1988) spoke to the significance of this change when referring to the concept of trust as the “cornerstone” of long-term relationships. This consumer trust is the area of trust in the marketing discipline addressed in this research.

Plank et al. (1999) note that consumer trust can involve referents such as the salesperson, product and the company. They propose that trust can manifest as a belief by the buyer that the referent will fulfil their obligations to that buyer. Within

the consumer literature there are a variety of definitions for trust (Mayer, Davis, & Schoorman, 1995).

### 2.5.3 Defining trust, distrust and mistrust

This research uses Moorman et al.'s (1992, p. 315) definition of trust as "a willingness to rely on an exchange partner in whom one has confidence" where the consumer has trust in attributes relating to a product (for example: manufacturer, brand, origin). This definition was selected as it specifically relates to the areas of trust in the elements of food product attributes investigated in this research. When considering trust from the perspective of the attitude towards a product or brand, it can be understood as the capacity of the brand to carry out its function correctly (Chaudhuri & Holbrook, 2001). Thus, trust can be expressed beyond the tangible product but instead to the intangible object, such as brand (Delgado-Ballester & Munuera-Aleman, 2001). The development of trust can exist on a continuum from low(er) to high(er) (Macmillan, Meyer, & Northfield, 2004; Wicks, Berman, & Jones, 1999).

When defining trust, mistrust and distrust must also be defined for this research. The understanding of these concepts and their dynamics across disciplines is difficult to reconcile. Indeed, while some scholars view distrust as a "complete lack of trust" (Schoorman, Mayer, & Davis, 2007, p. 350), others argue that they are separate dimensions (Lewicki, McAllister, & Bies, 1998). This research follows the work of Lewicki in understanding distrust as being separate and distinct from trust, potentially appearing simultaneously. Distrust is beyond the scope of this study.

Some scholars treat distrust and mistrust as synonymous in being the opposite of trust (Saunders & Thornhill, 2003). Others, including this research, views mistrust as differing from trust and distrust, and being principally directed at other people (Omodei & McLennan, 2000). I use the definition of mistrust by Ross, Mirowsky, and Pribesh (2001, p. 568) as "the absence of faith in other people". Mistrust is "the cognitive habit of interpreting the intentions and behaviour of others as unsupportive, self-seeking and devious" (Mirowsky & Ross, 1983, p. 229). Mistrust is a negative emotion similar to fear, it can take the form of believing it not safe to trust others, being suspicious of others' motives, thinking that people are against you and thinking that others want to do you harm (Ross & Jang, 2000). Low trust is

not mistrust, however mistrust can be considered as a part of negative emotion, as introduced in 2.4.2.4.3.

#### 2.5.4 Consumer trust and brand trust

Two closely related areas of trust being researched in marketing are of consumer trust and brand trust (Calvo Porral, Levy-Mangin, & Griffith, 2016; Harridge-March, Grabner-Kräuter, & Faullant, 2008; D. Lee, Moon, Kim, & Mun, 2015; F. Li, Zhou, Kashyap, & Yang, 2008; Menfors & Fernstedt, 2015). The conceptualisation of brand trust remains controversial with no consensus on definition, operationalisation or approaches to measurement (Koschate-Fischer & Gärtner, 2015; Lassoued & Hobbs, 2015). Attempts to define brand trust have been made by Chaudhuri and Holbrook (2001, p. 82) as "the willingness of the average consumer to rely on the ability of the brand to perform its stated function", and by Delgado-Ballester, Munuera-Aleman, and Yague-Guillen (2003, p. 11) as the "feeling of security held by the consumer in his/her interaction with the brand, that it is based on the perceptions that the brand is reliable and responsible for the interests and welfare of the consumer". It has been argued that brand trust is one-, two- or three dimensional (Chaudhuri & Holbrook, 2001; Delgado-Ballester et al., 2003; F. Li et al., 2008). However, this study uses the concept of trust as defined in 2.5.3, and follows the consideration of brand trust being a component of consumer trust (Lassoued & Hobbs, 2015). In this research, the terms 'consumer trust' and 'trust' in relation to consumers will be used interchangeably. Similarly, the term 'consumer' is used to encompass the role of the 'buyer', in addition to 'selector', based on the definition of the consumer being used as presented in section 2.4.2.4.

By choosing to focus on consumer trust, this study is able to specifically look at how the food-allergic consumer may rely on a product with attributes in which they have confidence. Consumer trust is an important factor in almost all business to consumer interactions (Harridge-March et al., 2008). This research will explore the relationship between the consumer and the trusted characteristics, such as product, manufacturer or brand, promoting a level of confidence for the consumer.

#### 2.5.5 Characteristics of trust

Overarching characteristics related to trust are generally observed and accepted by trust researchers are as follows:

Trustor and Trustee	<ul style="list-style-type: none"> <li>• Two parties are involved in a trusting relationship, a trusting party (trustor) and a trusted party (trustee)</li> <li>• Each party can be a person, organisation, or product</li> <li>• Includes evaluation of the actions of each party</li> </ul>
Vulnerability	<ul style="list-style-type: none"> <li>• Trust is only needed in uncertain, risky environments</li> <li>• Trustor risks losing something important to them</li> <li>• Trustee trusted not to exploit vulnerability</li> </ul>
Produced Actions	<ul style="list-style-type: none"> <li>• Trust lead to action, mostly risk-taking behaviour</li> <li>• The action will vary based on the situation</li> <li>• Action can involve something tangible or intangible</li> </ul>
Subjective matter	<ul style="list-style-type: none"> <li>• Trust is subjective, affected by situational factors</li> <li>• Different people view trust differently</li> <li>• There are different magnitudes of trust towards trustees</li> </ul>

Table 6 Characteristics of trust.

Adapted from: Y. D. Wang and Emurian (2005, p. 111)

The characteristics of trust have received much attention in the literature (J. K. Butler, 1991; Holland, Cooper, & Hecker, 2015; Skinner, Dietz, & Weibel, 2013). Within the literature the characteristics are overall aligned with those in Table 6 with some additional proposed characteristics presented often based on the nuances of the discipline being presented. Of the additional proposed characteristics found in the literature, the trust is 'good' characteristic where the objective of trusting another is the desire for a positive experience, has broad applicability but arguably can be included within the categories listed in Table 6 (Bhattacharya, Devinney, & Pillutla, 1998, p. 462)

#### 2.5.6 Causal relationships, attitude models and antecedents of trust

Relationships with people, companies and brands can engender trust (Chaudhuri & Holbrook, 2001; Morgan & Hunt, 1994; Rousseau et al., 1998). There are many influences that can cause trust to arise and there are also a number of ways to build trust including competence, benevolence, integrity and reliability (D. Harrison McKnight, Choudhury, & Kacmar, 2002; Sirdeshmukh, Singh, & Sabol, 2002). Satisfaction and trust may be considered complementary concepts in that trust is an essential variable and potential antecedent for decisions relating to the

enhancement of scope in a relationship while satisfaction is the essential variable and potential antecedent when relationship continuity is the objective (Selnes, 1998).

### 2.5.6.1 Antecedents and types of trust

The presentation of trust can be situated in relation to its antecedents, however the large number of proposed antecedents in the literature requires a system of organisation to communicate key themes (Jarvenpaa, Knoll, & Leidner, 1998; Söllner & Leimeister, 2013). The antecedents of trust are commonly grouped into four main categories: cognition-based, affect-based, experience-based and personality-oriented (D. J. Kim, Ferrin, & Rao, 2008). These groupings then form the types of trust and are presented in in Table 7 (Chua, Ingram, & Morris, 2008).

Cognition-based trust	<ul style="list-style-type: none"> <li>• ‘Trust from the head’, grounded in judgments based on evidence of the entity’s competence and reliability, as well as information gathered under specific circumstances (Chua et al., 2008).</li> <li>• Is based on the direct knowledge that the consumer has about the purchase choice relating to reliability, quality and protection; it is facilitated by brand image, perceptions of information quality and observations of protection from the features of the entity (S. C. Chen &amp; Dhillon, 2003; Corritore, Kracher, &amp; Wiedenbeck, 2003; McAllister, 1995).</li> </ul>
Affect-based trust	<ul style="list-style-type: none"> <li>• ‘Trust from the heart’, rooted in bonds derived from a consumer’s emotion and their sense of other’s feeling and motives (Chua et al., 2008).</li> <li>• Looks at indirect attributes that will reassure the purchaser such as reputation, external approval seals, recommendations, referral, feedback, and word-of mouth; there is a reliance on third-parties to inform the purchase rather than the purchase obtaining the information directly (D. J. Kim et al., 2008; McAllister, 1995).</li> </ul>
Experience-based trust	<ul style="list-style-type: none"> <li>• Relates to the personal experiences that the consumers has had with the entity, such as brand, vendor or product, and is based on familiarity derived from those experiences (Huchler &amp; Sauer, 2015; D. J. Kim et al., 2008).</li> </ul>
Personality-oriented trust	<ul style="list-style-type: none"> <li>• Antecedents are largely stable, including a disposition to trust, an individual shopping style and are reflected in the shopper’s habits and personality related preferences (D. J. Kim et al., 2008).</li> </ul>

Table 7 Types of trust

### 2.5.6.2 Loss of trust

However, Luhmann, Davis, Raffan, and Rooney (1979) note that trust is a fragile construct that is unstable in its nature and can quickly collapse upon the first disappointment. Elliott and Yannopoulou (2007) suggest that disappointment in a trusted brand can lead to emotional reactions including anger and frustration. They found that when trust in a brand was betrayed, consumers’ perceptions of the brand

were damaged with the brand trust being dramatically decreased or eliminated. However, in some instances the brand could be redeemed in the eyes of the consumer with the trust in the brand restored. Brand redemption is more likely with brand trust based on significant experience, with the disappointing incident seen as an isolated event rather than a reflection of the trusted brand. Delgado-Ballester and Munuera-Aleman (2005) address this when they state that the loss of trust can be a major risk to brand equity and that brand marketers need to actively prevent loss of trust while building up trust levels to sustain brand trust in the instance of an occasional failure. Based on the earlier discussion of distrust and mistrust in 2.5.3, the diminishment or loss of trust is not distrust. Consumer cynicism is another related concept, involving defensive behaviour by actively resisting, but not completely alienated consumers (Chylinski & Chu, 2010; Helm, Moulard, & Richins, 2015; Odou & de Pechpeyrou, 2011; van Dolen, de Cremer, & de Ruyter, 2012). Consumer cynicism is outside the scope of this research, but can be considered as a part of the negative consumer emotion, as introduced in 2.4.2.4.3

## 2.5.7 Trust and food

Trust is integral to food choice and is susceptible to damage through negative media exposure, food scares and experiential factors (Coveney, 2008) Trust and food are presented in the literature from both societal and individual perspectives. Key studies have investigated trust in food using different methodological approaches; a further subset of this research has investigated trust and food allergies directly.

### 2.5.7.1 Trust and food in the literature

Key streams of research into trust and food include: the epidemic of obesity and need for weight loss in a time of heightened food security; the media's focus on thin and underweight aspirational figures that do not reflect common sizes in society; and the rise in eating disorders. For all of these areas the role of women as the main dieters, media consumers and those afflicted with eating disorders in a time when they are often responsible for the selection, preparation and serving of food (Beardsworth & Keil, 2013, p. 174).

Recent consumer behaviour marketing literature on trust in food purchase decisions has studied organic food in India (Chakrabarti, 2010), Taiwan (Tung, Shih, Wei, & Chen, 2012), South Korea (Suh, Eves, & Lumbers, 2012), Thailand (Sangkumchaliang & Huang, 2012), China (J. Chen & Lobo, 2012), Germany

(Illichmann & Abdulai, 2013), the Czech Republic and the United Kingdom (Gerrard, Janssen, Smith, Hamm, & Padel, 2013). This food trust research reflects the growing interest for consumers of the origins of their food with a closer level of involvement to consider the entire food supply chain including ingredients, additives and chemicals. This follows a period of food trust research focused on food scares, particularly in Europe, including Salmonella and BSE (Berg, 2004; Knowles, Moody, & McEachern, 2007; Mazzocchi, Lobb, Bruce Traill, & Cavicchi, 2008; Wales, Harvey, & Warde, 2006).

#### 2.5.7.2 Trust in food

The issues surrounding the trust of food span academic disciplines with sociology and consumer behaviour within marketing having the major traditions. Sallerberg (1991, p. 193) states that humans have a need to 'trust in food'. Humans require food to eat but are also possessed of the ability to reflect on the risks, hazards and significance of the food they eat. In a study of food trust and mistrust by Sallerberg (1991, p. 196) she identifies 'strategies of confidence' which individuals use to reassure themselves such as deliberately developing a repertoire of trusted foods. Sallerberg's strategies of confidence are inherently personal and individual.

In contrast to Sallerberg, Fischler's work focuses on the societal and cultural level (Beardsworth & Keil, 2013). Fischler (1988, p. 190) identifies a growing demand for the 're-identification' of foods with more informative labelling, identification of foods and guarantees towards the purity and quality of products. With this reactive demand, Fischler also noted what he deemed 'food sectarianism' where individuals enact an individual food discipline, with a limited diet of trusted foods, to reintroduce order to everyday eating and avoid anxiety and insecurity about food (Fischler, 1988).

From consumer research, Chen (2008) states that the food scandals that have happened in the past few years have increased consumers' risk perceptions and decreased their trust in food safety. As the technology and product cost pressures drive the increasing complexity of the food sector, the result has been that consumers know less and less about what they are actually eating (Fischler, 1988). Consumers are more removed from where their food comes from and are required to place a high level of trust in the food producers, food retailers and food regulatory authorities that need to ensure that the foods are provided with good quality and

that the possible health risks coming from that food are minimised (M.-F. Chen, 2008). If consumers consider that consumption of certain food products to be risky, they may temporarily or permanently reduce the consumption of products in that category or seek out substitute products (Verbeke, Frewer, Scholderer, & De Brabander, 2007; Verbeke & Kenhove, 2002). Effective communication about the risks and safety of food depends on the extent to which the consumers believe the source to be reliable (Frewer et al., 1994; P. Slovic, 1992; Paul Slovic, 2000b).

Also from a consumer standpoint, trust in food can be influenced by social and relational factors. General levels of consumer trust in food safety can vary from country to country, as was found in the TRUSTINFOOD Project which studied twelve food items, in three categories across six countries in Europe (Halkier et al., 2007; Poppe & Kjærnes, 2003). Within the TRUSTINFOOD project, numerous demographic variables were tested including gender, education, age, occupation, household composition and place of residence were tested and it was found that the only statistically significant variable was gender where it was found that the average women was less trustful of foods than men (Kjærnes, Harvey, & Warde, 2007; Poppe & Kjærnes, 2003). However, the authors of this study did not theorise as to why this gender difference existed.

## **2.6 Interrelationship of PR and trust**

This research also builds on the linkage between PR and trust. PR and trust are connected features that influence consumers' choice as not all actions of consumers happen with complete certainty (S. C. Chen & Dhillon, 2003). How the constructs are connected is subject to dissenting perspectives within the literature, as noted in 2.1, over the nature of the interrelationship between PR and trust. The two main views are that one construct is an antecedent of the other or that they are two independent constructs.

### **2.6.1 PR as an antecedent of trust**

Mitchell (1999) supports this first view with the proposition that PR is an antecedent of trust. This group also has research with trust following as a function of risk, seen in the earlier work by Koller (1988) who proposed that the degree of trust an individual forms towards an interaction partner is a function of the degree of risk that will be involved in the situation. He based this perspective on the results of a related experimental study that found that a higher degree of trust resulted from the high-

risk condition than was found from the low-risk condition. Johansen, Selart, and Grønhaug (2013) found that the participants exposed to a high risk condition showed less initial trust and participants than in the low risk condition, showing a highly significant difference between PR and initial trust. From this view in a relationship perspective, when there are trust-related interactions, risk is always seen in connection with an interaction partner who holds a greater degree of control over the situation than does the individual and the interaction partner's behaviour may lead to positive outcomes or negative consequences for the individual (Koller, 1988).

### 2.6.2 Trust as an antecedent of PR

Kerler (2009) presents trust as an antecedent of PR in the area of management accounting fraud; as do Kim et al. (2008) and Van der Heijden et al. (2003) in their respective studies of online purchase intentions. In these studies, the interrelationship between trust ↔ PR on the same level is not explored, instead the choice is made to focus on the trust → risk relationship.

Another supporting view of the trust → risk relationship is that unless trust is already present, no one will risk moving forward (Selnes, 1998). Kesharwani and Bisht (2012) studied PR and trust in the context of internet banking in India. They state that their study showed trust as a 'significant antecedent' of PR but were not able to conclusively ascribe a directional causal relationship between the two factors (Kesharwani & Bisht, 2012, p. 317). They go on to recommend further research in this area.

### 2.6.3 PR and trust as independent or co-factors

However other literature, such as in the systems area, views PR and trust as independent constructs or co-factors which interrelate without a causal relationship (Heart, 2010). Mayer et al. (1995) examine the relationship between trust and risk, noting that it is not certain whether risk is an antecedent to trust or is an outcome of trust as trust is interactive with risk.

In some cases, PR and trust are seen to work in tandem, mediating another construct. Bensaou (1997) suggested that these constructs reflect the 'climate of the relationship' which is then the 'most robust predictor' of buyer – supplier cooperation (Bensaou, 1997, p. 118). In this perspective, both PR and trust are seen

as antecedents of a further construct, cooperation. In this tradition, Chang and Chen (2008) studied online purchase intent with both PR and trust as the mediators. They also examined the reciprocity between PR and trust and found what they deemed as a reciprocal relationship. Zhao, Koenig-Lewis, Hanmer-Lloyd, and Ward (2010) consider PR as influencing trust, and competence as the result of trust to then influence PR, finding a significant relationship.

Das and Teng (2004, p. 110) argue that "at the subjective trust level, trust is not a subclass of risk but rather a mirror image of risk", that trust and PR are two very different constructs and theoretical opposites, where high subjective trust equals low PR, whereas low subjective trust equals high PR. However, not all areas of subjective trust have inverse relationships with all types of perceived risk, as seen in Figure 13, instead the functional dimensions of competence and performance are linked, and as are the psychosocial dimensions of relational risk and goodwill.

**Subjective Trust and Perceived Risk**

		Perceived Risk	
		Relational Risk	Performance Risk
Subjective Trust	Goodwill	Inverse Relationship	No Relationship
	Competence	No Relationship	Inverse Relationship

Figure 13 Subjective trust and PR relationships.

Source: Das and Teng (2004, p. 102)

Delbufalo (2015) continues the exploration of risk-based view of trust, focusing on subjective trust and PR in supplier-manufacturer relationships. This work found a negative and reciprocal relationship between subjective trust and PR, describing "subjective risk and perceived risk as theoretically opposite constructs evaluating the same situation from two distinctly different perspectives of hope and concern"

(Delbufalo, 2015, p. 96). Yang, Pang, Liu, Yen, and Michael Tarn (2015) also suggest that total PR is negatively related to trust, their study incorporates eight PR dimensions of total PR (6 risk dimensions+security risk and service risk). Earlier works suggest that there is a complex relationship between PR and trust, with initial trust changing with time and consumer experiences (Corbitt, Thanasankit, & Yi, 2003; D. Harrison McKnight et al., 2002).

The dual roles of PR and trust for consumers managing severe food allergies have not been directly addressed in the literature. Furthermore, the interrelationship between PR and trust in the conceptualisation of consideration sets has not been specifically presented in the literature.

#### 2.6.4 PR, trust and food

This study focuses on food categories that may contain trigger allergens for the respondents, thus introducing PR and situations where consumers may look to food they trust. Consumer research is notably difficult for food products due the complex nature of food products as stimuli as well as the complicated nature of consumer response to them (Garber Jr. et al., 2003). Herrera and Blanco (2011) note that, in the context of food products, trust is closely linked to the other basic concepts of marketing, such as safety and PR as well as others including nutrition and health. In their study of consumer trust in protected denomination of origin (PDO) products they suggest a role for trust to reduce PR as act as a precursor to satisfaction, loyalty and buying intention for these food products. That consumers are able to identify and trust the PDO food products is seen as essential element in driving purchase behaviour for the short and long-term (Herrera & Blanco, 2011).

In a study of PR and trust in relation to food purchases, the purchase of chicken was studied as it was thought to be a 'normal' product not subject to overly heightened risk perceptions and could represent consumer perceptions of risk and trust towards a popular, everyday food item (Stefani, Cavicchi, Romano, & Lobb, 2008). Chicken was also selected by Lobb et al. (2007) for similar reasons as it represented a regular degree of food safety risk in contrast to a choice like beef which has been the subject of the BSE food safety scare in many global markets, and they found that there are significant interactions between PR, attitude and trust. Brunsø, Fjord & Grunert (2002, p. 21) note that the 'probability of not suffering some hazard from consuming the food in question' is a strong determinant towards the consumer food

purchase decision and incorporated both the concepts of PR and trust. Consumer trust is difficult to build and the communication of food risk probabilities is seldom successful in completely mitigating lay risk concern because it is just one of the aspects of public risk assessment (Knox, 2000).

## **2.7 Presentation of conceptual framework**

With the review of the relevant literature earlier in this chapter, I use a conceptual framework to communicate a vision for the research study investigation.

To represent the conceptual framework, conceptual modelling is used to represent the relationships being investigated. Conceptual modelling is the process where a model is abstracted from a proposed or real system (S. Robinson, 2008). Pritsker (1987) emphasises the difficulty in evaluating the worth of a conceptual model in the absence of measurable criteria. The descriptive nature of the conceptual model leads to an assessment of a valid model being that that is accurate enough to contribute to the purpose at hand (J. S. Carson, 1986). Usefulness or utility can be found in a conceptual model where the accuracy, or lack thereof, may not influence the ability of the model to explore the relationships contained within and also to facilitate learning on the subject area being investigated (Agusdinata, 2008; Bankes, 1993; Hodges, 1991; S Robinson, 2001). Pidd (2003) notes that the task in the development of a conceptual model is to abstract what is an appropriate simplification of reality. Simplicity is an overarching objective in the conceptual model development process as this will lead to a model that is easier to understand and interpret (S. Robinson, 2008). The importance of conceptual models being appropriately simplified is a prominent objective in the literature on this subject (Meredith, 1993; Stewart Robinson, 2007; Thomas & Charpentier, 2005). These goals of appropriate abstraction and simplified communication are incorporated into the design of the conceptual model.

The initial conceptual model presents a simplified representation of the interrelationship between consumer PR and trust as how this leads (and feeds back from) the creation of consideration sets as presented in Figure 14 below.

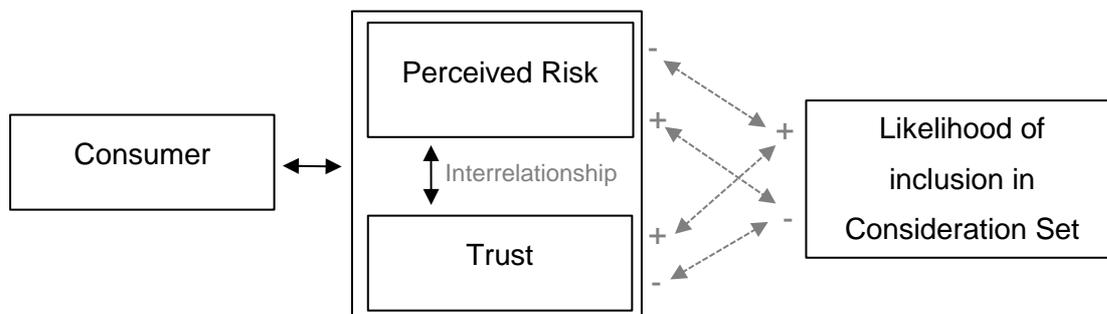


Figure 14 Initial conceptual model

The model starts with a consumer (for this study, a household with a severe food allergy) looking to make a food choice. This consumer could involve a parent seeking food for their child, an adolescent starting to choose foods for themselves with parental input or a food-allergic adult seeking food for themselves.

The role of the consumer is integral to the conceptual model. Looking at the models from the literature from which the conceptual model was inspired, there are a number of ways to address the consumer. While the visualisations of the TRA (by Ajzen and Fishbein (1980), as seen in Figure 4) and TPA (by Ajzen (1991), as seen in Figure 5) do not include a consumer, 'background factors' are introduced in the Reasoned Action Model (by Fishbein and Ajzen (2010), as seen in Figure 6). 'Background factors' include individual and social factors, such as personality and age, that are captured in the concept of the 'consumer'. Looking to the Food Process Models, what is represented as the Life Course (by Furst et al. (1996), as seen in Figure 7) is similar to this representation of the consumer, along with the 'influences' as introduced in subsequent versions of the food choice models (by Connors et al. (2001) and Sobal and Bisogni (2009) as seen in Figure 8 and Figure 9 respectively), for which the anaphylactic food allergy would be a part of 'personal factors'

This food search then passes dually through the lens of PR and trust. An interrelationship between PR and trust is noted but does not reflect a direct influence on the likelihood of food product inclusion in the consideration set nor does it prioritise one factor over the other. For this conceptual model, PR is seen as equal to trust, it is located above trust here as the two constructs are organised alphabetically. If the PR of the food product were seen as higher it would then lead to a lower potential likelihood of food product inclusion in the consideration set. Conversely, if the PR were seen as lower then it would lead to a higher likelihood of

food product inclusion in the consideration set. For situations with a food product that the household has trust in, the likelihood of the product inclusion in the consideration set would be higher. For food products that have less trust from the household, it would be less likely for that food product to be included in the consideration set.

A consideration was whether the box and arrow format was the best choice for expressing the study's qualitative approach, versus what may be considered a more 'relativist'-looking model with overlapping circles or similar. From the study design, there clear differentiations between PR and trust despite the qualitative nature of the research, and representing them in boxes as their own concept feels right for the model. In traditional flow-charting, a rectangle represents a process, while an oval would be a start and end point. As processes are involved for all three segments of the initial conceptual model (the consumer, the constructs and the consideration set formation), the rectangles are an appropriate choice.

The use of the '+' for higher and '-' for lower is a visual shortcut for the model, 'Higher' and 'Lower' are used with a continuum in models such as the Consumer Purchase Decision Model (by P. Butler and Peppard (1998) as seen in Figure 11). The intent within the conceptual model is to express the '+' and '-' not as absolutes but as a relation between higher and lower, and could have been labelled as higher and lower but the intention was to keep the model as visual as possible. The use of the positive and negative symbols reflects situations that positively or negatively affect PR and/or trust. Understanding the higher and lower as a range, versus a straight continuum or absolutes, allows for the nuances of qualitative responses from the relativist perspective.

The final segment of the initial conceptual model involves the 'Likelihood of inclusion in Consideration Set'. Connecting the PR and trust constructs to this segment are two dashed lines with arrows; the dashes represent the relative nature of the connectors and suggest that it is not necessarily an absolute direct relationship. The qualitative nature of the research also lends itself to the dashed connectors as representing the differences between consumers, explored through the participants and their experiences.

## **2.8 Conclusion**

The context of food allergies presents a solid basis for this research. In investigating PR and trust in consumer consideration set formation, the study draws from the rich supporting literature on these constructs. In presenting this literature review and the conceptual framework that has been informed by the literature, the most relevant research on the topics is referenced including both recent work and the influential works in the field. First, the pertinent work on food allergy is presented, followed by the literature PR and trust. The interrelationship between PR and trust is then presented before the areas of consideration sets and food choice are explored. The chapter finished with a presentation of the conceptual framework. Where appropriate there is elaboration on the studies most aligned to the research for both subject matter and their methodology.

### **3 How it was investigated**

#### **3.1 Introduction**

The philosophical grounding, methodology and methods employed in the research are discussed in this chapter. My ontology and epistemology are introduced and detailed. An explanation of the choices made for the qualitative study is presented with a discussion of oral history and narrative. Issues of the design of the qualitative study are discussed along with the details of the pilot study. The strategy for collection of the qualitative data is then presented. To conclude the chapter, the limitations of the methodology are shared and the ethical implications considered.

#### **3.2 Philosophical approach**

There are many ways to see the world and it is important to confirm the viewpoint from which the research is being carried out. This section presents a discussion of the major research paradigms and then focuses on the paradigm, ontology, epistemology, and axiology pertinent to this study.

##### **3.2.1 Research paradigms**

In their influential work on research paradigms, Guba and Lincoln (1994) suggest that there are four main paradigms: positivism, post-positivism, critical theory (et al.) and constructivism. The elements of these paradigms are summarised below in Table 8. Many additional paradigms have been identified, leading to what Lather (2006, p. 42) describes as 'paradigm proliferation'. Other paradigms include emancipatory, participatory and transformative (N. Mackenzie & Knipe, 2006; Mertens, 2007; Oliver, 1992; Rodgers, 1999). A research or scientific paradigm consists of elements including ontology, epistemology, axiology and methodology (Healy & Perry, 2000). These elements are seen in Table 8, and detailed as appropriate to this research in subsections 3.2.3, 3.2.4 and 3.3.

Paradigm	Positivism	Post-positivism	Critical Theory et al.	Constructivism
Ontology	Naïve realism – “real” reality, but apprehendable	Critical realism – “real” reality, but only imperfectly and probabilistically apprehendable	Historical realism – virtual reality shaped by social, political, cultural, economic, ethnic, and gender values; crystallised over time	Relativism – local and specific constructed realities
Epistemology	Dualist/objectivist: findings true	Modified dualist/ objectivist; critical tradition/ community; findings probably true	Transactional/ subjectivist; value- mediated findings	Transactional/ subjectivist; created findings
Methodology	Experimental/ manipulative; verification of hypotheses; chiefly quantitative methods	Modified experimental/ manipulative; critical multiplism; falsification of hypotheses; may include qualitative methods	Dialogic/dialectical	Hermeneutical/ dialectical

Table 8 Basic Beliefs of Alternative Inquiry Paradigms.

Source: Guba and Lincoln (1994, p. 109)

### 3.2.2 Constructivist paradigm

The paradigm, or 'word view', of this study can be considered as constructivism. I use the depiction of constructivism as describing "the individual human subject engaging with objects in the world and making sense of them" (Crotty, 1998, p. 79). The constructivist paradigm focuses on people's lived experiences in their own socio-historical context. Within this paradigm, the researcher is an essential part of the investigation, that can result in a narrative report. In choosing this approach, I am mindful of the potential within the constructivist paradigm to lead to a form of 'radical relativism' where reality is rejected and people construct what is 'real' (Labonte & Robertson, 1996). I stop short of the potential rejection of reality, instead viewing reality like Gutiérrez and Campos (2015, pp. 65-66) who present that "reality is constituted by a number of points of view.... And the world...understood as a construction...made from those points of view". With this perspective I locate my ontology as objective relativism, as discussed in the following section 3.2.3.

During the literature search I found that the constructivist paradigm has a history in food choice theory with the assumption that people construct their own food choices

by actively selecting what, when, where, with whom and how they eat (Sobal et al., 2006). However, this did not influence the decision for its use, but did help in understanding its suitability for use.

### 3.2.3 Objective relativist ontology

For an understanding of the nature of reality, I use the definition of ontology as “a set of beliefs about *what* the world we are studying actually is” (N. Lee & Lings, 2008, p. 11). Ontology can also be understood as the “nature of reality” (Creswell & Creswell, 2018, p. 21). My ontology has evolved over the span of my academic life from subjectivism towards relativism, now being most closely situated from an ontological locus as objective relativism.

The emergence of the social sciences in the late 19<sup>th</sup> century led to debate on whether these new disciplines could generate ‘objective knowledge’ in a manner akin to the natural sciences (Hunt, 1993). Arthur Murphy coined the term ‘objective relativism’ in 1927, to describe a ‘genuinely new philosophy’ that was previously ‘not discernible’ (Robischon, 1958). Objective relativism is understood as a form of cognitive relativism. As relativism relates to something being relative to something else, the different forms of cognitive relativism are differentiated by looking at what is relative and what it is relative to (Muncy & Fisk, 1987). Mandelbaum (1979) suggests that objective relativism is one of the most difficult forms of relativism to understand because it proposes that the truth can be both objective and relative. I challenge Mandelbaum’s assertion by proposing instead that objective relativism reflects the natural challenges and ambiguity of life and can be understood through human experiences. For example, Tucker (1974) uses the example of viewing a fish from the perspective of a marine biologist and also from the perspective of a fisherman; both of their views may be equally correct but different based on their purposes. Additionally, the position relative to the object can change the way an object is perceived (Muncy & Fisk, 1987). Phillips (1981) investigated positions within an organisation and found that the view of the organisation differed between positions (e.g. a marketing manager’s view may differ from that of the chief executive officer). Within this study, Phillips then concluded that there was no single informant that was likely to be found who was the ‘most reliable informant’ and that any one position is not necessary the ‘best’ for viewing the organisation (Phillips,

1981). This is an excellent demonstration of the view of the objective relativist, in that an individual's assessment depends on his or her position.

### 3.2.4 Relativist epistemology

From this ontological positioning, a relativist epistemological perspective drives the study, including methodology. Epistemology follows on from ontology, being a "study of what we can know about reality, and is dependent in many ways on what you believe reality to be" (N. Lee & Lings, 2008, p. 11). It is "how we know what we know" (Creswell & Creswell, 2018, p. 21). However, in the constructivist paradigm, the traditional distinction between ontology and epistemology may blur, as represented by the dotted line in Table 8 (Guba & Lincoln, 1994). Relativism began its emergence in consumer marketing research as an epistemological position in the early 1980's, following the traditional epistemologies of logical empiricism and positivism (P. F. Anderson, 1986). Epistemic relativism views criteria for verifying true consumer values as being relative to the contextual or conceptual framework investigating this 'truth'. This leads some to suggest that this is incongruous with the practice of marketing to consumers, to the point of destroying marketing (Mascarenhas, 2007). However, I suggest that this perceived incongruity can be viewed as a relic of the traditional mass marketing approach to consumer marketing.

Modern consumer marketing understands that the consumer wants to be respected as an individual and is compatible with epistemic relativism (Y. Li, 2016; Light, 2014). The focus on the consumer as an individual with unique perspectives may be more relevant to Western market individualism, versus more collectivist markets (Choi, Kim, & Kim, 2017; de Mooij, 2017). Additionally, the tightness-looseness of the consumer market, its social norms and tolerance for deviance may be an influence of consumer behaviour (R. Li, Gordon, & Gelfand, 2017; Lin, Dahl, & Argo, 2017; Torelli & Rodas, 2017). Canada can be classified as an individualistic-loose society and my experience in this market may influence the epistemic relativism. The viewing of consumers as unique individuals, is also seen in the move towards mass customisation, facilitated in part by the rise of e-commerce across markets globally (de Bellis, Sprott, Herrmann, Bierhoff, & Rohmann, 2016; Pollard, Chuo, & Lee, 2016). In a relativistic epistemology, the investigator and object of the investigation are linked so that the "findings" are actually created as the investigation takes place (Guba & Lincoln, 1994).

Within the embrace of relativism, I am inspired by the work of Paul Feyerabend, particularly the relativist perspective as advanced in this book *Against Method* (Feyerabend, 1993). In this work, he presents that for every attempt in viewing the 'scientific method', there are instances of advancements in knowledge achieved by going against its principles. From this, he goes on to assert that the universal principle for the scientific method is 'anything goes' (Feyerabend, 1993, p. 28). While I stop short of the true theoretical anarchism Feyerabend espouses, I do believe that there can be knowledge lost or unnecessarily dismissed if it does not look like the traditional knowledge. By choosing relativism I attempt to capture contributions to knowledge regardless of their form. For these reasons, I have chosen the relativist epistemological perspective as it most closely aligns to my views and continues the search for the truths that are held by different people, without the rigid singular truth espoused by empirical epistemological perspectives.

### 3.2.5 Subjectivist axiology

For axiology, I look to the description by Mertens (2014, p. 11) of it being the "nature of ethical behaviour". Lee and Lings (2008) depict axiology as following from ontology and answering the question of "what are you trying to do?" (N. Lee & Lings, 2008, p. 11). The answer to this question is that I seek to provide an understanding of the part of the world I am investigating. Although, based on the ontology, my understanding likely differs from that of another, through the methods I gathered the voices of the participants so they can lead this process of understanding. The intention is to present a balanced representation of the views of the participants (Mertens, 2014). For my axiology I did not attempt prediction of the areas that I investigated through this study, while I used explanation to support the stories conveyed by participants.

## 3.3 Methodology

This section presents the methodology of the study. For this I use the understanding of methodology, following on from ontology, epistemology and axiology, as "how you are going to go about your research" (N. Lee & Lings, 2008, p. 12). This understanding was chosen as it is a simple and clear explanation of methodology with an action orientation. However, going deeper, methodology is a branch of knowledge referring to how logic, reality, values and knowledge inform research

(McGregor & Murnane, 2010). With the methodology being the plan for how the research will proceed, combining theory and methods, the following subsections reflect a flexible approach to knowledge generation (Leavy, 2014).

### 3.3.1 Qualitative approach

Qualitative research seeks to understand phenomena in context-specific settings such as a “real world setting [where] the researcher does not attempt to manipulate the phenomenon of interest” (Patton, 1990, p. 39). A broad definition of qualitative research is that it is “any kind of research that produces findings not by means of statistical procedures or other means of quantification” (Strauss & Corbin, 1990, p. 17). In contrast with a quantitative approach, it is research with findings arrived from real-world settings where the “phenomenon of interest unfolds naturally” (Patton, 1990). However, the traditional dichotomy of quantitative versus qualitative may instead be understood as a continuum when applied to behavioural research, because they are neither mutually exclusive, nor interchangeable (Newman & Benz, 1998).

A qualitative approach was chosen for this research as it has a natural fit with a relativist epistemology. Qualitative inquiry helps us understand, describe, explain, and document social life, including ordinary, mundane everyday experiences. Qualitative research can examine the complex relationships, between, within and among groups of people, including our own entanglements (Leavy, 2014). Qualitative research may be distinguished as having hypotheses generated from the analysis of the data, rather than stated at the outset (Silverman, 2011). The 1980's were a particularly difficult time for the qualitative research tradition characterised by battles between paradigms and the qualitative-quantitative divide. In this divide, qualitative research was defined as not being quantitative research, rather than focusing on what it is. Throughout the decades, the field of qualitative research has experienced constant breaks and ruptures, although its breadth and open-ended nature has prevented the imposition of a single umbrella paradigm (Denzin & Lincoln, 2011).

This section shared the purpose and definition of qualitative research and the alignment of qualitative research with a relativist epistemology. The next section introduces oral history and the narrative research tradition.

### 3.3.2 Oral history and narrative research

Oral history emerged as an international movement where oral historians approached the collection, analysis and dissemination of oral history in a different way. The development of the 'new' oral history in the late 1960s led to the application of oral history to new disciplines, such as business and social science, to cover a diverse range of interests (The Oral History Society, 2015). Oral history is a both field of study and a method of gathering, preserving and interpreting the memories of people, communities and participants of events in the past, as is discussed later in 3.4 (Oral History Association, 2016a).

Based on a literature search, I propose that oral history is an underutilised approach to consumer research. Oral history is useful as it provides consumer researchers the means to examine theories, knowledge and assumptions about consumers and their consumption. Oral history identifies the meaning that consumers give to brands and brand choices throughout their lives (Tiu Wright, Davies, & Elliott, 2006). While oral history methods have been neglected in the consumer research tradition, other approaches to present the voice of the consumer, such as focus groups, are used extensively. However, focus groups do not allow for the individual voice of a consumer. Individual life narratives form the core of oral history with an individual's memories for the data codified as 'text' (Nelson, 2003). The use of life narratives was popularized by Sigmund Freud in the psychology tradition but has roots in the anthropology discipline. These life narratives allow researchers to hear participants' memories of their past and how this influences the present (Elliott & Davies, 2007), and thus allows access to the participant's voice in the form of a narrative account.

The term 'narrative research' has been used as an overarching category for contemporary research including oral history, personal narratives, narrative interviews and personal accounts (Casey, 1995). Riessman (2008) notes the term 'narrative' has many meanings and is used in many different ways often synonymous with 'story', where narrative involves the speaker organizing events into a sequence that is meaningful for themselves and their audience. Riessman (2008, p. 5) resolves that "all talk and text is not narrative". It can, however, be difficult to delineate where that line between narrative and not narrative lies, especially when viewed from a relativistic perspective.

This section has introduced the qualitative methodology used in this research. The following section presents the methods and best practices undertaken in the study

### **3.4 Methods**

This section contains an introduction to the methods used in the study, a description of the data analysis techniques employed, and concludes with a discussion of the ethical considerations of the research. Methods are the tools, techniques or procedures used in research and are determined by the methodology (McGregor & Murnane, 2010). Some methods may be better suited for some research projects and materials than others, this was considered in the choice of methods and materials for this study (Moisander & Valtonen, 2006)

#### 3.4.1 Research approach

The next section introduces the research approach. The research approach includes the use of oral history methods and best practices in obtaining a rich collection of data through interviewing, that is then used for narrative thematic analysis.

##### 3.4.1.1 Oral history methods

Ritchie (2014) explains that oral history interviews consist of a well-prepared interviewer questioning an interviewee and then recording the interview in an audio or video format. Recordings of the interview are transcribed, summarised and used for research or other purposes. For the study I follow the best practices for oral history, as presented in Table 9 below, by the Oral History Association (2016b).

<b>Best practices for oral history</b>	
<b>Pre-interview</b>	<ol style="list-style-type: none"> <li>1. First time interviewers and others involved in oral history projects should seek training to prepare themselves for all stages of the oral history process.</li> <li>2. Interviewers should make contact with an appropriate repository that has the capacity to preserve the oral histories and make them accessible to the public.</li> <li>3. Choose potential narrators based on their experiences to the subject at hand.</li> <li>4. Interviewers should conduct background research on the person, topic, and larger context in both primary and secondary sources.</li> <li>5. Oral historians should send an introductory letter outlining the general focus and purpose of the interview, and then follow up.</li> <li>6. Pre-interview session allows an exchange of information on possible questions/topics, reasons for conducting the interview, the process involved, and the need for informed consent and legal release forms.</li> <li>7. Interviewers should become familiar with the digital recording equipment and be knowledgeable about its function.</li> <li>8. Interviewers should prepare an outline of interview topics and questions to use as a guide to the recorded dialogue.</li> </ol>
<b>Interview</b>	<ol style="list-style-type: none"> <li>1. The interview should be conducted in a quiet room with minimal background noises and possible distractions.</li> <li>2. Record a “lead” at the beginning to include the names of narrator and interviewer, day and year of session, interview’s location, and proposed subject.</li> <li>3. Both parties should agree to the approximate length of the interview in advance.</li> <li>4. Ask creative and probing questions and listen to the answers to ask better follow-up questions, balance between objectives and perspectives of interviewees.</li> <li>5. The interviewer should secure a release form.</li> </ol>
<b>Post-interview</b>	<ol style="list-style-type: none"> <li>1. Care and storage of original recordings begins immediately after their creation</li> <li>2. Document preparation and methods, including the circumstances of interviews.</li> <li>3. Information deemed relevant for the interpretation of the oral history by future users, such as photographs, documents or other records, should be collected.</li> <li>4. The recordings of the interviews should be stored, processed, refreshed and accessed according to established archival standards. Finally, the obsolescence of all media formats should be assumed and planned for.</li> <li>5. In order to augment the accessibility of the interview, repositories should make transcriptions, indexes, time tags, detailed descriptions or guides to the contents.</li> <li>6. Preservation and access of oral history interviews honours agreements made with interviewers including restrictions on access and methods of distribution.</li> <li>7. The repository should comply to the extent to which it is aware of the letter and spirit of the interviewee’s agreement with the interviewer.</li> <li>8. All those who use oral history interviews should strive for intellectual honesty and the best application of the skills of their discipline.</li> </ol>

Table 9 Oral history best practices  
Source: Oral History Association (2016b)

The best practices incorporated into the elements of the study as detailed throughout the rest of this chapter are presented in Table 8 below.

<b>The study's use of best practices for oral history</b>
<b>Pre-interview</b>
<ol style="list-style-type: none"> <li>1. I attended oral history training by The Oral History Society, UK.</li> <li>2. Transcripts of interviews and digital media containing the recorded interviews are available upon request and held in possession.</li> <li>3. Participants were selected based on relevance to the research questions.</li> <li>4. I extensively researched the topic and context of the study.</li> <li>5. I used email or phone contact with potential participants to introduce the nature of the interview and assess suitability for participation.</li> <li>6. Through pre-interview contact I shared details of the interview process, topics, reasons for conducting the interviews, confidentiality and informed consent.</li> <li>7. I bought a Zoom digital recorder, and practised its use through the exploratory interviews.</li> <li>8. I produced an interview guide that is used in the interviews.</li> </ol>
<b>Interview</b>
<ol style="list-style-type: none"> <li>1. Interviews were conducted with a minimum of distractions, where possible.</li> <li>2. "Lead" with details of interviewer, interviewee, date, location was captured.</li> <li>3. Approximate length of interview was agreed in advance.</li> <li>4. Interviews were conducted with probing questions and follow-up questions.</li> <li>5. Release forms, including details of confidentiality and access, were signed.</li> </ol>
<b>Post-interview</b>
<ol style="list-style-type: none"> <li>1. Appropriate care and storage of original recordings maintained from the start.</li> <li>2. Interview preparation, methods and circumstances were captured.</li> <li>3. Photographs of the cupboard analysis and purchase logs are recorded.</li> <li>4. Interview recordings were saved in .wav format and stored in safe locations.</li> <li>5. Transcriptions with time tags are stored electronically and in the NVivo project.</li> <li>6. I have communicated agreements on access restrictions and distribution.</li> <li>7. Consent and release forms by the participants were received and kept in a secure location for the hard copies and electronic copies in NVivo.</li> <li>8. Interviews were conducted with intellectual honesty and to the best application of the skills of the discipline and oral history methods training.</li> </ol>

Table 10 The study's use of best practices for oral history

Oral history methods have the ability to evoke clear memories in participants, where "questions may cause interviewees to recall events long buried in their memories. They often express amazement at their recall of seemingly forgotten memories, then recount them in explicit detail and at surprising length" (Ritchie, 2014, p. 90). These memories for participants—often the life-threatening allergic reaction of their child—may not have been verbalised previously and may draw highly emotional reactions

from the participant. Consumers' long-term memory can span many years with the information contained being the source, when a consumer faces a novel stimulus-provoking situation (Foxall et al., 1998, p. 83). The information that enters long-term memory keeps being organised and reorganised as new information enters the consumer's memory (Ramesh, 2008). This ability to evoke dramatic historical memories in participants is a benefit of the oral history methods approach; however, it may also pose a limitation in some instances.

#### 3.4.2 Study introduction and overview

In the study, semi-structured interviews probe the conceptualisation of consideration sets. These interviews incorporate the Critical Incident Technique, as described by Symon and Cassell (1998), to focus on packaged food. The qualitative in-depth interviews were supplemented by receipts/purchase logs and cupboard analyses to add further depth to the study results (Marshall & Rossman, 2010)

The first part of the interview was followed by a cupboard analysis with the second part of the interview that focused on the items noted in the receipts/purchase log and found in the cupboard. The cupboard analysis and second part of the interview served to ground the information in the first part of the interview with food product and brand-specific information. This facilitated the consideration of how information from the first part of the interview found expression in activity, and explored whether other trust or PR issues were at play. The second part of the interview also probed what other products formed a part of the consideration set when the participant chose a packaged food item and why.

##### 3.4.2.1 Research process logistics

Prior to the on-location interviews, the pre-interview communication with participants to set up the interviews was undertaken by email, by phone or in person depending on the preference of the participant. It took approximately 30 minutes for the participant to complete the requested details and additional participant time was involved in setting up the schedule for the interviews.

The location-based primary research process took place in a location preferred by the participants; in a safe location for the interviewer and participant. Interviews were primarily conducted in the participant's home with the alternative of a local site. It

was preferred that the location had a seating area and access to the kitchen and/or food storage facilities. The interviews were conducted in the seating area so that the participants could feel comfortable physically and mentally for the duration of the interviews. Comfort breaks and other interruptions were accommodated as needed but preferably taken as scheduled into the interview process timetable: this was before the initial interview starts, after the first part of the interview, after the cupboard analysis or after the second part of the interview that followed the cupboard analysis. The research process had a total target duration of two hours, but responsive to the needs and requirements of the participants. In addition, there were 30-45 minutes allotted for the participants to complete the questionnaire prior to the on-location research and communication to set up the interviews.

#### 3.4.2.1.1 Pre-interview

In the pre-interview, participants were contacted to confirm their suitability for participation in the study. As stated above, the pre-interview took place over email, phone or in-person. The purpose of the pre-interview was to deal with the logistics of the interview, including interview timing, location and participants. The oral history approach, the general topic of the study, and the expected duration of the interview were communicated. Information sought from the participants, in addition to the logistical information above, assessed whether the participants had an individual with an anaphylactic allergy to peanuts in their household who met the cohort requirement for this study. In determining the severity of the allergy it was required that they have a formal diagnosis of peanut allergy from a qualified physician and carried an SIE medication, such as an EpiPen, for emergency treatment of exposure to the peanut allergen.

#### 3.4.2.1.2 In-depth interview

The in-depth interview was a semi-structured interview format conducted using oral history techniques and later analysed through a thematic approach. Semi-structured interviews can be regarded as being on a continuum from unstructured interviews to structured interviews, as they are rarely used in their purest form (N. Lee & Lings, 2008). The choice was made to not use an unstructured interview, which would involve presenting the topic and then allowing the participant complete freedom to talk without intervention from the interviewer, as it would not facilitate asking the questions necessary for the exploration of the research questions. Instead, in the

semi-structured interviews an interview guide was used with pre-selected questions to guide the conversation so that it covered the areas targeted for investigation, while allowing participants to share their views. The interview questions in the interview guide were tested in the exploratory interviews and refined as required. Questions were designed to address the research questions while using an oral history approach to the questioning. In this approach, an interview guide approach was used, listening closely to the participant's story and choosing from a repertoire of questions to continue the flow of conversation. The in-depth interview was split into two parts, the first being the main portion of the interview and the second part involving discussion following the cupboard analysis.

#### 3.4.2.1.3 Cupboard analysis and post-interview

After the first part of the interview there was a comfort-oriented break for participants to move around, use the facilities and head in to the kitchen to get refreshments. This naturally led to the opportunity to look inside their cupboards used for storing their dry food goods. The cupboards and their contents were photographed for the purposes of a discussion with the participant that was the second part of the interview. Items of salient interest were the snack food items including biscuits, cookies, crackers, cereal, confectionary and chocolate. These foods in the home have been implicated in fatal anaphylactic reactions to peanuts and other major allergens (Bock, Muñoz-Furlong, & Sampson, 2001, 2007; H. A. Sampson, Mendelson, & Rosen, 1992).

After the full interview and cupboard analysis, the participants were thanked and received a \$15 CAD (about £8) Chapters Indigo Bookstore gift card. This token amount was chosen to not unduly influence the participants, while showing that their participation was appreciated. While restaurant gift cards are often given in Canada for study participation, with the participant families having food allergies, this was not appropriate. The bookstore has locations across Ontario and an online store, making it an accessible choice for all participants and avoided the food allergy concerns by offering non-food compensation. Immediately following each set of interviews, once away from the home, I collected my thoughts and jotted down salient points from the interview adding to the field notes.

#### 3.4.2.2 Participants and my participant-observer role

As food branding and labelling standards vary by country, with significant differences in the consumer and industry representation informing these outcomes, the study focussed on a single national market to avoid the complicating factors of a multi-market study (Balasubramanian & Cole, 2002; Childs, 1998; Thakor, 1996). Food branding and package labelling in Canada is generally reliable and closely managed by the Government of Canada (Nesbitt et al., 2014; Schermel, Emrich, Arcand, Wong, & L'abbé, 2013). Based on these factors, situating the research in Canada was helpful in exploring the research questions.

Food Allergy Canada (FAC) is a Canadian charity founded in 2001 that provides information and support to meet the needs of people at risk from severe allergic reactions. Their services include an Allergy Information Service to inform people quickly about food recalls due to allergens as well as roles in Support, Advocacy, Education and Research. Although I used to be a member of FAC, I have not participated in any support or 'teen' groups via the organization, which would prejudice participants in any way towards me in the role of researcher.

Having severe food allergies to multiple foods, I took a participant-observer role in the research. This participant-observer role provided a basis for commonality with the research participants (Zagata, 2012). As an 'insider', I was afforded a deeper perspective. However, I was mindful of the challenges and pitfalls of the participant-observer role, including 'over-rapport'. 'Over-rapport' is when the researcher is so closely related to the participant that their observations are impeded (Jorgensen, 2015; Labaree, 2002; Miller, 1952; Patton, 2005). The participant-observer role also facilitated greater access for participant recruitment, based on my connections.

#### 3.4.2.3 Participant recruitment

The participants were drawn from volunteers self-selecting to participate in the research, and were recruited through my personal network of food-allergic families and Facebook mothers' groups, allergy and local. Within my personal network, I sought referrals to potential participants using a snowballing technique to obtain the desired mix and number of participants after selecting the initial respondents (Moriarty & Bateson, 1982). Multiple requests for participants to the network enabled

the recruitment of families with teenaged children that were needed to complete the cohorts.

#### 3.4.2.4 Participant selection criteria

The selection criteria used for the lead participant was that he or she be responsible for the majority of packaged food shopping decisions for an individual with a severe food allergy; either for himself/herself or a child under 18. I did not include people with other relationships to individuals with severe allergies (e.g. partners, clinicians, and teachers) and their influence on food as lead participants, as this is outside of the scope of this research.

#### 3.4.2.5 Participant profiles

This research involves households containing a family unit ranging in size from a single person to parents with children (and extended generations) of greater size. In total 30 families (with 1-4 participants in each) were divided evenly into three cohorts resulting in 10 families in each cohort. The three cohorts provided coverage and breadth to the study while the 10 family units per group provided depth. The first cohort comprised 10 family units where the primary household shopper was an adult (over the age of 18) with a severe food allergy and purchased food for himself/herself and the family unit. Parents of an adolescent (10-18 years old) with severe food allergies comprised the second group. For this group, the parents were likely to make food purchase decisions with input from the adolescent. The third group consisted of parents of young children (under 10 years old) with severe food allergies. The parent purchased food for the allergic child, potentially with limited input from the child on the food choice. The interviews were focused on the adult consumer participants.

The three cohorts were chosen to capture the food consumer managing a peanut allergy. Consumer food research on adults is well established and useful in understanding the role of the PR and Trust concepts being investigated. The Adults with peanut Allergy (AA) cohort has the consumer with the food allergy shopping for his/her household, mindful of his/her own allergy. However, the AA cohort is potentially very experienced at food shopping with a peanut allergy potentially affecting their PR and Trust levels. To capture the potentially varying levels of PR and Trust in consideration sets for households managing peanut allergies, the

cohorts of Parent of Adolescent with peanut allergy (PA) and Parent of Child with peanut allergy (PC) were included in the study. As presented in 2.3.3.1 discussing childhood food choice, parents play an important role in shaping their child's food choices into adulthood, and the parental role in food choice evolves from infancy through adolescence. With previous research on the PR of food almost exclusively conducted with adults as detailed in 2.4.2.5.1, this study includes the cohorts of PA and PC to examine PR and Trust in this context. Adolescents with a food allergy are at greater risk than younger children of fatal anaphylaxis and bring unique challenges to the PA in choosing food for the adolescent and guiding them to make appropriate food selections. Severe food allergies are usually diagnosed in childhood and present new obstacles in choosing food for the allergic child and the household that often goes peanut-free post-diagnosis. Participants in the PC cohort typically have less experience managing the peanut allergy than the AA or PA cohorts, with some being very new to shopping for suitable food. The coverage and breadth of the study were enhanced by the coverage of allergic individuals over all age ranges, divided into pivotal life stages.

The subsections that follow consider the geographic reach of the study along with socio-economic status, gender, age, and ethnic and cultural background. Noting that food choice is multilevel with the simultaneous operations and interaction of physical, biological, psychological and sociocultural factors, the study included a variety of participants (Sobal et al., 2014). However, there is an opportunity to expand the diversity of participants in future research as is addressed in the subsections. As presented in section 3.4.6, there were no specific characteristics, such as gender, educational background, income level, employment status, sexual orientation, ethnic background or immigration status, specifically sought for the 'consumer of the study'.

Consumers in this study are all residents of the province of Ontario, Canada, living in the area of southwestern Ontario as is discussed in the following subsection.

#### 3.4.2.5.1 Participant profiles - geographic reach

**“It's a pretty small town, so those are our two main grocery stores, so we don't really have a lot of choice, unless you want to go farther.” - Carly**

The geographic area of the ellipse shown in Figure 15 is 16,977 miles, this is the area of southwestern Ontario, Canada I travelled in to conduct the interviews. I calculated this using the distance of 271.9 miles roughly southwest-northeast from LaSalle, ON to Bowmanville, ON (Google, 2017a) and 79.5 miles roughly northeast-southwest from Mount Forest, ON to Stoney Creek, via the shortest routes (Google, 2017b).

Ontario is Canada's largest province with just under 14 million people, and the research area includes the Greater Toronto area, which is over 6 million of the total provincial figure (Ontario Ministry of Finance, 2017). The population of Ontario is concentrated in the south along the shores of Lake Ontario and Lake Erie; the distribution of Ontario's population is seen in Figure 16 and closely aligns to the area of the study.

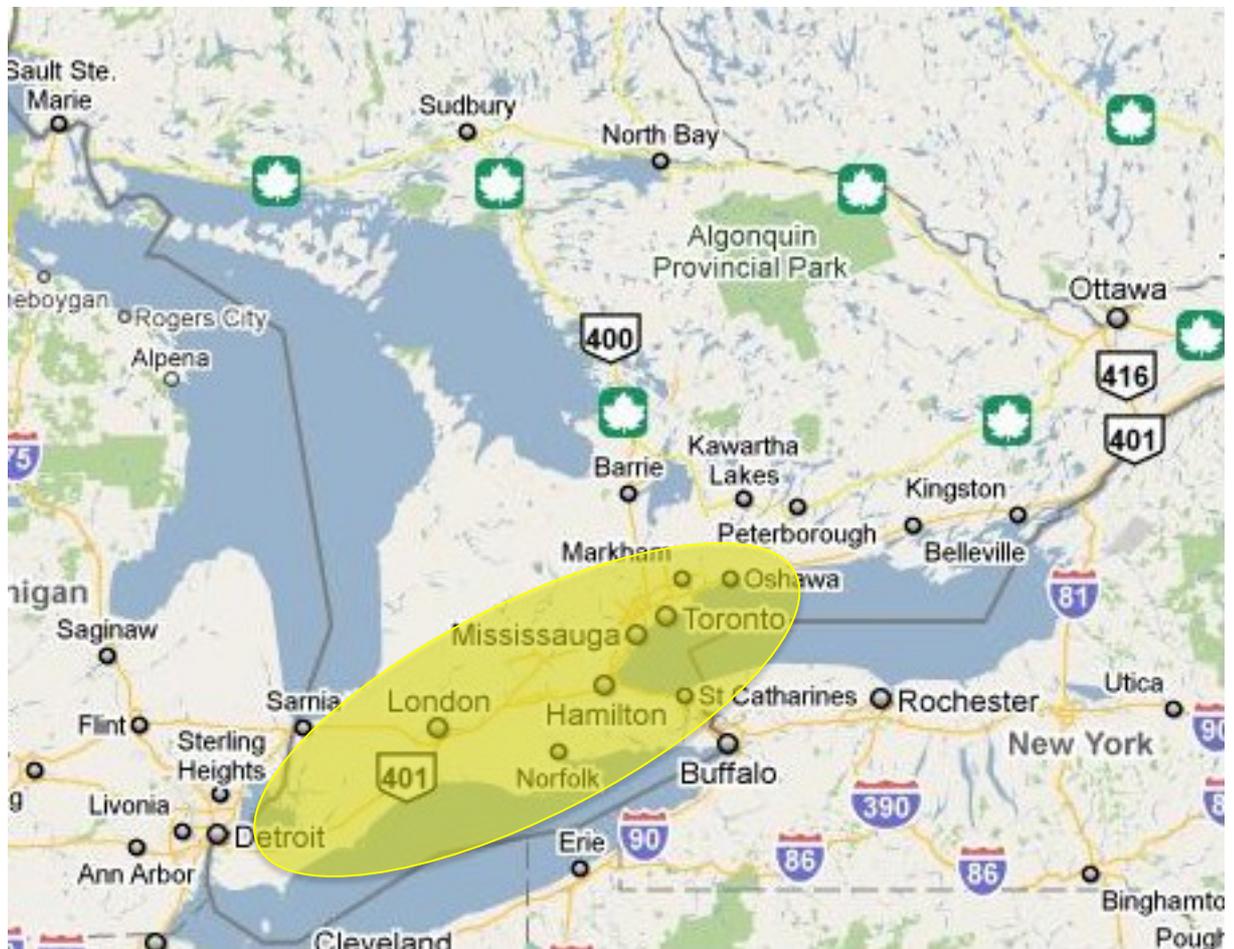


Figure 15 Map of Southern Ontario, Canada.

Source: AGuide2 Ontario (2010).

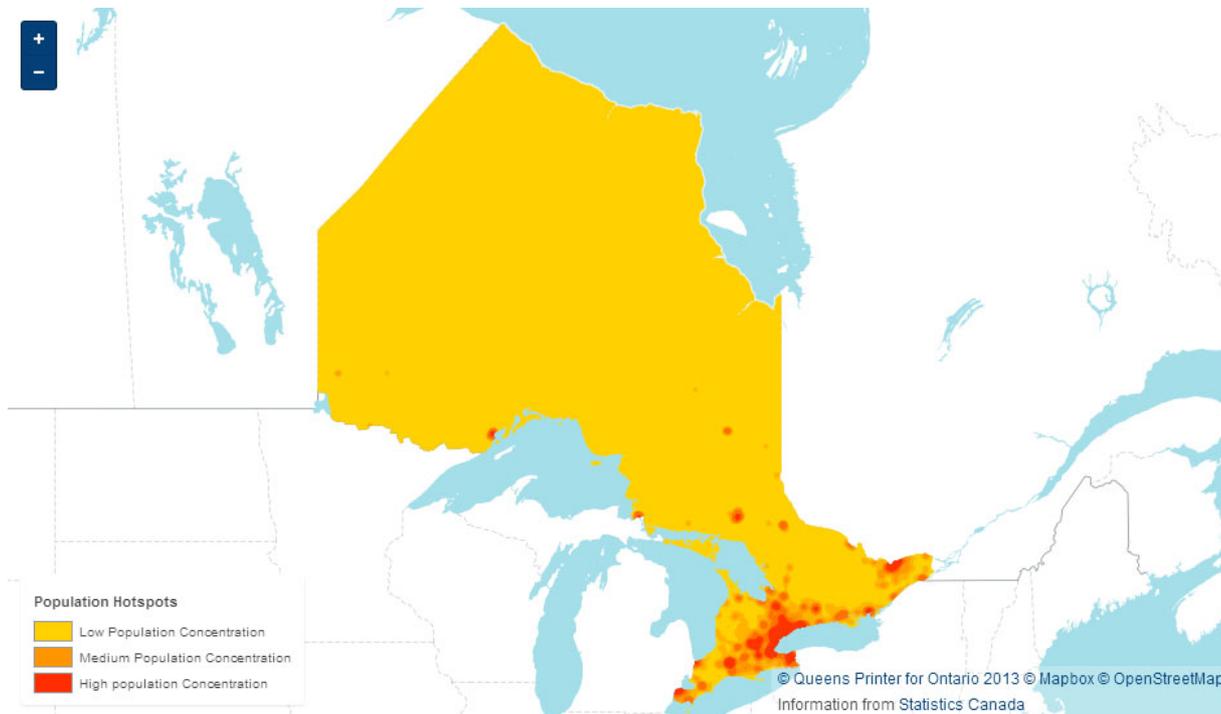


Figure 16 Ontario Population Distribution.  
Source: Queen's Printer for Ontario (2017)

#### 3.4.2.5.2 Participant profiles - socio-economic status

For the socio-economic status of participants, direct questions were not asked of participants. However, being welcomed into their homes, being referred to some participants and the discussions with participants themselves, I was able to get a general sense of backgrounds. From multi-million dollar mansions and a similarly valued penthouse, some participants were interviewed that could be classed as very wealthy. The majority of participants I would characterise as middle class. A few participants were in public (council) housing, or in poor condition apartments in less desirable areas. From these experiences I feel that I was able to achieve a mix of socio-economic backgrounds in the study.

While many of the homes I visited were more or less valued than the average list price for the location, I have included Table 11 as a look at the range of average home prices in the towns and cities where I conducted the interviews. These figures show a range in average residential home list prices of over one million Canadian dollars for the geographic research area.

Town/City	Average list price in Canadian Dollars	Average List Price in GBP*
Oakville	\$ 1,212,196	£ 690,952
Aurora	\$ 1,153,281	£ 657,370
Toronto	\$ 905,499	£ 516,134
Hamilton	\$ 784,548	£ 447,192
Burlington	\$ 776,054	£ 442,351
Whitby	\$ 695,841	£ 396,629
Stoney Creek	\$ 664,531	£ 378,783
Brampton	\$ 610,271	£ 347,854
Pickering	\$ 595,369	£ 339,360
Waterloo	\$ 594,749	£ 339,007
Guelph	\$ 554,556	£ 316,097
Windsor	\$ 390,631	£ 222,660
Tilbury	\$ 181,590	£ 103,506
*Using Conversion of 1 CAD to .57 GBP 26Apr2017 www.google.ca		

Table 11 2017 Residential real estate prices.

Source: Century 21 Canada (2017)

#### 3.4.2.5.3 Participant profiles - gender

**“I’m, I think recognisable as a male. <laughs>” - Roger**

The genders of participants by cohort are seen below in Table 12. For two cohorts, parents of children and parents of adolescents, all participants are female. In the interviews some noted that they shared food shopping responsibilities with their spouse or shopped together, while others were the sole food shoppers. For the cohort of adults with food allergy, one participant was a male who shares food preparation and shopping duties with his spouse, the rest were women who did the majority of their food shopping themselves. For this study, participants were sought that held responsibility for food shopping, either primary or joint, and the majority of participants who held primary responsibility were women. This is also seen in the literature, that found that while similar numbers of women and men report taking part in food planning and preparation, women are more likely to take primary responsibility and are less likely to report not having responsibility for these tasks (Flagg, Sen, Kilgore, & Locher, 2014).

Participant cohort	Gender of participant	Gender of allergic individual
Parent of allergic child Trisha	Female	Male
Parent of allergic child Carmela	Female	Male
Parent of allergic child Megan	Female	Male
Parent of allergic child Fionna	Female	Male
Parent of allergic child Catherine	Female	Male
Parent of allergic child Mackensey	Female	Male
Parent of allergic child Sarah	Female	Male
Parent of allergic child Allison	Female	Male
Parent of allergic child Jennifer	Female	Female
Parent of allergic child Kristi	Female	Male
Parent of allergic adolescent Christine 1	Female	Male
Parent of allergic adolescent Courtney	Female	Male
Parent of allergic adolescent Christine 2	Female	Female
Parent of allergic adolescent Regina	Female	Female
Parent of allergic adolescent Vilma	Female	Female
Parent of allergic adolescent Tanya	Female	Female
Parent of allergic adolescent Sasha	Female	Male
Parent of allergic adolescent Sheri	Female	Male
Parent of allergic adolescent Cathy	Female	Male
Parent of allergic adolescent Kim	Female	Male
Adult with peanut allergy Beth	Female	Female
Adult with peanut allergy Danielle	Female	Female
Adult with peanut allergy Carly	Female	Female
Adult with peanut allergy Helen	Female	Female
Adult with peanut allergy Samara	Female	Female
Adult with peanut allergy Roger	Male	Male
Adult with peanut allergy Angela	Female	Female
Adult with peanut allergy Amanda	Female	Female
Adult with peanut allergy Teresa	Female	Female
Adult with peanut allergy Robin	Female	Female

Table 12 Participants by gender

#### 3.4.2.5.4 Participant profiles - age

##### **“My age?!? Just don't ask my weight” – Cathy**

The ages of participants and subjects are seen in Table 13. For the subjects of the research: Children with peanut allergies ranged in age from ten months old to eight months old. Adolescents with peanut allergies ranged in age from ten years old to eighteen years old. Adults with peanut allergies ranged in age from twenty-one years old to fifty-two years old.

Participant cohort	Age of participant	Age of allergic individual
Parent of allergic child Trisha	32 years old	19 months old
Parent of allergic child Carmela	29 years old	8 years old
Parent of allergic child Megan	40 years old	6.5 years old
Parent of allergic child Fionna	37 years old	3 years old
Parent of allergic child Catherine	32 years old	7 years old
Parent of allergic child Mackensey	31 years old	10 months old
Parent of allergic child Sarah	34 years old	23 months old
Parent of allergic child Allison	34 years old	4 years old
Parent of allergic child Jennifer	34 years old	21 months old
Parent of allergic child Kristi	40 years old	4 years old
Parent of allergic adolescent Christine 1	48 years old	12 years old
Parent of allergic adolescent Courtney	30 years old	10 years old
Parent of allergic adolescent Christine 2	43 years old	11 years old
Parent of allergic adolescent Regina	40 years old	11 years old
Parent of allergic adolescent Vilma	52 years old	18 years old
Parent of allergic adolescent Tanya	41 years old	16 years old
Parent of allergic adolescent Sasha	39 years old	10 years old
Parent of allergic adolescent Sheri	46 years old	10 years old
Parent of allergic adolescent Cathy	46 years old	16 years old
Parent of allergic adolescent Kim	47 years old	16.5 years old
Adult with peanut allergy Beth	36 years old	36 years old
Adult with peanut allergy Danielle	21 years old	21 years old
Adult with peanut allergy Carly	22 years old	22 years old
Adult with peanut allergy Helen	49 years old	49 years old
Adult with peanut allergy Samara	29 years old	29 years old
Adult with peanut allergy Roger	48 years old	48 years old
Adult with peanut allergy Angela	40 years old	40 years old
Adult with peanut allergy Amanda	37 years old	37 years old
Adult with peanut allergy Teresa	37 years old	37 years old
Adult with peanut allergy Robin	50 years old	50 years old

Table 13 Participants and allergic subjects by age

Beyond the thirty core participants, there were 19 supporting participants. These were family members also attending and contributing to the interviews, as they were able. They were (in chronological order by age):

1. 10 month old boy
2. 21 month old girl
3. 23 month old boy
4. 3 year old boy
5. 3 year old girl
6. 3 year old girl
7. 4 year old boy
8. 4.5 year old girl
9. 5 year old girl
10. 7 year old boy
11. 8 year old boy
12. 10 year old boy
13. 12 year old male
14. 13 year old male
15. 16.5 year old male
16. Adult female
17. Adult female
18. Adult male
19. Adult male

The supporting participants that spoke as part of the research, were included as participants in the analysis, under the main participant, their relative. The older supporting participants, especially children aged 5+ and adults, were more likely to contribute usable content to the study.

#### 3.4.2.5.5 Participant profiles - ethnic and cultural background

**“I grew up in Malaysia okay, when everybody ate peanuts, so totally, they either drop dead and nobody knew why, but ah, no we had never heard of it.”**

**- Vilma**

Although I did not ask direct questions of the racial or ethnic background of the participants, they appeared to not be visible minorities, with the exception of one who was of Canadian Aboriginal descent and one of Southeast Asian origin (as per

our discussions). I would have liked to have more ethnocultural diversity in the group of participants, but with the self-selection of the participants and the demographics of the geographical research area, this was limited and could be explored in future research.

A new Canadian census was completed in 2016, but data beyond the population figures will be published later (Statistics Canada, 2017). Results of the 2006 Census have 16% of Canada's Total Population as being part of the visible minority population.

	<b>Canada</b>
	number
<b>Total Population</b>	<b>31,241,030</b>
<b>Total visible minority population</b>	<b>5,068,095</b>
South Asian	<b>1,262,865</b>
Chinese	<b>1,216,565</b>
Black	<b>783,795</b>
Filipino	<b>410,700</b>
Latin American	<b>304,245</b>
Arab	<b>265,550</b>
Southeast Asian	<b>239,935</b>
West Asian	<b>156,695</b>
Korean	<b>141,890</b>
Multiple visible minority	<b>133,120</b>
Japanese	<b>81,300</b>
Visible minority, not included elsewhere	<b>71,420</b>

Table 14 Visible minority population, Canada (2006 Census).

Source: Statistics Canada (2009)

From the discussions with participants, none of the participants were new to Canada, although one partner of a participant was new to Canada from Brazil. Some discussion of childhood peanut allergy in residents new to Canada from Africa took place in an interview with a participant who works as a social worker with that community. Also, a participant of Malaysian descent talked about the challenges of travel to visit Malaysia where peanuts are a mainstay of the cuisine and peanut allergies are perceived as rare. This situation of encountering childhood peanut allergy in cultures with a previously low incidence of peanut allergy holds potential

for future consumer research. Country-specific prevalence of food allergy has been sought by the WAO, but they note that food allergy prevalence data of any kind is not available in some countries in Central and South America, Africa, Eastern Europe and the Middle East (Prescott et al., 2013). The allergenic foods also vary by region with shellfish being the most common allergy in Asia, while peanut allergy prevalence is extremely low compared to the West for reasons not yet understood (A. J. Lee, Thalayasingam, & Lee, 2013). Ethnic and cultural backgrounds have an influence on food (E. N. Anderson, 2014; Atkins & Bowler, 2016). Some ethnic origins as mentioned by the participants are: English, Portuguese, Italian and Jewish. These origins align to the results of the 2006 Canadian Census data for Ontario as seen in Table 15.

<b>Ontario, Canada</b>	
Total population	12,028,895
<b>Ethnic Origins</b>	<b>Total Responses</b>
English	2,971,360
Canadian	2,768,870
Scottish	2,101,100
Irish	1,988,940
French	1,351,600
German	1,144,560
Italian	867,980
Chinese	644,465
East Indian	573,250
Dutch (Netherlands)	490,995
Polish	465,560
Ukrainian	336,355
North American Indian	317,890
Portuguese	282,870
Filipino	215,750
British Isles, n.i.e. <sup>3</sup>	205,755
Jamaican	197,540
Welsh	182,825
Jewish	177,255
Russian	167,365
Hungarian (Magyar)	151,750
Spanish	149,960
Greek	132,440
American	113,050

Table 15 Ontario ethnic origins from 2006 census (100,000+ total responses)

Source: Statistics Canada (2010)

#### 3.4.2.6 Study design limitations and scope

In pursuing this research project, there are necessary limitations to the study. Time and cost restraints mean the size of the participant cohorts is limited to a size that provides academically rigorous results, but is not all encompassing. The methodology is limited by the relativist epistemological stance taken for this study. The study is justifiably limited by the context in which it is positioned. The research methods and operationalisation of the variables was a subjective process that could be approached in many different ways. The choice of oral history methods influences the length and scope of interviews to drive the collaborative nature of the

project, between me as the interviewer and the participant in a co-creation process. The nature of the participants, their experiences and context may limit the replicability of results by other researchers, a challenge across qualitative context-specific research. The number of participants was driven by the desire to have adequate representation in each of the three cohorts. A limited range of participants resulted, based on self-selecting contacts that meant a predominately white, middle class, educated and traditional family format being represented. At this level, a greater participation of diverse backgrounds may lead to different results but would then raise the question as to whether the diversity of backgrounds in some manner influenced the diversity of experiences of the participants. All transcriptions and coding were undertaken by me, which reflected my own voice to an unintentional extent and made my choices the ones reflected in the results.

These limitations and scope have influenced the choices made for the study. Some of these choices are presented in the next section, which looks at the unit of analysis.

### 3.4.3 Unit of analysis

The unit of analysis is the phenomenon being studied, for which data is collected and analysed and is related back to the research aims and objectives (Collis & Hussey, 2013, pp. 101-102). The unit of analysis should be selected at as low a level as possible because it is the level where the decisions are made (Kervin, 1992). The household was selected, with an anaphylactic family member, as the unit of analysis. The household is defined as the family unit living together in one residence. Sub-units of analysis are the key individual participants in the study, being the parent of the allergic child/adolescent or the individual with an anaphylactic allergy.

It was decided to study the household family unit as their collective choice behaviour gives an understanding of how consideration sets for their food purchases are formed. In order to broaden the perspective for the qualitative data collection, household members beyond the core individuals were included if these additional individuals are involved with considering packaged foods. These additional family members, whilst not necessarily providing significant further data, added unique perspectives that further the depth of the research.

For the purposes for comparability within the study choices were made regarding inclusion and exclusion. For the parents and children, all genders were welcome to participate. The marital status of the child's parents was not relevant to the study, nor was the biological nature of parentage. The family unit within the residence was considered as the household. Households with extended family in the home, such as an uncle, were included; however, the interview participants were primarily the parent or allergic individual. For adults with anaphylactic allergies, their partners or family members were included as desired. Non-related, indirect household members such as child caregivers, nannies, housekeepers or room renters were not directly included. This study did not extend to schools, because although school employees have a unique perspective of a classroom with allergic individuals, it is beyond the scope of the study's focus on households. Participation in external activities, such as recreational sports or Girl Guides, was not relevant to the study.

The household unit of analysis informed how the study was conducted and dictated the level of analysis for the data. The next section reviews how the exploratory interviews helped to refine the study, making useful amendments to the interview guide and research process.

#### 3.4.4 Pilot study

In designing this study, there was a focus on making all aspects of the study up-to-date and as relevant as possible to investigate the research questions with the units of analysis. For this purpose, four exploratory interviews were conducted to shape and guide the study. These interviews were done with individuals that met the criteria for participation in the main study and whom I knew well enough that they were willing to give constructive feedback and to let me 'practise' with them. The households that participated in the exploratory interviews were then excluded from participating in the main study.

The first exploratory interview took place as an extended conversation with Leah, the mother of an allergic child, in January 2013. Leah's allergic child, Chelsea, age 2, was present, as was her non-allergic brother, Hunter, age 8 months. Their presence led to a frequently interrupted discussion that was not formally transcribed, but instead captured in notes. In this interview I learned of the main concerns of this

parent of an allergic child and an idea of common concerns as voiced by other parents that are in her network. Leah was able to validate the first draft of questions, providing helpful feedback and leading to the addition of questions that I had previously not considered. Interviewing her and her children proved to be a difficult endeavour. When undertaking preparations for the interview, the desire was to include the children however possible in the interview process to add value and additional insight to the outcomes. At that time, I was not a parent, nor had I spent much recent time around children, and I had not realised how disruptive they would be to the conversation. Although providing challenges in this instance, this experience did not dissuade me from including all interested family members in the main interviews, I just had to prepare myself and the recordings accordingly.

The second exploratory interview was with Mike, an adult with an anaphylactic allergic to peanuts since childhood, his interview was formally transcribed. The interview with Mike was helpful in making me feel that I was on the right track with my interview technique and questions. Having attended the oral history training at the British Library, I had some initial practice in oral history interviewing and understanding of best practices for conducting clear interviews suitable for transcription. In my interview with Mike, I was able to conduct the interview with a minimum of “ums” by me and practised my best non-verbal interested interviewing practices. At times in the interview Mike became somewhat emotional, I found this to be more uncomfortable for me than I had foreseen so I appreciated having the opportunity to practice, although I do question whether some of my discomfort was from knowing him somewhat, but not closely enough that we would have a significant comfort level or pre-existing trust. A question on relationships made both of us the most uneasy and was not critical for my research, so I removed that question from the interview guide so as to avoid unnecessarily causing stress for any participants. The question was aimed at investigating trust, so other questions were added to the interview guide to address trust more directly. The interview with Leah, presented above, had a much higher comfort level and degree of trust as we have been friends for over 20 years. The hardest part of this interview was trying to stay neutral in asking the questions without passing any overt feedback or judgement on what Mike was saying. Additionally, it was difficult not to interject reassurance, such as “it’s okay”, at times when Mike was getting more emotional. I was also uncertain at how deeply to delve into these more sensitive areas, if doing

a true oral history, I would have pursued a deep dive into these areas, however for the use of oral history techniques to investigate trust and PR I did not feel it necessary. The balance for this was that I wanted to make sure that I covered the questions that I believed to be the most important to provide the data needed to address the research questions. At no time was it apparently uncomfortable for Mike, otherwise I would have asked directly if he wanted to stop. I had introduced the interview by offering to stop or exclude questions that made him uncomfortable or that he did not want to answer.

In this interview with Mike, the main interview duration was targeted at one hour and was completed in just over 41 minutes. With the addition of a few more questions, it lasted over one hour and the responses I received from Mike were not overly long. The time taken to go to the cupboard, sort out the important products and to take pictures took approximately 10 minutes. The secondary interview as part of the cupboard analysis was targeted at 30 minutes and took just over 13 minutes. It went quickly as there were not a lot of snack foods for me to question him on in his cupboard. His answers were of a reasonable length overall but some were answered quickly. From this exploratory interview I decided to include the purchase log, where available, as an additional area to question beyond just the cupboard contents. I hadn't asked Mike for a purchase log or recent receipts so that was included in future interviews.

The third and fourth exploratory interviews took place in June 2016. The interviews were with mothers of an adolescent or child with anaphylactic allergies to peanuts, the previous interviews were with the parent of a child with a peanut allergy and an adult with a peanut allergy. This mix of exploratory interviews, with the third and fourth being more in-depth than the first two, gave me experience interviewing on the topic as well as essential feedback on the interview format and questions.

The third exploratory interview I did was with Mary (43), parent of an allergic adolescent daughter aged fourteen. She also has a ten-year-old daughter and husband (45). She was alone in the house during our interview. I chose her for an exploratory interview as she is a family friend that I knew to be very vocal about her daughter's allergy. I also believed that she would give me helpful feedback on my interview questions and style. The interview took place mid-morning, it seemed to be a good time for an interview, away from the breakfast and lunch periods. She

had strong opinions and gave me great practice for my interviewing style. There were times in the interview when I attempted to balance the questioning to keep the conversation going and steer it back to peanut allergy in some instances. Mary was the only exploratory interview I did with someone who was much older than I am, so I found that as a helpful element to practice. My daughter was born in the time between the second and third exploratory interviews, and her arrival then informed my perspective on interviewing parents about their children.

My fourth exploratory interview with Nicola (38) took place in her home with the allergic four-and-a-half-year-old daughter present, as well as her three-year-old son. Nicola is a former work colleague of mine. In her discussion of witnessing severe allergic reactions, she recalled:

“It affected me in a profound level, I was, it was actually, I had seen a severe reaction prior to having children of my own, so, uhh, it then having a child of my own with a peanut allergy, it just really brought that to life for me and it brought it to life and it was really troubling to see the initial food allergy and then even more troubling and scary to imagine that in my own daughter”.

It wasn't until after the interview that I realised that the previous anaphylactic reaction she had witnessed was my own, from a work event meal with peanut sauce, where I needed my EpiPen and she had driven me that evening. It brought the participant-observer perspective to the forefront, making it something I was more conscious of when conducting my main interviews. As I have known Nicola for over fifteen years, that one allergic incident was only a part of our association and did not overshadow, in my opinion, the exploratory interview as we had an established comfort level around each other. She was able to provide constructive feedback on my interviews. Both in our interview and pre-and-post interview, she told me stories of other allergy mothers she knows through her daughters' activities and school, where different PR profiles were in play, both higher and lower than her own. The knowledge of current parental actions relating to peanut allergies, around calling manufacturers, worrying about packaging CC and other areas were added into the interview guide as a result of this exploratory interview. The presence of the children was not as intrusive for this interview as they were occupied playing and watching television for the duration of the interview. Having the interview at her dining table worked well and I sought out similar locations in the home of the participants of the main study. The product selection as part of the cupboard analysis was more time-

consuming as the packaged foods were located in many different cupboards in the kitchen, most of which were locked to keep the cupboard doors closed and the children out. Going through the cupboards attracted the attention of the children who used it as an opportunity to ask for an afternoon snack of the products brought out for discussion. It was not an issue for this family, but another thing I kept in mind in homes for my main interviews that the items I was interested in may be off-limits for child access and restricted to consumption at specific meal and snack times.

The exploratory interviews did not have a recorded set of pre-interview communications such as emails or notes as they were organised over the telephone and in-person with my known contacts. For the participants in the main study, I used the first few contacts with potential participants as a guide for any changes that were needed in how I conducted my pre-interview communications.

Transcripts from the exploratory interviews highlighted the following areas of further development of the study:

- Focused cupboard analysis including greater use of receipts and purchase logs in situations where children are present and wanting snack foods from the cupboard
- The need for continued practice of oral history style interviewing
- Flexibility within the interview to manage emotional situations and keep conversation flowing with participant responses

In summary, the pilot study highlighted opportunities to improve the study design and interviewing techniques. It confirmed the suitability of the interview style, questions and intent for the main study.

#### 3.4.5 Research validity and reliability

Research validity and reliability are at the core of quantitative research as these empirical studies test hypothetical generalizations and aim to provide reputable, replicable results (Hoepfl, 1997). Within qualitative research, there are notable arguments for and against the applicability and relevance of these concepts (Golafshani, 2003). The perspectives on validity in qualitative research are many (e.g., Lincoln & Guba, 1985; Merriam, 1998; Thomas A Schwandt, 1997). Within these differing viewpoints, there is a general consensus that qualitative researchers need to demonstrate that their studies are credible. Methods for this can include

member checking, triangulation, thick description, peer reviews and external audits. Researchers typically engage in one or more of these procedures and report the results in their investigation (Creswell & Miller, 2000). The concept of credibility can be considered as a primary validity criteria, along with authenticity, criticality and integrity (Whittemore, Chase, & Mandle, 2001). For this research I see the criteria noted above for credibility as also being applicable for validity of qualitative research and have used these criteria accordingly.

This study incorporates thick description for validation. The definition of thick description by Schwandt (2001) was selected as it explains the concept in a clear and constructive manner:

“Many qualitative inquires emphasize the importance of “thick” as opposed to “thin” description. It is not entirely clear just what thick description is, however. Most efforts to define it emphasize that thick description is not simply a matter of amassing relevant detail. Rather to thickly describe social action is actually to begin to interpret it to be recording the circumstances, meanings, intentions, strategies, motivations, and so on that characterize a particular episode. It is this interpretive characteristic of description rather than detail per se that makes it thick” (T.A. Schwandt, 2001, p. 255).

Thick descriptions can capture the thoughts and feelings of participants as well as the web of relationships among them. Thick description leads to thick interpretation, which leads to thick meaning of the research findings. The thick meaning of findings aids the reader in cognitively and emotively ‘placing’ themselves in the research (Ponterotto, 2006). The level of description adds depth and further context to the study.

While validity and reliability are treated separately in quantitative studies, these terms are not necessarily viewed separately in qualitative research. Instead, terminology that captures both, such as credibility, trustworthiness and transferability, is often used (Golafshani, 2003). It can be suggested that the question for researchers is “How can an inquirer persuade his or her audiences that the research findings of an inquiry are worth paying attention to?” (Lincoln & Guba, 1985, p. 290). There are different purposes in evaluating the quality of studies between quantitative studies and it is even proposed that reliability is irrelevant in qualitative research. The concept of reliability is even deemed to be misleading in

qualitative research as it can lead to dismissal of the study (Stenbacka, 2001). I reject this need for a separate lexicon for qualitative research. The terms validity and reliability are recognised within mainstream science and these concepts play a role in ensuring rigour in studies. There is an opportunity for qualitative researchers to reclaim these terms and implement verification strategies that are integral and self-correcting within the conduct of the inquiry itself (Morse, Barrett, Mayan, Olson, & Spiers, 2002). Reliability of qualitative research can be achieved by measures such as accurate data recording, transcription, and/or inter-coder agreement (S. Lewis, 2015). This study incorporates accurate data recordings and transcriptions in order to achieve reliability. Inter-coder agreement is not pursued as there is only one transcriber and coder of the data.

There are many potential areas for bias in qualitative research, including the reactivity of researchers, selection biases, availability of data, affinity of researchers, ability of researchers, commitments of researchers and the personal qualities of researchers (Norris, 1997). The use of oral history interviewing methods worked to manage some of this bias, as follows. The oral history interview training emphasises a focus on the participants sharing their stories, the reactivity of the researcher to the participants' responses is intentionally managed by the interviewer to minimise his or her own reactions. Selection biases are acknowledged within this study as the participants selected, timing and places were subject to the researcher's ability to secure eligible participants, location and the time availability of the researcher as presented in the discussion of participant profiles in 3.4.2.5. Bias relating to the availability and reliability of the sources of data was managed by the selection criteria for the participants 3.4.2.4, which attempted to achieve a representative sample of participants. Bias relating to affinity of researchers with certain types of participants is discussed in 7.6, the focus on perceived risk, trust, oral history methods and narrative research are acknowledged choices made by the researcher. The abilities of the researcher were strengthened by the formal training in oral history methods through the Oral History Society, as well as qualitative methods training as part of the PhD Research Methods programme at Aston University. The value preferences and commitment of the research bias were managed through the mindful acknowledgement of the researcher's own biases towards her own allergy and the intention to not unduly bias the participants' responses. Bias relating to the personal qualities of the researcher was managed

by scheduling the interviews at times where the researcher was not rushed for time, fully rested and capable for concentration on the participants' responses.

#### 3.4.6 Operationalisation of variables

By clarifying what is meant by each of the variables in the research questions, the study is organised within defined parameters. This section details the understanding of each of the key terms in the study and explains, in plain terms, what they entail.

Within the study, 'PR' is understood as the concern over a potential exposure to peanuts in relation to a family member with an anaphylactic allergy. This PR is in relation to consideration set formation and selection of packaged foods by the consumer.

In this study, 'conceptualisation' is how the consumer mentally visualises or thinks about the consideration set for the packaged food product they are considering to purchase.

'Packaged food' is a broad term that is narrowed in this research to be commercially packaged non-perishable foods that are available for purchase in a sealed format from a major grocery shop. They exclude homemade, bulk or perishable foods. For the study, packaged food is narrowed to snack foods, including cereals, biscuits, chocolate bars, crackers and confectionery. The foods are branded in some form, either a commercial brand or shop-brand.

For this study, 'consumers' are the members of the household primarily responsible for selecting and purchasing food for their household. Influencers of food purchases, such as children, participate in a secondary role to add context to the consideration sets being formed by the primary shopper. The consumers are over 18 years of age, as those individuals were found to be the primary shoppers for their household. Beyond age, there were no specific characteristics, such as gender, educational background, income level, employment status, sexual orientation, ethnic background or immigration state, sought for the 'consumer of the study'.

'Severe allergies' for this research involve anaphylactic allergies to peanuts for which a SIE, such as an EpiPen, has been prescribed by a qualified physician. The

diagnosis for the allergy is required but individuals who have not had a severe reaction can be included in the study. With most peanut allergies being of a severe nature, the prescribed SIE and the identification of having an anaphylactic allergy to peanuts is enough to generate the level of PR and need for trust being investigated by this study. Additional allergies, to food or other items, do not complicate the study and are accepted, as encountered, in addition to the requirement of a peanut allergy.

In this research, 'trust' is focused on the packaged food products in the consideration set. The targets of trust in the packaged food consideration set include the manufacturer, retailer, brand, ingredients, Peanut Free Symbol, and labelling of other elements specific to these products.

The 'context' of the research is that it involves the characteristics of consumers, in a household with a person with a severe peanut allergy, that face PR and rely on trust in some way to form their consideration sets for commercially packaged snack foods. The anaphylactic allergy was added to the consumer context to add magnitude to the perception of risk and requirement for trust as the foods under consideration could lead to the death of their allergic family member.

The use of 'interrelationship' in the study is to examine how PR and trust are interconnected and to investigate the correlation between these factors. In Chapter 2 the arguments for the relationship between PR and trust were discussed. From the perspective of this study, PR and trust are hypothesised to be intensified by the context of severe allergies, the bond between PR and trust is of interest to the study and presents an additional area of investigation.

The time dimension of the study is a 'point in time', the in-home interview contact with the participants takes place in a single day. The time dimension is extended by the pre-interview contact with participants, for approximately 30 minutes, up to six weeks before the in-home interview and cupboard analysis. A longitudinal study could be an area for future research, following the child from experiencing parental food choices to making their own food consideration sets as they become adults; however, it was deemed to be beyond the scope of this study.

This discussion of validity and reliability flow into the data collection procedures that were used, as presented in the next section.

### 3.4.7 Data generation procedures

Having reviewed concepts of validity and reliability, the study and analysis is structured to achieve both, this section proceeds to specify the procedures that support those concepts. In presenting how the data was generated, this section is organised according to the steps of the study; it is organised in this manner so that the order of the elements in the study correspond to the results as presented in later chapters.

#### 3.4.7.1 Pre-interview contact

The purpose of the pre-interview contact was to qualify the participants and organise the details of the in-home component of the research. The first contact with participants was made using Facebook Messenger, email, phone calls or in-person meetings. Some of the first contact was done through introductions from my contacts as they referred prospective participants. For the phone calls and in-person first contact, notes were made to record the details. Each participant was then sent a detailed email confirming the interview date, time, location, and included the introduction letter and blank purchase log template as attachments. All electronic records of the contact were saved. An additional email was sent two days prior to each interview to confirm all details, answer any questions and remind the participant about the interview.

#### 3.4.7.2 In-depth interview

The in-depth interviews were recorded with a H1 Zoom audio recorder to facilitate accurately capturing the interview, to allow the participant to speak freely without the interviewer taking notes during the interview, and to facilitate transcription post-interview. I own the H1 Zoom audio recorder as purchased upon the recommendation of The Oral History Society as an excellent recorder for oral history interviews. Its use was practised during the exploratory interviews.

#### 3.4.7.3 Cupboard analysis and second part of interview

The cupboard analysis involved looking inside the cupboards and selecting products for discussion and was not audio recorded. The contents of the cupboard were

photographed as were the products selected for discussion. The second part of the interview was audio recorded and the selected products were used as props for the discussion.

In detailing the data collection procedures used for each segment of the study, I have demonstrated the preparation and suitability of data sources within the research. The next section introduces the concept of content validity and how it has been incorporated into the study.

#### 3.4.8 Content validity

Content validity can be defined as “how well a measure represents a specific area of content” (N. Lee & Lings, 2008, p. 171). However, this definition does not reflect that defining and measuring ‘content’ can be less exacting with qualitative research than with quantitative research. For this study, content validity was assessed through the transcription and coding of the transcripts from the exploratory interviews. By examining the results of the interviews, the interview questions were assessed and modified to better investigate PR, trust and consideration sets. This lends confidence that the questions in the interview guide are asking the ‘right’ questions to produce relevant responses addressing the research questions.

### 3.5 Data analysis

The section presents the approach to the data analysis, including the tools used to facilitate the investigation. Data analysis in qualitative research can begin during the data collection stage. This can help the researcher become aware of issues arising early in the data collection and make the necessary modifications to the data collection process to correct the problems (Ezzy, 2013). The narrative approach taken with this research is compatible with looking for themes using an inductive approach to the data. The narrative approach looks for the ‘how’ and ‘why’, to uncover the sense making while building the stories of participants’ experiences.

#### 3.5.1 NVivo documentary/textual analysis

To organise the data from the participant interviews qualitative data analysis software (QDAS) was used, for this study it was the NVivo software. There are many features of the NVivo software that make it a suitable choice for qualitative studies, potential uses for NVivo can be seen in Table 16.



<b>Manage data</b>	to organise and keep track of the records that go into making a qualitative project (such as audio files, transcripts, photos, document, and participant profiles)
<b>Manage ideas</b>	to organise and provide rapid data to conceptual and theoretical knowledge generated in the course of the study
<b>Query data</b>	to ask simple or complex questions of the data
<b>Visualise data</b>	to show the content and/or structure of cases, ideas, etc. at various stages of the interpretive process and to visually represent the relationships among items
<b>Report from the data</b>	using contents of the qualitative database

Table 16 Uses for NVivo during the analysis of qualitative data

Source: Bazeley and Jackson (2013, p. 3)

I used NVivo in the past during my time at Aston University and attended the University of Gloucestershire NVivo seminars. However, in the years since I had used the programme there have been changes so I spent time learning how best to use the current version of the NVivo software by watching the NVivo training videos, reading the QSR International NVivo guides and referencing guides such as *Qualitative Data Analysis with NVivo* by Bazeley and Jackson (2013) amongst others.

The software was practised by setting up a project for the exploratory interviews and using the transcripts from those interviews as the data. From the exploratory interview data, a first attempt at coding for this study was made endeavouring to capture the main themes and let participants' stories guide the way. For qualitative inquiry, a code is a word or short phrase that symbolically assigns a salient, summative, essence-capturing and/or evocative attribute for a portion of data, such as from an interview transcript (Saldaña, 2015). I ended up with many more codes than intended but I considered that was better to have more to study and that they could be refined and changed based on what was coming out of the transcripts from the study interviews. This coding and NVivo practise was preparation for analysing the main interviews.

The main interview coding was started as the interviews were being transcribed. The focus at the time was completing the transcriptions while figuring out how to improve the codes based on participant responses while keeping the research questions in mind. While there are various views about coding early along with the transcripts, a number of interviews were transcribed before an initial coding of the full interviews. This was in part practical, as I waited until I began to see initial themes emerging out of the transcripts. I needed to understand if the themes and codes from the exploratory interviews were related to what was being seen in the study interviews. While there are many options available for transcription and coding, such as using voice recognition software for the transcription or hiring people to transcribe and code, I performed all the transcription and coding myself. My ownership of the transcription and coding process was fruitful as I was able to listen to the interviews and really focus on the words, stories and speech elements again and outside of a participant role.

### 3.5.2 Purchase log

Participants had the choice of showing grocery receipts for six weeks of grocery purchases or completing a purchase log to record their purchases in select packaged food categories. Most of the participants completed the purchase logs, but some provided their receipts or did both. Some of the receipts received are pictured in Appendix I.

For the participants that completed the purchase logs, some contained more purchases than others, often linked to the household size with larger households with children having more purchases in the packaged food categories selected for the study. Some households had weekly variation in their purchases, while others purchased the same items each week. Examples of the purchase logs can be seen in Appendix J.

## 3.6 Ethical considerations

Performing research in a responsible, ethical manner is important for the researcher, participants, institution and the greater research community. Protecting vulnerable persons and the privacy of individuals are of key concern within the research process. In this section, I discuss the ethical considerations taken for the study and the methods employed to protect those involved from ethical violations.

As this research is independently funded, there are no ethical concerns relating to a funding body. This research does not involve any members of vulnerable groups, nor any intentional deception (Singleton & Straits, 2005). Informed consent was obtained from participants at the start of the interview with details of the study provided. Participants were also advised that they may withdraw from the research at any time and have their information excluded from the results. Consent, conduct of the interview and management of the recordings followed the ethical guidelines of The Oral History Association and The Oral History Society (Oral History Association, 2009; The Oral History Society, 2012).

The use of the first names of participants is consistent with the Oral History Association's Principles and Best Practices for Oral History, which states that "because of the importance of context and identity in shaping the content of an oral history narrative, it is the practice in oral history for narrators to be identified by name"(Oral History Association, 2009). Signed informed consent was obtained through the form in Appendix E, with the corresponding information letter in Appendix D communicating that "When the results are published, only first names will be used. If you would prefer an alias for the purpose of the study, please just let me know." The details of the information letter were reiterated verbally before the interview to field any questions or concerns. No participants requested an alias to be used, nor did any express hesitation about their first name being used.

As presented in 3.4.2.5 Participant profiles, there was the presence of those under 18 years of age for some of the in-home research, consisting of the interview, and cupboard analysis. For adolescents from 10 to 18 years, some participated in the interview with their parent, always in the presence of the parent. For children under 12 years old, the in-home research was with their parents who were in the residence for the duration of the visit. While the children had the opportunity to contribute to answers should they and their parent(s) wish, they were closely monitored by myself and their parent(s) to ensure that the child's limited participation was a positive experience and not upsetting for them

Interview recordings were made digitally with a main copy kept in a secure location on a USB drive in the researcher's home in a Sentry-brand fireproof safe.

Information was not kept in any location that could be subject to breach. Transcribed interviews were also kept securely and separate from any information that could violate the confidentiality of the participants.

Data management to prevent external exposure of data contained in NVivo was also incorporated within the organisation of the data analysis.

### **3.7 Conclusion**

In this chapter the philosophical underpinning of the study was presented, placing the research in the relativist epistemological tradition. The choice of qualitative methods, oral history best practices and narrative research was then presented. The research process logistics detailed each of the elements of the study and how they were pursued. Research design followed with an elaboration of the participant recruitment, selection and profiles along with the limitations and scope of the study. Details of the exploratory interviews were presented along with commentary on the implications for the study from these interviews. The next sections included a discussion of validity and reliability in this qualitative study, along with the operationalisation of the variables involved. Data collection included email and phone for the pre-interview and photography for the interviews and cupboard analysis. A confirmation of content validity and chosen techniques for analysing the data were then detailed. Finally, a discussion of the ethical considerations covered the prevention of bias, management of participants, confidentiality and the proper storage of the interview recordings.

## **4 Food choice**

### **4.1 Introduction**

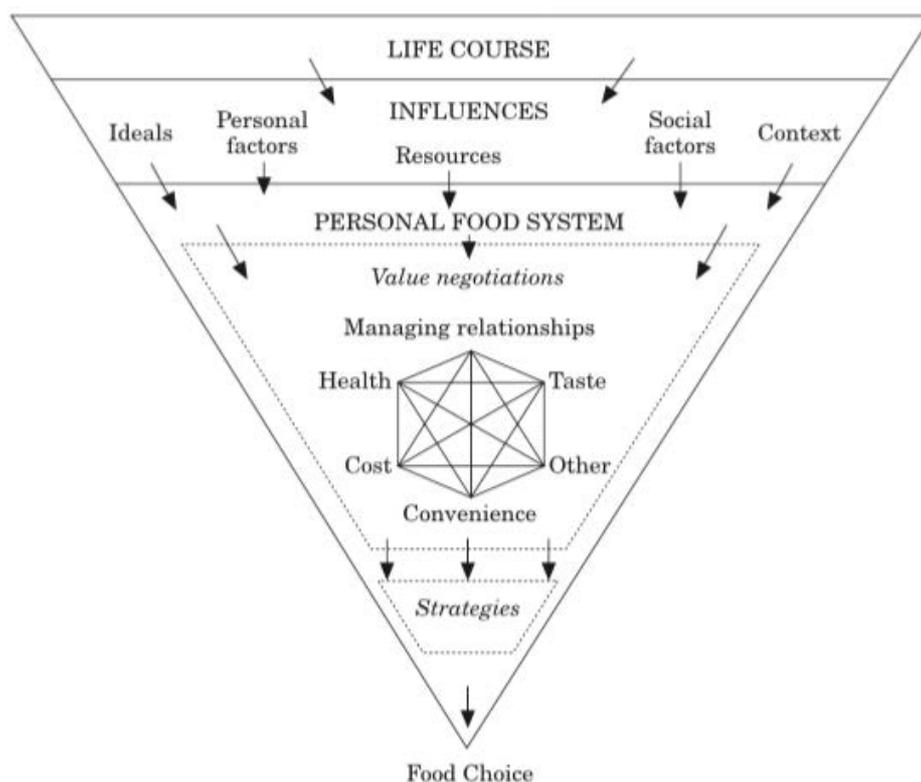
The next three chapters of Food choice, PR and Trust present and discuss the findings of the study. Food choice theory has been woven into these chapters, helping to situate this research in the literature. The discussion is framed by the food-choice process model and incorporates key instruments for the PR and trust concepts. This food choice chapter presents key findings and analysis of the food choice influences and related value negotiations. The following two chapters concentrate on the personal food system and strategies relating to PR and trust. As introduced in Chapter 2, there are many complex factors that influence the choice of food, and they often differ based on the choice circumstances and timing. In examining the factors that shape food choice, a view of the food choice environment for the participants is presented.

### **4.2 Food choice theories and models**

There are several approaches to food choice theory, as presented in Chapter 2, including economic models, TRA/TPB and the food choice process models. The selection of the model for this study was considered among these approaches to food choice theory. The qualitative approach to investigating the research questions led away from the economic models, as they are more suited to a quantitative approach. As presented in section 2.3.1.1, the quantitative economic models are outside the scope of this study as maximizing utility is not necessarily the objective of the food choice process for the study context. The effectiveness of the TRA and TPB models has been demonstrated extensively within the consumer behaviour literature, with the TPB being regularly used to study consumer food behaviour as presented in section 2.3.1.3. The third main approach to food choice theory, the food choice process models as presented in section 2.3.1.4, are traditionally used in the nutritional science discipline where they originated. In selecting a theoretical model to frame the study, the perceived applicability of the food choice process model to the research context and research questions led to its selection. However, the investigation could have alternatively used the TPB model, as is more traditional for the consumer marketing discipline. The selection of the food choice process models is a decision made for the study in the best attempt to examine the research

questions and although not regularly used in the consumer marketing discipline, this study explores the suitability for consumer marketing use.

As highlighted in the literature review, none of the traditional models for food choice directly address PR and trust. However, the qualitative construction of food choice models from Furst et al. (1996) and Falk et al. (1996) sought to explain food practices and decisions, which could include PR and trust as part of the personal food system. The work of Connors et al. (2001) extended the prior models by elaborating the relationships within the Personal Food System, as seen in Figure 8, and forms the basis for discussing the study.



(Figure 8 repeated-The food-choice process model. Source: Connors et al. (2001, p. 190))

This extended food-choice process model further organised and tested the value negotiations component of the personal food system, but did not expand on the strategies involved. As introduced in Chapter 2, I believe this to be a gap in the literature that is partly addressed by this study.

While value negotiations may be unique to the consumer and his or her situation, the strategies consumers employ to conceptualise the consideration set act as habits or rules based on prior value negotiations. These strategies can be seen as leading on to food choice in Figure 8, with a synopsis of the stages of the food choice

models seen below in Table 17. Within the table, the three major segments of life course, influences and personal food system have a black background. The two parts of the personal food system, value negotiation and strategies have grey backgrounds. The details within these categories have a white background.

<b>Life course</b>	<ul style="list-style-type: none"> <li>• Personal experiences and historical eras</li> <li>• Current involvement in trends and life role</li> <li>• Anticipation of future events, including hopes and fears</li> <li>• Upbringing and culture</li> </ul>
<b>Influences</b>	<ul style="list-style-type: none"> <li>• Comprising categories affecting the choice process: ideals, personal factors, resources, social framework and food context</li> </ul>
1. Ideals	<ul style="list-style-type: none"> <li>• Expectations, standards, hopes and beliefs</li> <li>• Symbolic meanings associated with food, such as social status</li> </ul>
2. Personal factors	<ul style="list-style-type: none"> <li>• Preferences from psychological and physiological traits</li> <li>• Likes/dislikes, emotions, age, gender, health status, food allergies</li> </ul>
3. Resources	<ul style="list-style-type: none"> <li>• Tangible: money, equipment and space</li> <li>• Intangible: skills, knowledge and time</li> </ul>
4. Social factors	<ul style="list-style-type: none"> <li>• Nature of interpersonal relationships, social role and meaning</li> <li>• Families and households, with household food roles</li> </ul>
5. (Food) Context	<ul style="list-style-type: none"> <li>• Physical surroundings, i.e. stores, and social climate</li> <li>• Types of foods, food sources and availability of foods</li> </ul>
<b>Personal system</b>	<ul style="list-style-type: none"> <li>• Comprising two components: value negotiations that weigh choice considerations and strategies involving choice patterns</li> </ul>
<b>Value negotiations</b>	<ul style="list-style-type: none"> <li>• Comprising dynamic relationships between: taste, cost, convenience, health, managing relationships and other factors</li> </ul>
1. Taste (Sensory perceptions)	<ul style="list-style-type: none"> <li>• Taste and flavour</li> <li>• Texture, odour or appearance</li> </ul>
2. Cost (Monetary considerations)	<ul style="list-style-type: none"> <li>• Price</li> <li>• Perceived worth of food</li> </ul>
3. Convenience	<ul style="list-style-type: none"> <li>• Time as commodity to be spent or saved</li> <li>• Ease of access or preparation</li> </ul>
4. Health (and nutrition)	<ul style="list-style-type: none"> <li>• Disease management and bodily wellbeing</li> <li>• Nutritional value and avoidance of specific foods</li> </ul>
5. Managing relationships	<ul style="list-style-type: none"> <li>• Managing others' preferences and needs</li> <li>• Maintain harmony in the household over food choice issues</li> </ul>
6. Other	<ul style="list-style-type: none"> <li>• Additional values such as safety, quality, variety, symbolism, ethics, and limiting waste</li> </ul>
<b>Strategies</b>	<ul style="list-style-type: none"> <li>• Rules or habits to guide future food choices, derived from previous value negotiations</li> <li>• Used to simplify or expedite the food choice process</li> </ul>

Table 17 Food choice model elements.

The food choice strategies as they relate to PR and trust are discussed in the next chapters; the remainder of this chapter examines the influences and value negotiations of participants' food choices.

### **4.3 Food choice: life course**

**Carly (AA): "The transition [to adulthood] is just been like I have more choice in what I eat, so I feel a bit more comfortable, like trying new things out knowing that I'm an adult and I can make these decisions . . . whereas when I was a kid, like my parents were just more concerned of keeping me safe."**

Life course plays an important role in the food choice process. It forms the basis for the influences and personal system, leading to the food choice. As presented in the previous chapter, participants were divided into three age-based cohorts. By using these cohorts, the study was able to explore food choice at different points in the life course within a household. Personal experiences, such as from past allergic reactions or historical eras were shared by the participants. For adult participants, their childhood food experiences were the most salient when talking about how their food choices were shaped. Historical attitudes play a role as many of the adult participants spoke of how allergies were generally treated more discretely and less seriously when they were children, up to fifty years prior. For the parents of younger participants, they spoke of advances in oral immunotherapy that were changing the allergy experience for their children and how the 'Peanut Free schools' had educated other children about food allergies, leading to greater acceptance among peers.

Upbringing, and being part of a culture during a specific historical period, was something only touched on by the participants but surfaces in their responses throughout the three discussion chapters. While the individual life course plays a role in food choice, family life course also forms certain food choice patterns. Careers can shape perspectives about food, as shown by the participant who worked for a packaged food manufacturer, the one who works as a nurse and the participant who works as a teacher. Economic circumstances are reflected in the food choice process, such as 'tight budgets' from some with a larger family size or of being better off than their parents were. The participants' life courses were

underlying factors for their food choices, though time constraints and the focus of the interview guide led to a concentration on key life situations that shaped their approach to food. The life courses of individuals managing severe allergies is an area worthy of future research.

#### **4.4 Food choice: influences and value negotiations**

Influences within the food choice process model mutually shape each other and affect the paradigms brought to food situations, leading to unique participant food perceptions of individual situations, different food settings and social situations and life stages (Furst et al., 1996). This section is organised to align with the five food choice influences: ideals, personal factors, resources, social factors and context, which then leads to a discussion of the associated value negotiations (Connors et al., 2001). However, within the food choice model there is an interrelationship between the influences and the value negotiations of the personal system. To avoid duplication, quotes are included in the section most closely related to their subject.

##### 4.4.1 Food choice influences: ideals

**Robin (AA): "...my mom was more, probably I'm more into getting the brands where she'd get the cheaper stuff..."**

While ideals are a separate influence in the food choice model, the expectations, standards and beliefs people have about food pervade the food choice process. In the interviews with participants the symbolic meaning of foods was reflected in their responses. Some feelings, like Robin's above where she is economically better off and able to afford brands that her mother couldn't when she was growing up, led her to purchase brands partly out of the desire for the social status involved. Other motivations for these branded purchases may be related to her higher trust in certain brands and manufacturers and perceptions of their quality and reliability.

##### 4.4.2 Food choice influences: resources

The resources for food choice can be regarded as tangible, such as money and space and intangible, such as time and knowledge. The environment for food choice determines the availability of certain products and the formats in which the consumer is able to acquire food. The three resources subsections of 'shopping list', 'technology' and 'money' each influence food choice. Shopping lists help the

consumer manage their food choices, saving time during the shopping trip and also ensuring that tangible concerns, such as the availability of storage space in the pantry, are taken into account. Technology acts as a tool to facilitate shopping, replace skills, reduce effort and decrease time investment for the consumer. The availability of money influences the consumer's ability to afford to shop, and the value negotiations around cost examine the worth of the food to the consumer.

#### 4.4.2.1 Resources: shopping list

**Helen (AA): “Usually I have to have a list because I get lost <laughter> in what I really need to buy and then come home and realise that I've missed half of my list.”**

The shopping list is one resource consumers use to prepare for the acquisition of food. A shopping list can serve as (1) a guide to limiting impulse purchases, (2) a memory aid, and (3) a method of formal planning that structures meals and eating habits while preserving financial resources (Dubowitz, Cohen, Huang, Beckman, & Collins, 2015). Some participants identified shopping lists as guides to what they look for in store (see quote <sup>1</sup> in Appendix N). These guides can also help ensure that consumers find all the items they are looking for in store. This can help consumers manage their time by avoiding the need for repeated trips to the store to purchase needed items (see quote <sup>2</sup> in Appendix N).

Shopping lists can also help manage the time risk involved in shopping, by allowing participants to complete their shopping more quickly.

- Jennifer (PC): “I might make a list of what we need, sometimes I, sometimes it's just a quick shop where you're running out to grab what you need, other times it's like, what do I need for the entire week.”

In addition to managing the time risk, shopping lists also help participants manage the financial risk of shopping, making sure that consumers do not under buy or overbuy (see quote <sup>3</sup> in Appendix N). Avoiding overbuying allows participants to manage the tangible resource of available space in their food storage area. This role of the shopping list also allows the consumer to manage their tangible resource of money and intangible resource of time.

The role of shopping lists as an aid to memory was also mentioned by participants. The lists are used so that items are not missed or forgotten on the shopping journey. It also helps participants avoid impulse buying from triggers such as being hungry while in the grocery store (see quote <sup>4</sup> in Appendix N). The shopping list as an aid to memory again helps participants manage their time risk, by ensuring that the shopping trip gets all the required products and avoids the need to return later to obtain items that were missed.

- Tanya (PA): “I make a list and I try to remember my grocery boxes to put the groceries in... It's because I forgot things if I don't make one.”

Other resources, such as the grocery boxes, help guide an organisational system for the consumer to use while shopping, enhancing his or her productivity.

A few participants make shopping lists less often or not at all. For some, routine purchases are done from memory, with a shopping list only used for non-routine purchases.

- Sasha (PA): “I will make a shopping list if, uh, we start to run out of items that are not on our usual shopping, but otherwise it's relatively routine-based, um, so I have it by memory.”

For other participants, making a shopping list is not a usual part of their shopping preparation and only made when they remember to jot items down (see quote <sup>5</sup> in Appendix N). One participant makes a list very rarely; due to the frequency of her grocery shopping many times a week she is able to get all the items she is looking for (see quote <sup>6</sup> in Appendix N). For such participants, it is evident their intangible resource of knowledge is relied on as a resource for their food choice.

The need for a shopping list, and desire to use one, varied among participants. However, the role of the shopping list as a guide to purchases whether for issues of economy or other tangible issues, or broader control or planning (intangible aspects) was demonstrated in participants' responses.

#### 4.4.2.2 Resources: technology and values - convenience

**Megan (PC): “I do lots of price matching, so I'll check what we have, I tend to shop by sort of what's on sale and stock up on what's on sale, so I kind of pair**

**that with A.) what's missing and B.) what's on sale... [using apps] Flipp for the most part and another one called myShopi.”**

Participants report using technology to aid in their shopping. This technology is primarily located in the participants' smartphones. Mobile shopping, sometimes called M-shopping, and applications are emerging in marketing research (Fuentes & Svingstedt, 2017; M. Kim, Kim, Choi, & Trivedi, 2017). There are three main areas of mobile shopping suggested by Groß (2016); of those three this section focuses on the use of mobile shopping as a personal assistant and helping consumers optimise their shopping experience in traditional brick and mortar stores. Apps can serve as shopping managers and promote extrinsic elements such as saving money and intrinsic elements such as consumer empowerment and risk reduction (Spaid & Flint, 2014).

Some participants use their phones to make a shopping list, with their purpose discussed in the previous section, either in notes or in a mobile software application (hereafter, app) (see quote <sup>7</sup> in Appendix N). There are also apps that can be used for interactive shopping lists. One participant uses an interactive shopping list app to collaboratively do her grocery shopping with her husband, so that no items are missed (see quote <sup>8</sup> in Appendix N). This collaboration between the consumers in the household allows each member to purchase needed items when close to the desired stores, saving the resources of time and money.

Apps were also used by participants to enhance their grocery shopping experience. Flyer apps, such as Flipp, organise interactive flyers for all the major grocery stores, including The Real Canadian Superstore and Walmart, enabling consumers to search and select the cheapest promotional prices for items and then use the phone app at the checkout to obtain those prices (price matching). Some participants report only using the flyer apps on occasion (see quotes <sup>9</sup> <sup>10</sup> in Appendix N). Other participants regularly use the flyer apps to price match. This price matching allows for a diminished time risk, as promotional price shopping can be done in one store instead of going to multiple stores, and manages financial risk, by ensuring that the price paid is the lowest promoted price at eligible retailers that week. The flyer app technology allows consumers to avoid the need for paper flyers in their home, thus managing space and ecological impact as well as saving money and time.

Apps are also used to gain benefits from shopping, both financial and informational. Store-based apps, such as from the PC Plus app from Loblaw stores, rewards consumers with 'PC points' for their purchases. The PC points can be used towards free groceries in store (see quote <sup>11</sup> in Appendix N). The PC Plus app tracks a consumer's purchases and customises point rewards and recipe recommendations according to the items purchased. A PC Plus card must be presented at the time of purchase, but the points can be loaded using a mobile device or computer.

- Beth (AA): "I do have PC Points, and PC offers like they give you deals but they also have like a website where they'll offer you suggestions and recipes based on, which to me is a little bit Big Brother, because it's based on things that you've bought in their store, but it's, you know it's an interesting, it adds a little something to the experience I guess."

Some stores offer points from other suppliers, such as Air Miles, that allow for redemption of points towards a catalogue of items including travel rewards (see quote <sup>12</sup> in Appendix N). These enhanced apps with recipes and customised content can provide consumers with the resources of skills and knowledge.

The shopping list is a tangible resource used by some participants, sometimes fluidly based on the food shopping goals. The ability of consumers to manage their packaged food purchases through shopping lists, memory, and supported by apps allows them to efficiently manage their shopping behaviour.

For some participants, the information search usage of the smartphone was used in conjunction with product labelling for information, in addition to direct contact with manufacturers by phone and email if desired. The role of apps for consumers managing severe food allergies, or other health-related conditions, is worthy of further investigation but beyond the scope of this study.

#### 4.4.2.3 Resources: money and values - cost

The availability of money and how it is used in food choice is very personal to the household. Participants faced different financial situations and had different approaches to how they used their money. For some there is the value negotiation between the product's price and how they perceived the worth of the food.

While many participants rely on technology to aid their shopping, as previously highlighted in 4.4.2.2 a few report using physical paper flyers to review what is on price promotion. Promotional pricing drives their shopping behaviour and dictates which stores are included in the shopping trip.

- Danielle (AA): “We usually go through the flyers and write down what's on sale at every place and that's like if something's on sale at FreshCo or No Frills, that's when we'll decide to go there... If nothing's on sale, we won't go there.”

When the desired items go on price promotion the consumer typically purchases larger quantities of the product in order to ‘stock up’. For these consumers, the food advertising contained in the flyers is the primary source of information used.

- Allison (PC): “We look for the items that we buy when they go on sale, we buy a ton so that's the only kind of advertising we look for is when the items we want are on sale.”

Planning efficient shopping trips and stocking up on discounted products are ways that the consumer can conserve their money and time resources.

A large family size was given as a rationale for price promotional-seeking behaviour. An effort to purchase products on price promotion or at the best price is made to help manage the grocery bill.

- Kristi (PC): “A lot of it's just whatever is on sale or is the best price at the time. ... I would say that's probably one of the higher influences with buying for six of us.”

However, a few participants with smaller families also reported promotional deal-seeking behaviour with pricing being a significant influence on product consideration.

- Amanda (AA): “It's a huge influence I guess, I don't want to spend way too too much, so um, yeah I do look at prices a lot.”

Availability of money and the economic wellbeing of the household can be important determinants of shopping behaviour, and food purchase management within tight budgets can limit the available food choices.

Other participants report price being of a smaller influence on their shopping behaviour. Price is sometimes a secondary consideration, or just one factor among many considered. Some participants report looking at the prices, but still purchasing the products they want (see quote <sup>13</sup> in Appendix N). A few participants are not influenced at all by product price, instead, making their buying decisions based on other criteria personal to them (see quotes <sup>14</sup> <sup>15</sup> in Appendix N). A number of participants looked to balance the price of a product with other criteria. In some cases, the price of a product is not as important as acceptability of its taste. As long as the taste of a product is acceptable, then price is the deciding factor. There is a willingness to try new products based on price to assess taste, but if the taste is unacceptable, there will not be a repeat purchase.

- Christine 2 (PA): "I'm too cheap! ...I do want to get a deal, like we have three kids, I need to be mindful of our pennies but as I say, if it's going to taste terrible, but I'll try it, like we tried, I won't buy that again. Right, so we'll try it, um, because yeah the price does, it's high up there, right as long as it tastes good. But otherwise, you know, I would go for, if it's, if it's the same taste I would definitely go with price."

The balance can be seen by some participants as a desire for value over price. Premium products are purchased in some cases if the perceived quality of the product is seen to justify the price.

- Beth (AA): "It [price] definitely does [influence], I mean I have to budget conscious, but again, it's like right now, I'm sort of, I only grocery shop for myself so I can afford to sometimes be a bit decadent, and I do tend to spend more money, I find, on higher quality... I try to go more for value than price."

For some the promotional pricing of desired products is viewed as a nice bonus, but overall not a requirement for purchase (see quote <sup>16</sup> in Appendix N). The influence of resources, such as money available for shopping, can be part of the value negotiations around cost and the perceived worth of food.

For many participants, the allergy consideration comes first, with other factors, such as price, a lower priority. Some participants were unconcerned about price for products described as peanut free.

- Courtney (PA): “I’ll pay, I’ll pay whatever the price is if it’s peanut free, I’m not picky when it comes to that, I’ll pay the extra.” (Also see quote <sup>17</sup> in Appendix N)

The perceived safety of a child eating the product gave some participants a feeling of peace of mind and reassured them about their purchase, even if it cost more (see quote <sup>18</sup> in Appendix N). For some parents, there are certain categories of product that they are willing to pay more for, often foods with more potential of peanut CC.

- Kristi (PC): “For certain things I would be happy to pay quite a bit more, sometimes some of the, like the candies and the treats and the cupcakes and stuff like that, I’m happy to pay the Cupid’s Cupcakes [nut free bakery] price because I know that they’re nut free, um, as opposed to just getting, like a different company.”

For a number of participants, the fear of an anaphylactic reaction reinforces their willingness to buy these allergen-free products even if some other items cost less.

- Roger (AA): “We do admittedly pay more for a lot of things, because of my and my son’s allergies, um, and again, we’re health conscious too, and so you’re already, you know, and you’re shopping at these specialty sort of organic stores, you know it goes with the territory, sometimes it gets a little much on certain things, but not in so much the things with the allergies though, but for the allergies, it’s like, you know, it’s what, saving a few bucks and risking, you know, a possible anaphylactic reaction is not, it’s not smart.”

A few participants viewed the combination of peanut-free labelling, perceived safety and product liking to be a reason for purchase.

- Vilma (PA): “If it’s peanut free and if it’s safe and she likes it, I really don’t care, we’ll just buy it.”

Managing the peanut allergy through the choice of food labelling as peanut free is the priority for these families, outweighing other considerations such as price.

Food that is labelled as peanut free or major allergen free is often more expensive than other foods. The additional cost of the peanut-free products is a source of annoyance for some participants (see quote <sup>19</sup> in Appendix N). The extra cost for peanut-free foods is a financial concern for a few participants. As a university student, Danielle has a limited student budget for food and must balance her budget

with her food choices. The allergy still takes precedence for her, as she chooses to purchase foods with allergen-free labelling, but attempts to find the best price possible on these products.

- Danielle (AA): “[How does the price of a product influence your choice?] A lot. Especially, again, since I am a student. But with Made Good bars [major allergen free], they're the perfect example, it's like food is expensive and then when you stick the allergy word in there it's even more expensive.”

For participants, personal factors including the severe food allergy and related health value negotiations often guide the food choice, while financial resources limit the options for some.

#### 4.4.3 Influences: social factors

The social framework is a complex influence on food choice, characterised by conflicting priorities and power issues. Families and households are one of the most important sets of interpersonal relationships influencing food choice (Furst et al., 1996). This includes the role(s) of the main food shopper in the household and their role in selecting food for the household. Influence over the food choices of others, such as the parent influencing the food choice of his or her children or schools influencing the food choices of their students with nut-free policies, is included within the social factors.

##### 4.4.3.1 Social factors: relationships and values - managing relationships

The role of relationships in food choice became a significant area within the study results. This primarily involved interpersonal relationships and household food roles. Correspondingly, the value negotiations involved in managing relationships while meeting the needs of the individual with severe food allergies were key areas examined. As this research directly involved families, family dynamics often surrounded the formation of consideration sets. It became clear; however, that relationships outside the family unit also played an important role. Within the three cohorts, (1) adults with allergies (2) parent of adolescent with allergy and (3) parent of child with allergy, some relationships crossed cohorts, while others, such as the role of schools or work colleagues, were focused on stage of life. While difficult to categorise the relationships, participants often spoke of an 'insider-outsider' perspective relating to a 'responsibility' to the allergic individual. I then categorised this 'responsibility' as 'personal responsibility', where the allergic individual was

responsible to themselves; 'obligation', where others held a responsibility towards the allergic individual; and then others who held a 'tertiary responsibility' towards the allergic individual. Within the food choice model, these should be considered to be an elaboration of the social roles within the influences of social factors.

#### 4.4.3.2 Relationships: insider-outsider

**“We've sort of weeded out people who don't get it, like I just don't have time to play those games, but we have.... I didn't understand food allergies, until it was slapping me in the face so I try and be really cognisant of that and I try and pass that on to my son, I'm like just because people are, say stupid things, like it doesn't mean they are bad people, they just don't understand it.” - Allison (PC)**

The insider-outsider perspective was often voiced by participants in a variety of forms, including in the idea of 'allergy people' and 'non-allergy people', where the difference was the awareness of allergy concerns rather than a need to have the allergy oneself. Other participants conceptualised the idea of insiders as those who 'get it' and outsiders as those who 'don't get it', where 'it' is seen as a true understanding of allergy concerns, usually but not exclusively, from direct experience. This insider-outsider view was not a dichotomy, with what could be represented as in-between space existing, where some people act as insiders and others as outsiders. I have not represented the insider-outsider perspective as a continuum from high to low responsibility, as the responsibility can be context-specific, such that certain situations may warrant greater responsibility than others. This idea of responsibility to oneself or others is closely related to accountability, as the responsibility is a proactive stance that can be shared; however accountability is reactive and individual. For the purpose of avoiding or preventing reactions, responsibility is the more important construct for this study.

I have identified the type of people with responsibility towards allergy avoidance that participants spoke about. They are summarised in Table 18 and discussed below.

<b>Insider</b>	<b>Some insider/some outsider</b>	<b>Outsider</b>
Self	Friends (of self or parent)	Work colleagues
Parents of allergic child/adolescent	Family members (grandparents, ex-spouses, spouses, siblings)	Restaurant personnel
School	Manufacturers	Other people/'society'
Medical provider (doctor, allergist, paediatrician)	Brands	'The media'
	Other parents	Facebook commenters

Table 18 Insider, outsider and in-between

Participants' stories reflect a range of insider-outsider experiences. How the outsider reacts towards the allergic individual was also of importance. While some outsiders were seen to be sympathetic and understanding towards people with allergies, regardless of whether they 'get it', some were not. With this, how vocal the 'not sympathetic' population was in comparison to the sympathetic population was discussed in the interviews. Some participants surmised that the majority of outsiders may be sympathetic, but the loudness of negativity from the unsympathetic population drowns them out (see quote <sup>20</sup> in Appendix N). This negativity can take the form of accusing the allergic person of 'faking it', or just wanting special treatment for themselves or their child (see quote <sup>21</sup> in Appendix N). The accusatory nature of some of the negative comments can lead to defensiveness on the part of the allergic consumer (see quote <sup>22</sup> in Appendix N). This includes minimising behaviour on the part of the outsiders, such that the allergy 'is not a big deal' or that 'it's funny' (see quote <sup>23</sup> in Appendix N). Those without a social role or relationship to food choice in an allergic context may present as outsiders.

Participants suggested that connecting with others on an individual basis, instead of the group perspective, helps them further the level of understanding for the outsider. There is seen to be misinformation prevalent on food allergies, with some outsiders not recognising that the allergy is a serious matter (see quotes <sup>24</sup> <sup>25</sup> in Appendix N). Personal experience with the peanut allergy is seen as a factor in 'getting it' and becoming an insider. There is a perception that some outsiders may think they have an understanding about allergies, but only 'really understand' when

it affects them directly, such as being the parent or family member of someone with a peanut allergy (see quote <sup>26</sup> in Appendix N).

There may be questions about the outsider's intentions, whether they just forgot about the allergy or were inattentive or whether they just do not care (see quote <sup>27</sup> in Appendix N). One solution to removing some of the responsibility from the outsider was openness towards allergy information and allergy labelling laws (see quote <sup>28</sup> in Appendix N). However, while this strategy uses interpersonal relationships to establish an understanding about food choice for individuals with severe food allergies, not everyone will want to take on such information or a social role.

#### 4.4.3.3 Relationships: insider - personal responsibility

**“Well, I think, if you have a life threatening allergy, you need to learn how to live in society with that allergy, because if everyone bends over backwards making it, I think it gives you a false sense of security...” Vilma (PA)**

Personal responsibility, where the ‘ownership’ of the allergy rests with the allergic individual, is a part of the insider experience. All ten of the adult participants voiced their need to take responsibility for their peanut allergies. For the adolescent participants, personal responsibility was mentioned as the goal, with some ‘not being there yet’.

For the allergic adults, their responsibility to be aware and protect themselves from allergic reaction was ever-present. Their age and maturity were given as reasons why they should know what they should eat and not eat (see quote <sup>29</sup> in Appendix N). The transition to adulthood was seen to be an important period in taking responsibility for their allergy. Adulthood meant that childhood inattention that led to prior allergic reactions was replaced by a greater conscientiousness towards avoiding allergens (see quote <sup>30</sup> in Appendix N). This transition to adulthood involved the choice of foods and new decision-making responsibilities moving to the new adult. Where parents had previously been responsible for keeping them safe, the new adult was able to expand his or her comfort with food by learning to cook and respond to allergic reactions, instead of trying to hide them from parents (see quote <sup>31</sup> in Appendix N).

The need for self-advocacy was seen to be an important component of taking personal responsibility, where the allergic adult acts as their own spokesperson. This self-advocacy can include educating others on allergy issues (see quote <sup>32</sup> in Appendix N). How the allergic adults advocated for themselves varied; some noted a need to connect with other people through their communication, as people can be discouraged if they feel blamed (see quote <sup>33</sup> in Appendix N). Personal responsibility was felt to have been internalised by the allergic adults, learning to live with their allergies since they were very young by reading labels and choosing appropriate foods (see quotes <sup>34</sup> <sup>35</sup> in Appendix N). The value negotiations around health and wellbeing for these allergic individuals have led to strategies towards food choice.

Personal responsibility was mixed with parental obligation for the adolescents. One participant parent told of a time her adolescent daughter read the label for a granola bar that she had given her. The daughter saw that the product contained peanuts and did not eat it, scolding her mother later. The mother was relieved that her daughter had taken the initiative to check the ingredients, despite receiving the food from her mother, who usually checked for peanuts (see quote <sup>36</sup> in Appendix N). In this case, the personal responsibility for the allergy took prominence for the adolescent over her mother's social role of providing her with allergen-free food.

Many parents of children and adolescents with allergies worried about the adolescent years and the risk-taking behaviours that occur during these years, including feelings of invincibility (see quote <sup>37</sup> in Appendix N). The peer pressure, bullying and rebellion of the adolescent years were seen as challenges by the parents to their encouragement of personal responsibility behaviour in their children on the way to adulthood (see quotes <sup>38</sup> <sup>39</sup> in Appendix N). Adolescent reluctance or forgetfulness about carrying their SIE is also a concern, with some participants reporting that this was a source of conflict in their family, including a regression on learning personal responsibility for some adolescents (see quote <sup>40</sup> <sup>41</sup> in Appendix N).

Some parents make the distinction between what is eaten in the home and outside the home, or with and without parent/s. This can manifest in different ways, such as when the parent insists on accompanying their adolescent when the adolescent eats out with friends, sometimes to the adolescent's embarrassment (see quote <sup>42</sup> in

Appendix N), or when another mother shared a story about her adolescent son self-advocating towards a friend's parent. Upon reading the food label after that parent had deemed it safe, the son discovered nuts in the ingredients and his mother was happy that despite his anxiety in these situations, he did check for his allergens (see quote <sup>43</sup> in Appendix N). As adolescents grew older and more comfortable in self-advocating, some parents reported that this alleviated some of their anxiety about the allergy (see quote <sup>44</sup> in Appendix N).

Adolescence is often the time for the 'ownership' of the allergy to transfer from the parent(s) to their child. As the adolescents progress to secondary school and university, there is increased freedom from their parents, but an increasing need to take personal responsibility for their allergies (see quote <sup>45</sup> in Appendix N). When this shift of responsibility from parent to child occurs, their social roles with regard to food choice also changes, along with the value negotiations involved.

The personal responsibility for allergies that is seen in adults can be the result of parents 'training' their children for this responsibility from an early age. The obligation of parents towards their adolescents and children can extend to preparing them to take personal responsibility for their allergies as they grow older. This preparation can involve teaching the child to ask others, including adults and restaurant servers, about the presence of allergens in the food (see quote <sup>46</sup> in Appendix N). While this 'training' is often led by the parents, others with an obligation to the child, such as their teachers, may support these efforts (see quote <sup>47</sup> in Appendix N). This early learning may start with the child beginning to understand his or her allergy and knowing to tell others that they have an allergy (see quote <sup>48</sup> in Appendix N). The ability of the child to reject food that is being given to them, give food to their parents to approve for them, and ask questions about allergens in the food are some of the objectives of this training (see quote <sup>49</sup> in Appendix N).

Some children are motivated in taking a more active role in their allergy by memories of past anaphylactic reactions, while others are driven by a greater awareness of their allergy (see quotes <sup>50</sup> <sup>51</sup> in Appendix N). The goal of this preparation by parents is to make things easier for their child as they grow up, so the child becomes accustomed to living with and managing the allergy (see quote <sup>52</sup> in Appendix N). The process of 'growing up' often involves the shift in responsibility from parent to

child for choices, however, parental training of the allergic children on food choice can be a more intentional education as the personal factor of the food allergy is a significant influence on the food choice.

#### 4.4.3.4 Relationships: insider - obligation – parents

**“Parents are responsible for their children's eating and their food choices and stuff like that and that's where the real fear is.” - Beth (AA)**

The parental obligation to take care of their children includes keeping their children safe. For parents of children with allergies, the allergies may be diagnosed when the child is very young. This can involve the mother modifying her diet in order to breastfeed her allergic child or controlling everything the baby puts in his or her mouth to protect them (see quotes <sup>53</sup> <sup>54</sup> in Appendix N). As the child transitions to eating solid food, caution and control over the child's food choices were ways participants avoided allergic reactions (see quote <sup>55</sup> in Appendix N).

Parental worry and concern for their children was a theme running through participants' interviews. Some participants report their parents being concerned to the point of being overprotective, after having seen their child have a severe allergic reaction (see quote <sup>56</sup> in Appendix N). However, the anxiety towards the allergies for parents is often checked in order to manage daily life and to avoid passing that anxiety on to the allergic child (see quote <sup>57</sup> in Appendix N). When the child is very young, parental protection may take the form of a greater hypervigilance and lower levels of acceptable risk than may occur in later years (see quote <sup>58</sup> in Appendix N). Where children are diagnosed with a severe food allergy at an older age, it can also be traumatic and anxiety-inducing for the parents, counterbalanced by the knowledge that the child has lived for many years with the undiagnosed allergy, and also now knowing to avoid the allergen (see quote <sup>59</sup> in Appendix N). However, an adult participant questioned whether the anxiety surrounding food allergies may cause a general hysteria among parents of young children, believing their child to have serious allergies when they haven't been formally diagnosed (see quote <sup>60</sup> in Appendix N).

Parents can also serve in an advocacy role for their allergic children. It is often the child's parent that reacts to situations involving allergens, to protect their child and to combat situations or mind-sets that put the child in danger (see quote <sup>61</sup> in

Appendix N). This advocacy role can be within the home, for instance where one parent wishes to continue eating peanut butter and the other parent opposes this wish, leading to dissention between parents (see quote <sup>62</sup> in Appendix N). For the adult participants, many of their parents still ate peanut butter in the home or were otherwise less than cautious (see quote <sup>63</sup> in Appendix N). An adult participant also recalled her parents' advocacy towards the allergy being made very privately forty years ago, in contrast to how it is typically made more openly now (see quote <sup>64</sup> in Appendix N).

The obligation of parents towards older children and adolescents often involved preparing them for self-sufficiency in life and personal responsibility for their allergy. As was discussed in the personal responsibility section, parents can take on the role of educator, pointing out appropriate foods, warning of food with peanuts and giving children the tools to manage themselves and their allergy (see quote <sup>65</sup> in Appendix N). Parental worry for children can continue through this period, as romantic relationships, peer pressure and bullying emerge, and parents desire to alleviate some of the worry about allergies from their child (see quote <sup>66</sup> in Appendix N).

#### 4.4.3.5 Relationships: insider – obligation - medical provider

**“His paediatrician and the allergist are great about it, and the two other times we've been to the hospital with his food allergy, they've been, they've been good, they'd take us right in and taken it very seriously.” - Kristi (PC)**

Medical providers for allergic individuals can include doctors, nurses and hospital staff. Most participants saw specialised allergists and were very positive about their experiences (see quote <sup>67</sup> in Appendix N). A few of the participants' families were involved in medical trials for peanut allergies, usually oral immunotherapy, and had advanced medical support for their treatment.

Once the allergic individual had been diagnosed, the medical provider was generally seen as an insider. This was demonstrated by being knowledgeable on the latest allergy research, providing helpful allergy information and involving the allergic family members in the care decisions (see quote <sup>68</sup> in Appendix N). The social role of the medical professionals balances an informative relationship with their patients while ensuring the patients' personal factors of physical and psychological wellbeing.

#### 4.4.3.6 Relationships: insider - obligation – schools

**"They're very good, they. The teachers that we've had so far, he's going into grade two, they've emailed when they're doing food activities, they check if they're not sure, but they, the teachers so far have seemed very aware of labelling and how to read labels and the fact that they check in when they're not sure. So, I've been very confident."** - Megan (PC)

Participants made it clear that they believe schools hold an obligation to the allergic child. Some parents had positive experiences, while other parents had some concerns. The level of schooling from nursery to secondary school, appear to correlate with high to lower direct responsibility of the school to keep the child safe.

Two of the parents had their children in home nurseries and both had very positive experiences, with the care provider being well-versed in allergies and discontinuing the use of the child's allergen in the setting (see quotes <sup>69</sup> <sup>70</sup> in Appendix N). In some nursery settings, there is no outside food permitted and all meals are catered by the nursery, which allows for careful allergen control in the food being served to the children (see quote <sup>71</sup> in Appendix N). There were two parents that noted issues with their nursery; one involved a vegan nursery with parents of children without allergies becoming upset when peanuts were taken off the menu, and the other a fight between the parents and the nursery management to allow the allergic child to carry his SIE on him (see quote <sup>72</sup> in Appendix N). In these cases, the relationships had to be managed to achieve harmony and resolve the situations.

For students in the early elementary grades, the teachers play an important role in helping to protect the children from allergens. In the case of food activities at school it is important that the teachers reach out to the parents and work in cooperation to keep the children safe (see quote <sup>73</sup> in Appendix N). Food allergy bullying can also arise in these early elementary years, so when teachers monitor the lunch rooms of the lower grades they need to take threats, like children throwing nuts at or bringing peanut butter to school, seriously (see quote <sup>74</sup> in Appendix N). A number of schools were adept at managing allergies and supporting allergic families. For some this may be because they were schools with high tuition fees, giving them the resources to devote to managing resources (see quote <sup>75</sup> in Appendix N). Other schools could do more to keep the children safe; often parents' concerns were around the

prevalence of allergens within the schools, both served to students and their presence in the teachers' lounge (see quote <sup>76</sup> in Appendix N). Peanuts in the teacher-access parts of the school is disappointing for parents who see the social role of teachers as being protective of their students and not risking them harm from allergens. The introduction of Sabrina's Law in 2005, an Ontario provincial law that mandated every school board to establish an anaphylactic policy, changed the responsibilities of school employees towards anaphylaxis management, especially around SIE administration, and has led to greater allergy education within the schools (Levac, 2005).

The role of the teachers in keeping adolescents safe is less direct in secondary school, as the students are not supervised at meals nor are the food restrictions as proactive. The secondary schools manage allergies more reactively, having protocols in place should a student have a reaction (see quote <sup>77</sup> in Appendix N). As adolescents begin to take on the personal responsibility for their allergy during the secondary school years, the freedom for others in bringing whatever they want for lunch must be responded to, with a greater degree of vigilance from the allergic individual to avoid their allergen (see quote <sup>78</sup> In Appendix N). As adolescents enter secondary school they have value negotiations with their peer group in order to manage their relationships and their personal factor of the severe peanut allergy.

#### 4.4.3.7 Relationships: some insider/some outsider – obligation - friends

**“When you go to someone's house now for dinner a lot of people are conscientious enough to ask about allergies ahead of time.” - Roger (AA)**

Participant experiences with friends ranged from negative, in the form of exclusion, to positive, in the form of taking care. Adult participants report instances of not being invited by friends to group meals at restaurants due to their allergies (see quote <sup>79</sup> in Appendix N). Others report a lack of care by friends in eating peanuts when eating a restaurant meal attended by the allergic individual when some foods were being shared, thus putting the allergic individual at unnecessary risk (see quote <sup>80</sup> in Appendix N). When friends have been around the allergic individual during an allergic reaction or while they had the allergy, the friends were seen as being more careful (see quote <sup>81</sup> in Appendix N).

Some adult friends of participants made an effort to accommodate the participant's safety when hosting in their home by using a different sponge for cleaning crockery or cutlery, or other measures to avoid peanut exposure or contamination (see quotes <sup>82</sup> <sup>83</sup> in Appendix N). Where an allergic adult participant lived with roommates, she had mixed experiences with their consideration towards her allergies, with one roommate particularly lacking in care (see quote <sup>84</sup> in Appendix N). The personal system of the allergic individual results in them managing relationships in order to avoid their allergens and keep themselves from having an allergic reaction.

Allergy awareness by child-aged friends of the allergic children was seen as good. The other children were seen as being well-versed in respect to allergies and mostly accepting of their allergic peers (see quote <sup>85</sup> in Appendix N). While there was a level of interest by children's friends about their food allergies, it was not seen to be an important issue to them (see quotes <sup>86</sup> <sup>87</sup> in Appendix N). This awareness by allergic children's friends sometimes extends to asking other children if they have food allergies before sharing food (see quote <sup>88</sup> in Appendix N). Of particular note, compared to the adult friends of allergic adults, the child friends of allergic children were viewed to be more aware and accepting of the allergic individual

#### 4.4.3.8 Relationships: some insider/some outsider - obligation – family

**“...even in my own family, nobody's ever had an allergy so they try to get it, but they don't... like my own mother [child's grandmother], who I love dearly, has said, 'well just give him a little bit of a peanut, not a full thing of peanut butter, just give him a little taste', ah no, no.” Sheri (PA)**

Participants suggest that the obligation to help the allergic individual avoid their allergens extends to the whole family, including extended relations. Within this, the insider-outsider perspectives, as presented earlier, can be applied. Based on participant responses, the other members of the family can be insiders or outsiders. The insider-outsider distinction is not aligned to family role, as, for instance, some grandparents are considered insiders while other grandparents act as outsiders, for instance.

When family members are seen as outsiders due to their perceived lack of care about the allergy, this can cause estrangement within the family. For some this

means not seeing family members, not allowing them in their home and not going to the family members' homes (see quotes <sup>89 90</sup> in Appendix N). This is a difficult scenario for many of the allergic families, but results from the parents doing what they think is best to keep their allergic child safe. There are situations where close family members do not believe in the allergy or deny the allergy, thinking the parents are being ridiculous (see quotes <sup>91 92</sup> in Appendix N). For a few participants there were estranged fathers that the allergic child had not seen in many years. From accusing the mother of overreacting about the allergy, to having hidden peanuts in their furniture, these non-involved parents took the role of an outsider, despite their close family connection to the allergic individual (see quotes <sup>93 94</sup> in Appendix N).

For some other family members, their behaviour as outsiders was attributed to unintentional actions, from forgetting about the allergy to not realising about nut usage. Tales of this included an uncle bringing 'May Contain' chocolates for his niece, and bowls of nuts left out on family members' tables without thinking (see quotes <sup>95 96</sup> in Appendix N). This lack of attention to the presence of allergens on the part of others, can be explained as people who have not previously known allergic people, and for example think that the allergic individual can just 'pick out' the nuts from a meal (see quote <sup>97</sup> in Appendix N). However, these cases were not unique to those recently diagnosed; there were many relatives that had known about the allergies for a long period of time that would 'slip up' and expose the allergic individual to their allergen (see quote <sup>98</sup> in Appendix N). Some parents report reminding family members about the allergies before attending family gatherings, but lamenting that the lack of care by close family members is frustrating (see quotes <sup>99 100</sup> in Appendix N). The value negotiations for these parents involve managing relationships with their family members and trying to ensure a suitable environment for the allergic individual.

The lack of understanding of allergy accommodations required of family members when hosting the allergic individuals was attributed by some participants to having a cultural and/or generational influence. This was particularly noted for the grandparents of allergic children, who may have not dealt with allergies before and find it hard to understand or adapt (see quotes <sup>101 102</sup> in Appendix N). Grandparents from some cultures, such as Italian, were noted as having nuts out at home, especially during holidays such as Christmas (see quote <sup>103</sup> in Appendix N). Child

and adolescent family members of allergic individuals seemed to be better at understanding and accepting their family member's allergy, even when newly diagnosed (see quote <sup>104</sup> in Appendix N). Both young siblings of allergic individuals and the children of allergic adults were reported to be conscientious towards their family member's allergy, by asking questions and avoiding allergens (see quotes <sup>105</sup> <sup>106</sup> in Appendix N). There is in some instances a generational component to peanut allergy awareness, especially for young people growing up in Ontario where allergen protocols have been introduced since the 2005 Sabrina's Law to help shield food allergic children from their allergens in public settings, as discussed above in 4.4.3.6.

#### 4.4.3.9 Relationships: some insider/some outsider – 'other parents'

**“People with children are, because they are surrounded by it more and they maybe understand it more, because they're exposed more, I think a lot of people don't get it at all.” Angela (AA)**

Participant experiences with other children's parents were mixed. While other parents were described as more aware of allergies than the general population, it does not result in them being necessarily more supportive. For some, the other parents' understanding of allergies was divided among parents that have exposure to allergies versus those who do not. For those that do not have food allergies in the family, it was viewed that their understanding was lacking (see quote <sup>107</sup> in Appendix N). This includes stories of other parents complaining about school policies designed to protect students with allergies and being upset that their children could not bring peanut butter sandwiches to school. When hearing of these complaints, sometimes told directly to the allergy parent, it was upsetting to the allergy parent (see quote <sup>108</sup> in Appendix N).

Also upsetting were incidents where allergic parents heard about other parents purposefully excluding the allergic child from visiting their house (see quote <sup>109</sup> in Appendix N). While these exclusionary incidents are negative experiences, the allergy parents also understand that other parents can be very nervous about the allergy and use of the SIE, such as at birthday parties where there may be peanuts in the home (see quote <sup>110</sup> in Appendix N). Other parents that had children with allergies were seen as insiders and were able to 'get it' (see quote <sup>111</sup> in Appendix N). The complex territory of other parents involves many social factors and can

guide allergy parents to make other value negotiations on values, such as safety for their child.

#### 4.4.3.10 Relationships: outsider – work colleagues

**“I still have colleagues that will see me and they're like 'okay, okay, I had peanut butter today, I won't talk to you' ... but even with a comment like that, they still don't get it and these are very educated individuals.” Helen (AA)**

Allergy awareness and accommodation by work colleagues was generally seen as lacking by participants. While a number of company human resources departments had policies regarding allergies, there were opportunities to improve how they operated in practice. In some instances, the allergic participants did their own orientation to new work colleagues regarding their allergy and SIE location (see quote <sup>112</sup> in Appendix N).

Other participants worked in environments that were not friendly towards people with allergies, such as for a participant working as a nurse in a major Toronto hospital who had a serious allergic reaction at work because there were no food restrictions in the shared nurses' lunch room (see quote <sup>113</sup> In Appendix N). In these situations, the interpersonal relationships in the workplace may be more distant and with a less involved social role that does not significantly influence others' food choices.

#### 4.4.3.11 Relationships: outsider – restaurants

**“I used to work as a waitress and there were peanuts in the bar area and they had rules about not bringing peanuts into the dining room, because of allergies and nobody cared, no one cared, you know, the restaurant patrons didn't care, the other waiters or waitresses didn't care, you know, peanuts could be anywhere and they, allergies meant nothing to them, they felt that if you had an allergy you should stay home.” Tanya (PA)**

Participants generally saw restaurant staff as being outsiders, with some seen as being more helpful than others. Participants spoke of the need to trust the restaurant servers as they were the conduit to the kitchen personnel. For some, the staff were viewed to 'not get it' or 'not care' about allergies, leading to a perception of physical and psychological risk (see quote <sup>114</sup> in Appendix N). This potential lack of care by restaurant staff may lead to mistakes, like the non-intentional inclusion of nuts in

food, in the kitchen and via non-communication by the servers (see quote <sup>115</sup> in Appendix N). One participant noted that younger servers tended to be more 'on it' and helpful regarding allergies than were other servers (see quote <sup>116</sup> in Appendix N). The influence of social factors for the younger servers may derive from school and activities where they have exposure to other young people with allergies, but overall there is still a gap in how the restaurant staff are influenced in their work by allergies, if at all.

For participants, the 'outsider' label also extended to the restaurant management and corporate owners. Many restaurants were viewed to be worried about the risk of litigation and instead of making an effort to be allergy-friendly, relied on blanket statements warning of the risk of allergens. Participants spoke of the need for restaurants to at least 'try' and that there was more that the restaurants could do towards allergies (see quotes <sup>117</sup> <sup>118</sup> in Appendix N). The rights of individuals with allergies to make their own informed decisions was raised, with stories of people with allergies being refused service by restaurants that would not guarantee a peanut-free kitchen (see quote <sup>119</sup> in Appendix N). The food context of the restaurant setting can influence the allergic individual, as peanuts or cross-contamination could be present in the food or on surfaces. Personal factors from the food allergy, as well as psychological preferences, can lead to value negotiations around health resulting in the avoidance of certain restaurants.

#### 4.4.3.12 Relationships: outsider - mistrust– 'others'

**"I think there's a lot of blame and there's a lot of blame when something happens too. Especially with, so in my hometown in the last year, a 10-year-old died and he didn't have up-to-date EpiPens and he didn't have up-to-date inhalers and there was this big whole thing about it and it's hard because people want to point fingers." Trisha (PC)**

This section reflects 'others' that generally behave as outsiders. As mentioned earlier in the insider-outsider introduction, there is a segment of society that believes the allergy to be made up to get attention and/or is not sympathetic towards allergies (see quote <sup>120</sup> in Appendix N). This negativity can extend to blaming parents, calling them liars and treating the allergic child with prejudice (see quote <sup>121</sup> in Appendix N). Some participants spoke of feeling a backlash, with these 'others' becoming disgruntled with food restrictions, such as gluten free and dairy free, such that

peanut allergy was associated and aggregated with these other dietary factors resulting in it being perceived as 'high maintenance' (see quote <sup>122</sup> in Appendix N). These characterisations were concerning to many participants and in some cases they attempted to shield their children from these negative messages.

The online environment was seen to be divided between insiders, as seen in the allergy Facebook groups, and outsiders, as seen with others. Outside of the allergy groups, Facebook commenters were particularly seen as negative and unpleasant about allergy concerns. This was upsetting to participants, leading them to block commenters they view as ignorant, such as those that suggest allergic individuals should not go out of their homes (see quote <sup>123</sup> <sup>124</sup> in Appendix N). Other commenters were seen to be nasty towards children, especially comments surrounding vandalism at Toronto parks, where play equipment was smeared with peanut butter and some commenters called for the injury and death of children with peanut allergies under the guise of 'natural selection' (see quotes <sup>125</sup> <sup>126</sup> in Appendix N). On television, talk show hosts and sitcoms were associated with making jokes about food allergies and minimising the serious consequences of allergies as simply an inconvenience (see quotes <sup>127</sup> <sup>128</sup> in Appendix N). Some participants were more bothered by these comments than others, with some just dismissing them as ignorant.

#### 4.4.3.13 Relationships: visualisation of role of relationships

The prior sections detailed the roles of insiders and outsiders and examined how they interrelate. Based on the interview results, I have identified different types of relationships with the allergic individual and grouped discussion of each accordingly. Within these relationships, the transfer of primary responsibility for the allergy from those with an obligation to the child, such as their parents, and then progressing through adolescence, to the grown adult having personal responsibility for themselves was identified. The three age cohorts selected at the outset of the study proved helpful in exploring this transition. These elements are visualised in Figure 17 below.

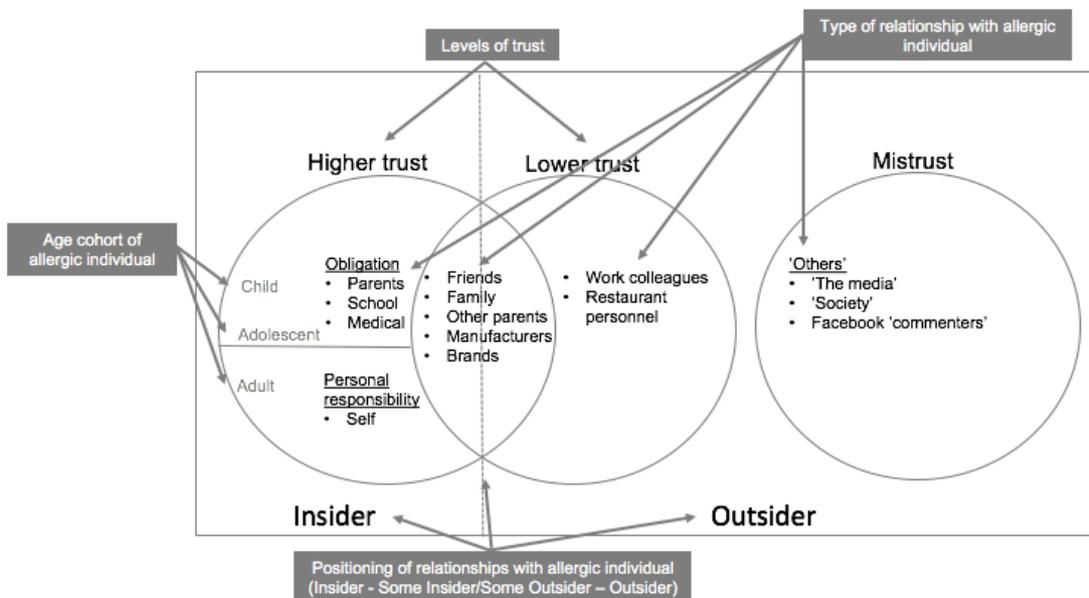


Figure 17 Visualisation of the role of relationships in the conceptualisation of packaged food consideration sets for individuals managing severe allergies (detailed)

In this version of the visualisation of the role of relationships in the study, grey call-out boxes are added to explain the model in detail. The modified Venn diagram is used to show the two spheres of higher and lower trust, while the overlapping section shows types of relationships that can involve some higher trust and some lower trust. The underlined titles in this section are the form of responsibility to the allergic individual, the obligation to another or personal responsibility to oneself. The insider-outsider positioning is organised with a dotted line representing the area of some people acting as insiders and some acting as outsiders. The relationship category of 'others', is placed in a separate circle representing mistrust. Following the mistrust definition in 2.5.3, these 'others' are outsiders that are regarded suspiciously, negatively with a concern that they may intend harm.

#### 4.4.4 Influences: context

The food context is the physical surroundings and social climate of the choice setting where food is supplied by the larger societal food system. It can include the types of food and the availability of foods, including variance due to seasonal or market factors (Furst et al., 1996). Where, and how, participants shop for food was a significant part of the interview discussion. Each participant had their own individual approach to the food-shopping journey. While there were strong personal factors regarding the food context, such as preferences, like and dislikes, similarities

between some participants were also identified. The next two subsections discuss the stores where participants shop and how they see their choice possibilities when forming consideration sets.

#### 4.4.4.1 Context: stores and values: convenience, cost and other factors

Participants shop in a wide variety of food retailers ranging from premium to discount stores. Table 19 presents the stores where participants report shopping and participants' rationale for choosing these stores. Common responses focused on convenience, availability and value.

<b>Premium grocery stores</b>	<b>Rationale for Choice</b>
Health Food Store/ Longos/ Whole Foods Market/ Pusateri's	<ul style="list-style-type: none"> <li>• Have products not sold elsewhere</li> <li>• Have allergy specialty foods</li> <li>• More conscientious about foods stocked</li> </ul>
<b>Pharmacy/Chemists</b>	
Shoppers Drug Mart (pharmacy chain now owned by Loblaw)	<ul style="list-style-type: none"> <li>• Convenient for snacks</li> <li>• Carries President's Choice products</li> </ul>
<b>Conventional grocery stores</b>	
Loblaws/Fortinos/Zehrs (Loblaw premium stores)	<ul style="list-style-type: none"> <li>• Store in close proximity to home</li> <li>• Free parking</li> <li>• Good quality produce (fruits and vegetables)</li> <li>• Peanut-free foods</li> <li>• Get PC Points (loyalty programme)</li> <li>• Availability of grocery carts (with child seat)</li> <li>• Know store layout, where things are</li> <li>• Carries President's Choice products</li> <li>• Stores have large variety of safe items</li> </ul>
Sobeys	<ul style="list-style-type: none"> <li>• Store in close proximity to home</li> </ul>
Metro	<ul style="list-style-type: none"> <li>• Good quality produce (fruits and vegetables)</li> <li>• Availability of specialty brands</li> </ul>
<b>Independent stores</b>	
Food Market/Organic Bins (Fresh City Farms)	<ul style="list-style-type: none"> <li>• Avoid processed food</li> <li>• Availability of whole foods</li> <li>• Sometimes can manage order online</li> <li>• Convenience, close to where you are</li> </ul>
Independent Grocery Store/ Foodland	<ul style="list-style-type: none"> <li>• Located in small town</li> <li>• Good quality meats</li> </ul>
<b>Discount stores</b>	
Walmart	<ul style="list-style-type: none"> <li>• Online shopping with delivery</li> <li>• Large stores with wide variety of items</li> <li>• Convenience</li> <li>• Low prices</li> </ul>
Real Canadian Superstore/ No Frills (Loblaw discount stores)	<ul style="list-style-type: none"> <li>• Low prices</li> <li>• Large stores with wide variety of items</li> <li>• Peanut-free foods</li> <li>• Convenience</li> <li>• Family member works for Loblaw</li> <li>• Click and Collect (order online, store pickup)</li> <li>• Get PC Points (loyalty programme)</li> <li>• Carries President's Choice products</li> </ul>
FreshCo (Sobeys discount stores)	<ul style="list-style-type: none"> <li>• Low prices</li> </ul>
Food Basics (Metro discount stores)	<ul style="list-style-type: none"> <li>• Low prices</li> <li>• Store in close proximity to home</li> </ul>
<b>Warehouse club stores (membership based)</b>	
Costco	<ul style="list-style-type: none"> <li>• Bulk items</li> </ul>

Table 19 List of Canadian grocery stores with participant commentary

Canadian supermarkets are led by the 'Big 3' Canadian chains: Loblaw, Sobeys and Metro, all of which operate conventional and discount stores with a number of different store names. Margins at the Big 3 have been eroded in part by competition from the U.S. retailers Walmart and Costco (Holloway, 2016). Discount grocery consumers in Canada come from all socioeconomic backgrounds, some in need of low food prices and others just enjoying the savings (Shaw, 2016). In a study by Field Agent Canada, Walmart topped its survey for best grocery prices, followed by Real Canadian Superstore, No Frills and Costco (Canadian Grocer Staff, 2015). Value negotiations between price and the perceived worth of food drives some participants to choose to shop at stores aligned to their priorities.

In addition to low prices, participants noted store locations in close proximity to home as a factor in grocery store choice for certain products. Of the stores noted, the Loblaw stores were mentioned the most frequently. The Loblaw core, premium and discount stores have 900 store locations in Canada, greatly outnumbering any of their main grocery competitors as seen in Table 20. The major Canadian grocery retailers usually have full-size, full-service store locations that are typically in areas with higher populations, making them geographically close to participants' homes. Of the other decision criteria noted by participants, there are differences and commonalities by store name and premium-discount category. All Loblaw stores sell the President's Choice and No Name store brands, with the discount store No Frills having a smaller selection of the premium President's Choice products. The PC Points loyalty programme where participants can collect points to convert into grocery purchases is available at all of the Loblaw stores. Price matching, where grocery retailers match competitors' advertised sale prices, is only available at the Real Canadian Superstore and Walmart. Value negotiations around convenience, including ease of access and other factors such as variety may be a consideration for consumers shopping at these stores.

<b>Loblaw Companies Ltd. (Loblaw Companies Limited, 2016)</b>	
Loblaws/Fortinos/Zehrs (Loblaw premium stores)	400
Real Canadian Superstore/ No Frills (Loblaw discount stores)	500
Shoppers Drug Mart (pharmacy chain now owned by Loblaw)	1300
<b>Sobeys (Sobeys Inc., 2017)</b>	
Sobeys	255
FreshCo (Sobeys discount stores)	89
Foodland (Sobeys rural stores)	227
<b>Metro (Metro, 2016)</b>	
Metro	338
Food Basics (Metro discount stores)	125
<b>Walmart (Wal-Mart Stores Inc., 2017)</b>	
Walmart	400+
<b>Other</b>	
Costco (Costco Wholesale Canada Ltd., 2017)	91
Longos (Longo Brothers Fruit Markets Inc., 2017)	30
Whole Foods Market (Whole Foods Market IP. L.P., 2017)	13
Pusateri's (Pusateri's Fine Foods, 2017)	4

Table 20 Canadian grocery store counts

The choice of food retailers by participants was based on a number of factors, including proximity to home and low prices. For this study it is helpful that there are a limited number of grocery companies in Canada, as it allows for common store brands and similar selections for participants no matter where they live in the province.

#### 4.4.4.2 Context: choice possibilities and values: cost, convenience, health

The choice possibilities for participants reflect their food context. The availability of food and other influences can serve to expand or constrain these choice possibilities. These choice possibilities can be viewed through the lens of the conceptualisation of consideration sets. Participants were asked about the number of foods that they considered before purchasing a new packaged food item. The size of reported packaged food consideration sets, driven by the choice possibilities, varied among participants as seen in Figure 18.

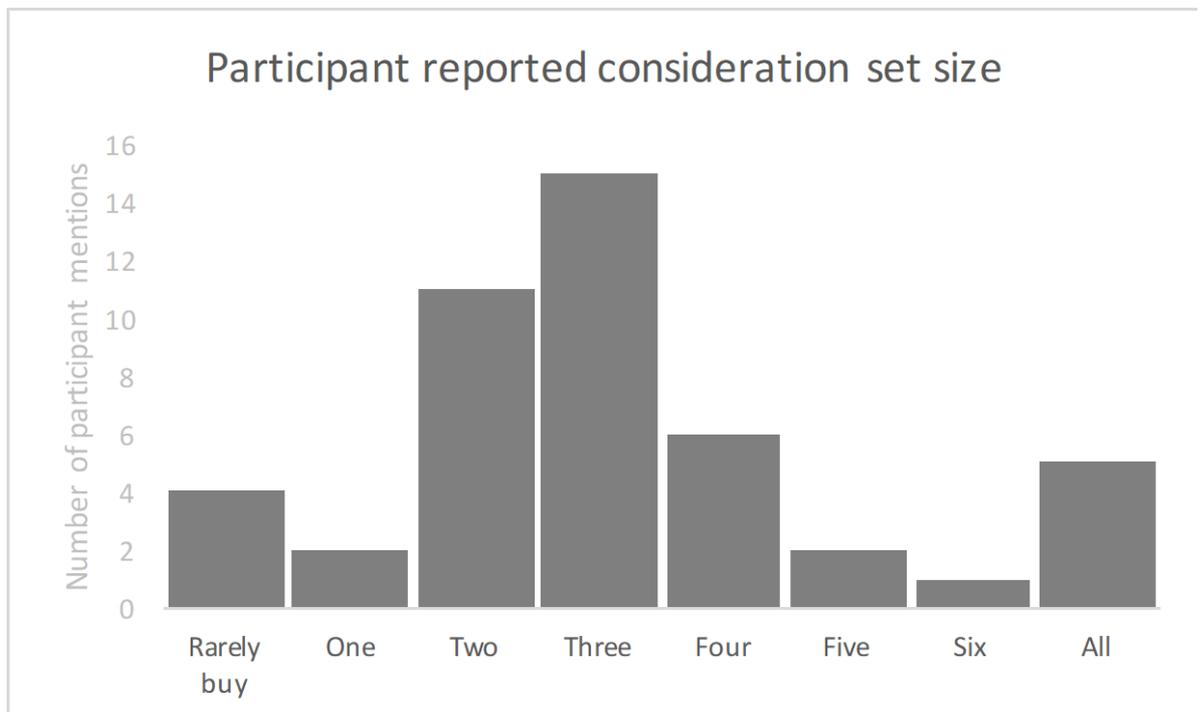


Figure 18 Participant reported conceptualised consideration set size

The size of conceptualised consideration sets in different packaged food categories, such as cereal, biscuits and chocolate, for an individual participant was reported to be largely consistent with no notable exceptions. The conceptualisation of consideration sets by participants was driven by the food context and choice possibilities available in the societal food system. Value negotiations involved many elements such as cost, convenience, health and other factors. The availability of packaged foods at the stores visited by participants could have influenced how many items they were able to consider in their food choice process, however the stores frequented by participants were largely consistent based on the study location.

#### 4.5 Conclusion

This chapter began with a discussion of food choice theories and models. Food choice theory, specifically the food choice process model by Connors et al. (2001), as derived from the earlier food choice process models by Furst et al. (1996) and Falk et al. (1996), served as the foundation for the chapter. The chapter format follows the food choice process, beginning with life course and continuing on to influences and the value negotiation component of the personal food system. The discussion in the life course section revealed that the basis of participants' approach to food choice was formed by their life experiences, as well as by the generations, culture, past allergic reactions and other experiences they brought to the research.

The chapter's discussion continued to food choice influences, starting with ideals. The other sections primarily contained participants' ideals, but certain elements, such as a desire for social status expressed through choosing brand name products, were included and highlighted. I demonstrated that influences and the related value negotiations were closely linked and they were discussed fluidly in these sections and subsections. When considering resources, the use of a shopping list in both paper and electronic form was a frequent accompaniment to food choice preparation. The resources of technology, such as price-matching apps, helped participants manage their time and drove the value of convenience. Similarly, the resource of money was seen to hold an important role for consumers as they negotiated the cost values of price versus the perceived worth of the food.

The influence of social factors was then addressed, focusing on relationships and the value negotiations involved in managing relationships surrounding the food choice for an individual with an anaphylactic allergy. In managing relationships relating to food allergy, many roles were found to interact. Firstly, guided by the participants, I distinguished between insiders and outsiders as those that 'got it' (insiders) and those that 'don't get it' (outsiders), in relation to a deep understanding of having a severe allergy. Societal roles were divided between these distinctions, with some roles having incorporating elements of both insider and outsider, referenced as some insider/some outsider. Families play a major role in food choice for allergic individuals, as well as guiding the responsibility for the food choice. This responsibility for food choice transitioned from the caregiver obligation to a child, such as a parent or school, to the adult taking personal responsibility for their allergy. The relationships section ends with a detailed visualisation of the role of relationships, which adds to the understanding of the roles and ownership of responsibility through the age cohorts of the allergic individual. The discussion of influences concluded with the context of the food choice. The stores participants shop at and why they shop there were presented, as well as the related value negotiations. From this, I assessed the choice possibilities as they relate to the value negotiations in relation to the conceptualisation of packaged food consideration sets.

The next two chapters, PR and trust, continue the discussion of the personal food system. I share strategies relating to PR and trust through the perspective of the participants and the chapters are organised according to themes that arise.

## **5 Perceived risk (PR)**

### **5.1 Introduction**

This chapter on PR has been organised to share the findings, analysis and discussion from the interviews conducted with the participants. This chapter follows the one on food choice where I set the basis for the narrative thematic discussion of food choice strategies relating to PR and trust. This chapter on PR precedes the chapter on trust as ordered alphabetically in Chapter 2. The sections and subsections are organised as broad themes and subthemes, reflecting the interviews conducted with the participants. For this chapter, higher PR and lower PR are used as greater-than-neutral PR and less-than-neutral PR respectively; a specific measure of what constitutes either is not used.

The three participant cohorts of Adults with peanut allergies (AA), Parents of Adolescents with peanut allergies (PA), and Parents of Children with peanut allergies (PC) each bring a different perspective examining PR. The AA cohort has a great deal of experience in managing their PR in respect to their allergy, with many having over twenty years of food shopping with their allergy. This lengthy experience, coupled with the personal responsibility for their allergy contrasts with the PC cohort. Most participants in the PC cohort had just a few years of experience buying food for their child with allergies, with two participants having just months of shopping for their newly diagnosed child. The PA cohort had a level of experience between the AA and PC extremes; one adolescent was newly diagnosed, while the other parents had shopped for their adolescent's allergy for over 10 years. The differences in experience between the cohorts are an influence to their view of PR.

### **5.2 PR theory and the expanded risk dimensions**

As introduced in Chapter 2, there is no single theory of PR. The many disciplines involved in PR research have varying approaches to PR study and measurement. As discussed, I follow in the research tradition of consumer PR, understanding PR as 'the expected negative utility associated with the purchase of a particular brand or product' (Dunn et al., 1986, p. 205).

To frame the discussion of the PR, the spectrum of negative consumer utility is examined using the expanded risk dimensions, as presented in Table 2 in 2.4.1, and repeated here for reference.

Types of risk	Risk description (The risk that the ...)	Anchor points
<b>Financial risk</b>	brand/product will cause you to lose money (e.g., by not working for you or costing more than it should)	<b>Low (1)</b> = low chance of losing money <b>High (9)</b> = high chance of losing money
<b>Performance risk</b>	brand/product will have something wrong with it or that it won't work well	<b>Low (1)</b> = low functional risk <b>High (9)</b> = high functional risk
<b>Physical risk</b>	brand/product may result in a health hazard to the consumer	<b>Low (1)</b> = very safe <b>High (9)</b> = very unsafe
<b>Social risk</b>	brand/product will make other people regard the purchaser in a negative way	<b>Low (1)</b> = low social risk <b>High (9)</b> = high social risk
<b>Psychological risk</b>	brand/product will have a negative impact on the purchaser's self-perception or peace of mind	<b>Low (1)</b> = low psychological risk <b>High (9)</b> = high psychological risk
<b>Time risk</b>	brand/product will waste time, waste effort or resulting in the loss of convenience for the purchaser	<b>Low (1)</b> = low time risk <b>High (9)</b> = high time risk

(Table 2 repeated-6 Dimensions of Risk)

The six dimensions of risk, sometimes called the Jacoby-Kaplan instrument, are regularly used in quantitative research to calculate the 'overall PR' of a brand or product for the consumer. 'Overall PR', as presented by Jacoby and Kaplan (1972, p. 7), ranges on a nine-point scale where 1=no risk at all and 9=extreme risk, and is calculated as a function of the products of uncertainty and consequences of the risk for each of the risk dimensions. While the 'overall PR' absolutes of 'no risk' versus 'extreme risk' are best suited to empirical investigation, the associated range of 'lower PR' versus 'higher PR' is used here as it is more suitable for qualitative investigation. This qualitative investigation uses the term PR instead of 'overall PR' to avoid confusion with the empirical calculation that is measured on a nine-point scale between anchor points.

### 5.3 Food choice strategies and PR

In the food choice process model, for the actions preceding food choice, value negotiations are involved, which lead to strategies. For the participants, value negotiations for selecting allergy-suitable foods have taken place, for most, repeatedly over many years. These recurring value negotiations have led to strategies that are identified and are presented in this chapter on PR and the next chapter on trust. The participants' stories of why these strategies have been formed and the value negotiations involved in forming them are examined.

As discussed previously, the value negotiations leading to food choice strategies have an interplay. This interplay can take place as iterations leading to the strategy. I view the consumer's approach to PR as part of his or her strategy, formed through the value negotiations. For the risk dimensions that form PR, the value negotiations can be related as seen in Table 21.

Food choice value negotiation	Risk dimension
Taste (Sensory perceptions)	Performance risk
Managing relationships	Social risk
Convenience	Time risk
Cost (Monetary considerations)	Financial risk
Health (and nutrition), safety	Physical risk
Quality, ethics and health	Psychological risk

Table 21 Relating the risk dimensions to food choice value negotiations

The value negotiations and risk dimensions are viewed as being complementary and leading towards the PR strategies discussed throughout this chapter. In describing the PR themes and subthemes that have derived from the participant interviews, a commentary is included on the value negotiations and risk dimensions.

### 5.4 Higher and Lower (+-) PR and consumer search for product information

**This section examines the concept epitomised by the phrase: 'I seek information from manufacturers to understand risk.'**

Consumers seek information to assess the PR of products. This theme from participants details their efforts and strategies to obtain the information they desire from the food manufacturers. Some participants shared that sometimes the information they want and need is difficult to obtain and that they have developed

strategies to cope with this difficulty. At times, the information received may be inadequate or viewed as unreliable and associated strategies are formed, such as the avoidance of certain products or manufacturers. There were apparent differences between participants' accepted PR levels leading some to be comfortable with manufacturers' responses and others to be confident in their own abilities to assess risk without contact with the manufacturer.

#### 5.4.1 Higher PR with consumer time spent to get information

**This section examines the concept epitomised by the phrase: 'I spend a lot of time trying to get answers from manufacturers'**

This section describes situations where participant consumers try to get the information they want from manufacturers to assess product risk, including the participants' time and physical risk. In this area, participants speak of the manufacturers' obligation to provide the consumer with the needed information.

Product information from manufacturers regarding allergies is noted as being at times inconsistent by participants. Some participants told stories of telephoning a manufacturer from the grocery store itself; President's Choice was a brand that was noted in this regard. As a store brand, different products are made by different manufacturers, and this, in conjunction with labelling that according to participants is not clear, contributes to the risk perception of the product.

- Sheri (PA): "We get a lot of President's Choice items, and we call and verify and we are not happy with the labelling, we find that it doesn't clearly state if it's on the same lines."

This perceived lack of clarity makes it more difficult for consumers to assess the physical risk of the product. The challenge of obtaining the necessary information leads some participants to restrict their choice of manufacturer and brands to manage the effort and time involved.

- Allison (PC): "So, suddenly I was calling manufacturers and trying to figure out why everybody's labels were different and yeah, it's, I used to spend, now we've gotten it, like his allergies have stabilised, so now we know the brands we go to, before that it was just like a shit show."

The time risk related to approaching manufacturers was noted, as participants, through experience, report spending considerable time on the phone with manufacturers trying to obtain the desired information in order to understand the risk (see quote <sup>129</sup> in Appendix N). In some cases, this time risk and uncertainty was extended by manufacturers who were unable to give timely answers to participants' allergy questions.

- Kim (PA): “If I buy the product, I still have to phone the manufacturer, to double check for cross-contamination of things that they don't have to list about, and usually they can't give me an answer, and they have to research and get back to me.”

The lack of immediacy in the response from certain manufactures was discouraging to some participants. When comparing manufacturers, participants noted that some were able to respond more quickly than others. This difference in response times was a consideration for participants in managing their time risk.

- Sheri (PA): “President's Choice has excellent customer service but it takes so long to find out a quick answer. Salba gave me an answer in two seconds or less. The soap that I bought was able to direct me to their website, tell me the ingredient list and confirm in seconds, was amazing.”

Convenience and health were important value negotiations leading to strategies to manage participants' time investment. A notable finding is that the level of manufacturers' commitment to consumers managing allergies may be questioned in instances of protracted response times, equally it may be the recognition by manufacturers of an obligation to allergy consumers.

#### 5.4.2 Higher PR with consumer concerns about accuracy of information

**This section examines consumer strategies in response to the concept epitomised by the phrase ‘I’m not sure manufacturers know their stuff’**

Some participants doubt the accuracy of information given by manufacturers. An observed lack of accountability by manufacturers to provide correct responses to the consumer questions contributes to the psychological product risk. It also results in a higher level of involvement for the consumer with the product as they attempt to find out the correct information.

Even when participants could gain a response from manufacturers, the response may be viewed by the participants with a level of scepticism. Participants have experience, both directly and through social media, with manufacturers' customer service departments providing inconsistent and contradictory information about allergy risk.

- Danielle (AA): “So it's another problem with this whole calling in thing is, do they know what they are talking about? So that's, I'd like to know if the cookie ones are okay, because some people say they're not for peanut allergies either, it's so much inconsistency, but this specific product should stay exactly the same.”

When participants were asked about which manufacturers were good at responding to product queries, incidents were raised of inconsistent messages from even the 'good' manufacturers (see quote <sup>130</sup> in Appendix N). Value negotiations regarding the risk to health from questionable or incorrect information are seen here and can lead to strategies that are used by consumers to navigate this ambiguity in the food choice process.

In this study, the lived experience of participants' communications with manufacturers appears to have triggered greater PR through participants' uncertainty about the responses received. This uncertainty is furthered through social media, specifically Facebook allergy groups, where experiences of questioning manufacturers are shared and compared. These comparisons often highlight differences in the manufacturers' responses, leading group members to doubt the credibility of some manufacturers and highlighting to them the risk of reliance on manufacturer information.

#### 5.4.3 Higher PR with manufacturer not sharing information with consumer

**This section examines the concept epitomised by the phrase: ‘I need information to make an educated choice, not ‘the party line’**

Participants expressed a desire to make their own decisions about food choice, and are stymied by some manufacturers not providing information to support this. In this situation, the power rests with the manufacturer to share the information needed by the consumers, while the consumers want to have more control over their ability to make an informed decision.

When trying to assess the physical risk of a product under consideration, some participants report receiving a standard response that does not address their questions. These generic responses often advise consumers with allergies to avoid a manufacturer's products, without providing any information about the risk involved (i.e. specifically why the product should be avoided). The apparently dismissive nature of these manufacturer replies results in participants reporting frustration both with the response and the manufacturer (see quote <sup>131</sup> <sup>132</sup> in Appendix N). The noncommittal nature of some manufacturer responses does not allow the allergic consumer to make an educated choice regarding risk. Instead, power and control reside with the manufacturer.

- Cathy (PA): "Like it's, that's not the go-to, it's like a cover your back, rather than legitimately giving advice so I can make a decision, that's all I'm asking as a consumer is, I'll make the decision, you're not responsible for that, but give me the education I need, what I need to make an educated choice, rather than just 'we recommend you don't do it', it's irritating."

Continuing the information search, participants report new product line extensions and flavours as typically triggering the need to contact manufacturers to obtain information. The question of 'What's changed?' is asked about manufacturing facilities, manufacturing processes and the risk profile of existing products.

- Samara (AA): "Like when they create a new, sort of like a feature thing or a special thing, I will enquire about that, when it sort of is not the basic one,"

The need for information about the products involves control, personal responsibility and obligation to others. The value negotiations here are primarily around health and other factors, such as safety leading to strategies of product avoidance and monitoring manufacturers.

A number of participants expressed negative emotions regarding the manufacturers, especially frustration and resentment. With the power and control of the product information held by the manufacturers, the participants react to this by attempting to wrest a portion of power and control for themselves. Participants share their frustration with the manufacturers by choosing to not buy the manufacturers' products, driven by a level of resentment towards the time and effort required to receive an answer to a product question.

- Sheri (PA): “Like PC, um, I'm frustrated, I try not to buy their products because I resent having to make a fifteen-minute call to check two products every time... So many products that don't indicate either way, and I'm just, I'm getting a little bit tired of calling all the time.”

The effort required to get answers caused frustration, leading to a level of fatigue for some participants, as they became tired of searching for answers (see quote <sup>133</sup> in Appendix N). The expectation of participants is that they should not be required to telephone to obtain necessary information that they believe should be available on the product packaging in the first place. Value negotiations around convenience, where time is a commodity to be spent or saved, can lead to strategies and decision rules that expedite the food choice process in the face of difficult-to-obtain manufacturer answers.

There are also attempts by participants to police the manufacturers. In this, they seek to reclaim some power and control from the manufacturers by holding the manufacturers to account. This perceived accountability of manufacturers to their consumers involves a time, energy and financial investment.

- Cathy (PA): “Sometimes, if I, more as like a police, like when the Compliments grocery, um, granola bars for instance, it really ticked me off that they had this symbol and there was (sic) almonds, so I phoned, they didn't really care, they really didn't, I don't find there's a whole lot of, you know, sympathy from those companies.”

The frustration with manufacturers is continued with participants' perceptions that the manufacturers just do not care about the issues concerning their consumers. Value negotiations around the safety and health of the allergic individual may have formed this strategy of seeking accountability in food choice by attempting to police the food manufacturer.

#### 5.4.4 Lower PR when manufacturer is responsive to the consumer

**This section examines the concept epitomised by the phrase: ‘Manufacturers are used to allergy questions, they ‘know the drill’**

Certain manufacturers were perceived to be forthcoming with the information requested by their consumers. This positive communication facilitated the

information search by giving consumers a sense of control and power over their decisions.

Participants note that some manufacturers have prepared responses for their consumers to common allergy questions. The manufacturer's obligation to their consumers is seen as facilitating consumers' information search. In this, certain manufacturers are identified as 'good' and in some cases become known within the allergy community for their helpful assistance.

- Cathy (PA): "I have phoned quite a few, I don't know, I guess Nestle was good actually, when I had questions, this was years ago, but with some choc, I think I had a question about whether their individual snack size Kit Kats for instance were safe, and they are, they know the drill, like maybe because they're well known for it, but they've got the drill down pat."

The specificity of the information is seen as an important element. When a consumer's questions are given specific answers, the consumer is satisfied. The preparation on the part of the manufacturer to respond to questions and have the answers available in a timely manner is seen positively.

- Allison (PC): "Most of the responses I've got seem like they get the questions quite often because the responses they come back with seem to be well thought out and planned, you know they'll say 'we use the same equipment but don't use the same this, we use' very specifically."

Manufacturer openness to educating consumers about their products is favoured by participants, enabling their consumer information search. The consumers are prepared to make their own decisions about the risks involved in selecting certain items, once they feel that they have the information they require. The sharing of control over product information gives the power of knowledge to consumers and builds a relationship with the manufacturer.

- Cathy (PA): "I find the cereal manufacturers have good labelling, like Kellogg's, even though they do have some products, but they're pretty clear, and I'm trying to think of which ones I've phoned, I think Kellogg's I've phoned about their production lines to find out and they were pretty good actually, they were good at explaining like what lines they use for what, and their cleaning process, they were pretty decent about it."

These results appear to support the idea that positive perceptions of manufacturers that share seemingly accurate information generates positive emotion for these consumers. Value negotiations are around the convenience of dealing with helpful manufacturers and the confidence in the information provided to avoid allergic reactions, leading to food choice strategies that are positive towards these manufacturers. The resulting relationship between the manufacturer and the consumer can be seen as them sharing an obligation towards the allergic individual.

#### 5.4.5 Lower PR when consumers feel capable of assessing their risk

**This section examines the concept epitomised by the phrase: ‘I don’t call companies, I have enough information to assess risk.’**

Not all participants report calling manufacturers to seek product information. In these cases, there was a belief that the information they have on the products was sufficient for them to assess the risk.

Many of the adult participants with an allergy do not call manufacturers. Their ability to take personal responsibility for their choices and the consequences may play a role. The information on the labelling is seen as being sufficient in some instances, with the thought of calling the manufacturers being beyond what is necessary.

- Danielle (AA): “Some people will go as far as if it says nothing they’ll call in and they’ll ask if it’s ‘May Contain’ or shared lines and anything and like I don’t. (Also see quotes <sup>134</sup> <sup>135</sup> in Appendix N)

Different levels of concern about manufacturers is seen across participant cohorts. Within the parents of allergic children cohort, some parents do not call manufacturers, managing their obligation to their allergic child within their accepted level of risk.

- Jennifer (PC): “I do not call companies, I know that there is, I know companies aren’t, they don’t legally have to have a ‘May Contain’, but I figure if they don’t have it on there, I’m not going to call, because I can’t live freaked out about every single food option that there is.”

From this, it appears that for some participants the emotional justification of the decision to not call manufacturers may be driven by the desired avoidance of

negative consumption emotions, such as fear. Value negotiations can include managing relationships, where harmony in the household is desired and could be disrupted by the presence of negative emotions.

The obligation of the participant to keep their child safe takes different forms. Some of the participants make a distinction between having the food in their home and having their child eat the food. Especially seen with parents of adolescents, perhaps due to the maturity of the allergic individual meaning they are able to not accidentally consume the product, there can be an acceptance of the labelling at face value. If the allergic individual is going to eat the noted item, it is then that the due diligence of telephoning the manufacturer is performed.

- Kim (PA): “If he's going to eat it, I'll phone and do the research, if we're going to eat it, I'll just make sure that the label looks safe, so if the label looks safe, then I'm safe, I'm okay with it being in the house, if it has come into the house, before he eats it and it is new, I phone and I research it.”

The ability to manage within a home environment with an accepted level of product risk may also relate to the personal responsibility of the allergic individual to not consume the food in question.

### **5.5 + - PR of Cross-Contact/Cross-Contamination.**

**This section examines the concept epitomised by the phrase: 'I want to understand the risk of cross-contact/cross-contamination'**

What is referred to by study participants as cross-contamination may also be called 'cross-contact'. The 'cross-contact' term has recently been adopted by some members of the allergy community to in some instances replace cross-contamination, the latter being a term that is often used to refer to bacteria or viruses getting on food. The risk from bacteria and viruses in a cross-contamination situation may be reduced by cooking the food, while allergens from cross-contact are not affected by cooking (Food Allergy Research and Education (FARE), 2014). The potential for cross-contact—the unintended introduction of allergens into food—exists in a manufacturing context when there is a chance of allergen transfer during processing or handling in the production facility. This cross-contact can occur when allergen-containing and non-allergen-containing foods are produced on the same processing line or in the same facility, and the allergen controls needed to prevent

this cross-contact are not implemented properly, such as in the case of incomplete cleaning (Bedford, Yu, Wang, Garber, & Jackson, 2017). Additional sources of unintentional or 'hidden' peanut allergens can be found in Figure 19.

### **Box 1: Sources of hidden peanut allergens**

- Formulation mistake
- Product reuse (e.g., leftover chocolate used for a peanut-containing product is reused for a peanut-free product)
- Inadequate cleaning of shared equipment
- Cross-contamination from shared utensils (e.g., scoops in ice-cream parlours; kitchen utensils in Asian or African restaurants, which frequently use peanuts)
- Artificial nuts originating from de flavoured and re flavoured peanuts
- Confectionaries imported from countries with less stringent labelling regulations than those in Canada
- Protein hydrolysates containing incompletely hydrolyzed soy, wheat, peanut, or milk protein

Figure 19 Sources of hidden peanut allergens.

Source: Al-Muhsen, Clarke, and Kagan (2003)

The term 'cross-contamination' is used by Food Allergy Canada (2015) and the participants to mean both 'cross-contamination' and 'cross-contact', without a distinction made between the two. Within this study, the terms 'cross-contamination' and 'cross-contact' both refer to the unintended presence of the peanut allergen and are represented by 'CC'.

#### 5.5.1 Higher PR from CC in packaged food products

**This section examines the concept epitomised by the phrase: 'I worry about peanut CC'**

The complexity of food, determined in part by the number of ingredients listed, can increase consumers' risk perceptions of CC. A greater number of ingredients in a product can present more opportunities for the CC of peanuts, and worries about

this CC can lead to consumers avoiding this risk by not purchasing the product. Participants mention that a simpler product list, potentially with under ten ingredients, is seen to present less risk of CC.

- Allison (PC): “Really, honestly anything with more than like ten ingredients, I just like, once I'm reading through and and [sic] I'm losing track, that's a problem and also then you'll have concerns about cross-contamination.”

Some consumers want to know if peanuts are processed in the same facility as the product they want to purchase or if the desired product is made on the same production line as product containing peanuts. Manufacturers share this production information externally to different degrees. Manufacturers can disclose risks through the optional ‘May Contain’ statement, however some participants want this to go further. This consumer search for information comes up against manufacturers' desire to control the information about their manufacturing practices, including a competitive aspect. Some of the participants want this manufacturing process information to enable them to better assess the product risk. The restriction of this information by manufacturers can lead consumers to hesitate when choosing products and seek products from manufacturers that avoid this risk by having dedicated peanut-free facilities.

- Christine 1 (PA): “Sometimes I'm a little leery, like certain brands, because I think that they, like I don't like how they [manufacturers] say that it's on the same equipment but they would warn you if they felt that there was a possible contamination, I have a problem with that so the only ones that I'm really, really happy with are the ones that are peanut and tree nut free facilities.”

In some cases, participants want the manufacturing process disclosure, including facility issues, to be mandatory for manufacturers.

- Trisha (PC): “Make it mandatory that they disclose even ‘May Contain’ or the facility issues because that is still cross-contamination... a big fear.”

Consumers' worry about the CC risk—for some a fear—is an undesirable negative consumption emotion. The control of product information by manufacturers leads to frustration for consumers in their information search. Some participants spoke of this frustration, derived from not getting the information they need about CC.

The desire for a differentiation between peanuts and tree nuts on labelling is a requested item. When the term 'nuts' is used by manufacturers, consumers may question how educated a manufacturer is about allergy issues, and see this lack of clarity as a risk for CC.

- Carly (AA): “[Manufacturers need to] Be more conscious of cross contamination and the difference between peanuts and nuts in general, like specifically for my allergies, a lot of things will just say like, ‘May Contain’ nuts, and a lot of companies will try and umbrella peanuts under that label, but they are two distinctive allergies usually, with your case it's not, but with a lot of allergies that I find people are just allergic to peanuts and they have no other reaction to nuts, so when you try and umbrella both terms under it, well one of these things means I'm completely okay with eating your product and one of these things means if I die you're just going to blame it on labelling.”

Participants who have a peanut, but not tree nut, allergy are especially concerned with manufacturers' understanding of the difference between nuts, and see a risk of death from incorrect or incomplete information. The ambiguity surrounding a manufacturer's use of the term 'nuts,' which can refer to either peanuts and/or tree nuts, can further complicate label interpretation by consumers (Bedford et al., 2017).

### 5.5.2 Higher PR from CC in unpackaged food products

**This section examines the concept epitomised by the phrase: ‘I worry about CC in unpackaged foods’.**

'Bulk foods' for this discussion are unpackaged items in bins (a large food container that typically has a loose cover) or netting bags that are open to consumers and not displayed in a sealed package. They do not refer to 'bulk' items from cash-and-carry stores like Costco that sell sealed packages of larger quantities than are typically sold in a grocery store.

Foods can be displayed in store unpackaged, where the consumer or store employee puts the unpackaged selected item into a package, such as a bag. Bakeries, for example, often package at the store-level, either by the store employee or the consumer. Unpackaged peanuts have the potential to shed residue or

fragments outside of the intended display location. Other unpackaged foods or the store fixtures may be vulnerable to CC with unpackaged peanuts.

In Canadian bakeries, bread and pastry items are usually displayed in open shelves and packaged in store at the time of sale. As peanut butter and peanuts are popular in Canadian baked goods, this leads to participant concern about CC in the bakery, as various items are baked on the same trays and in the same loaf pans.

- Amanda (AA): “Bakery, baking, pastries, any time we go into any type of bakery shop, most of the stuff in there you can't touch, mainly because of cross-contamination.” (Also see quote <sup>136</sup> in Appendix N)

Even when precautions against CC are taken by a family member working in the bakery, one participant shares that the bakery products make her nervous about causing an allergic reaction.

- Robin (AA): “My daughter actually works at a bakery, and she's always saying, it's not a nut free place, so when she gets me things, she'll make sure that she touches it first and she knows it hasn't been around other things and whatever, but it still makes me nervous.”

Bakeries are seen by many participants as creating higher PR from CC, with the use of peanuts and peanut products in baking a source of concern, and the open transfer of the product within the store or store section thought to provide opportunities for CC.

Bulk Barn is a store that sells primarily unbranded items such as flour, beans and cereal from open bins. The customer uses a scoop to take the product from the bin and put it into a plastic bag, which is then sold by product type and weight. Participants share concerns about possible CC in these stores coming primarily from the bins and scoops.

- Christine 2 (PA): “I used to be a big Bulk Barn shopper, which I can't go there anymore, which is a little bit aggravating, um, but I do um, I do worry about cross-contamination.” (Also see quote <sup>137</sup> in Appendix N)

The major grocery stores also have sections with bulk bins and scoops. These sections are often located near the bakery and fresh produce. The risk of CC and

the risk of allergic reaction from the smell of unpackaged peanuts leads some consumers to avoid these areas in the stores entirely (see quotes <sup>138</sup> <sup>139</sup> in Appendix N). Negative emotions, such as the fear of an allergic reaction in a child, can drive this avoidance, as can the related obligation towards the allergic individual. The obligation of the participant to their allergic child leads some to advocate against the bulk bins and unpackaged peanuts. The risk of CC within grocery stores for allergic children extends to worry about what they are touching in store, including the shopping trolleys, after which the children may then put their hands in their mouths.

- Courtney (PA): “Lot [sic] of grocery store we've had problems with the peanuts being open in the stores, they don't have them in closed things so normally when I see that I go to the manager right away and say something.”

The plastic mesh bags used by some grocery stores for selling peanuts in their shells are a concern to participants. The bags allow crumbs, pieces of shell and sometimes peanuts to fall out. These bags are typically found in fresh produce sections. The protocols for cleaning the product bins and managing the CC between these bags and the fresh produce in the section are a concern may lead to a higher PR (see quote <sup>140</sup> in Appendix N). Where packaging (or lack thereof) of peanuts does not meet participants' expectations, they see a risk from CC. In some cases, they avoid stores like Bulk Barn entirely, or the store sections with unpackaged peanuts. They attempt to regain control over their grocery shopping environment by choosing to shop in stores that they feel have a lower PR.

The risk of CC dissuades some consumers from purchasing in this bulk format. In a recent Dutch study, it was found that while unpackaged and paper packaged nuts were preferred to those packaged in plastic, there was no significant difference between the unpackaged or paper packaging in consumer perception of freshness, liking or healthfulness (Kroese, 2017). While there are limitations to this recent study, such as the unclear definition of 'nuts', the author's desire to understand the 'best' packaging for products comes through. There are also differences between Canadian packaging and that seen elsewhere, typically Canadian and US snack products are packaged in larger quantities per pack, than the typical European packaged snack. For manufacturers, bulk unpackaged items or mesh bags may be cheaper from a packaging cost perspective, thus giving retailers a beneficial price that they can pass on to customers who choose to shop this format. Some

participants lament that they cannot purchase foods from these bulk bins, due to their allergies, while they greatly desire to do so. The value negotiations around bulk foods weigh their lower cost and convenience against the consumers' health and safety concerns relating to consumption of those foods, leading to personal strategies around these foods and stores.

### 5.5.3 Lower PR from food product packaging CC

**This section examines the concept epitomised by the phrase: 'I'm not worried about packaging CC'**

While a few participants worried about CC between sealed product packaging on the grocery store shelves, others thought this was concern was overblown.

- Danielle (AA): "Not so much between the boxes... That never even occurred to me. Like somebody said something about that in the US, in one of these groups, like the peanut butter cookies were right beside the peanut free cookies, like what if the packages ripped open. But I don't know, I kind of think we're getting a little, like if we're worrying about that kind of stuff we're maybe getting a little bit too overboard."

The perception of risk from situations of potentially low possibility varies by participant, but all participants appear to be aware of packaging risk, whether or not they subscribe to it.

### 5.5.4 Lower PR from individual food product packaging CC

**This section examines the concept epitomised by the phrase: 'I feel that individual packaging cuts the risk of CC'**

Individual packaging is seen by some participants as lowering the risk from CC. When snack products, such as cereal (granola) bars, are sold in individually sealed packages, the control over when the finished product is exposed to environmental CC resides with the consumer.

- Tanya (PA): I like it [individually packaged granola bars] because, um, it's sealed up and it's not going to get contaminated where she's taking it, she can leave it sealed up in her backpack and eat it when she needs it."

The ability to use the individual packaging, such as a wrapper, to hold the product when it is being eaten is another way participants feel they are lessening the risk

from external CC. Value negotiations around the typically higher price of individually wrapped food items are offset by positive regard for the convenience and health benefits of the individual packaging. This leads for instance to participants developing strategies of buying individual snacks for their allergic children to take and eat outside the home.

## **5.6 +- PR and food product nutritional labelling**

**This section examines the concept epitomised by the phrase: ‘I use the nutritional labelling to understand the risk’**

Participants expressed the desire to make the right decisions about food choice for themselves and their families. The product label provides the main source of nutritional information about the product, including the ingredients list and the ‘May Contain’ statement. The former details all of the ingredients in a product listed in decreasing order of quantity. The ‘May Contain’ statement is a voluntary statement that is typically presented in the format of ‘May Contain Peanuts’ where the word peanuts can be replaced by any of the top eight allergenic food(s). There may also be a contains statement such as ‘Contains Peanut’, or the allergenic foods may be **bolded** on the ingredients list.

### 5.6.1 Higher PR from consumer effort needed to read ingredients list

**This section examines the concept epitomised by the phrase: ‘The ingredients list takes a lot of time and effort to read’**

Some participants say that considering products constitutes a time risk for them. The time required to read the ingredients list was mentioned by all participant cohorts, with the need to read the ingredients list stemming from the product risk of an item. Value negotiations regarding convenience can include the time required to read the ingredients list and the ease of use of the product packaging in assessing the suitability of the product for the household.

For many participants, it is products intended for others in the family, and not just themselves, that take time to be considered (see quote <sup>141</sup> in Appendix N). Shopping with children, coupled with the extra time required to read labels, was seen as a challenge, especially for parents of larger families (see quote <sup>142</sup> in Appendix N). Some participants are unwilling to spend too much time reading the ingredients list and decide to go without the product instead of trying to understand the list.

- Jennifer (PC): “If it's harder, if I can't understand everything that's on the list, or if it's a brand new product, half the time I'll just put it back, I'm not going to waste time.”

The time required to read product labelling can be an influence for allergic consumers' shopping habits and this lack of convenience can drive strategies to shorten the food choice process in store.

A number of participants use the 'May Contain' statement as a screening tool and then proceed to read through the ingredients list, where again, difficulty in understanding the ingredients is an issue for them. This difficulty in understanding contributes to the product risk for the consumer.

- Amanda (AA): “The first thing I do is check the bottom and it says 'May Contain', and then I actually literally work my way through every single thing, even though I don't understand half the stuff that's there, um, I still look for those key words, um yeah.”

The need to read the ingredients list regularly is seen by some participants as essential, as the physical risk is perceived as ever-present.

- Cathy (PA): “Always, we I read the labels on it, so if it's something packaged, I'm always, even orange juice, always read the label, I found peanut oil in an orange juice a few months ago, six months ago and I know it's peanut oil which they say is technically not peanut, but I'm not giving my kid peanut oil.”

Many participants self-identify as 'label readers', having a vested interest in reading the labelling. For some of the adult participants this presents as self-efficacy, their confidence in their ability to find and avoid their allergens.

- Helen (AA): “Yeah, so that's the first thing I look at, I'll flip over a package and do read the labels, specifically around any sort of nut containment or processed in a plant they're in or also my big, I'm a big reader anyways so I'm always looking for other things in products that may or may not be good for us.”

For parents of allergic children, their obligation to their children can drive them to always read product labels. The risk and worry from not reading a label compels them to look.

- Jennifer (PC): “Well I read labels on everything, even if I, like I buy Oreos all the time, but every time I pick them up, I got to put them in my cart and I'm like, no, I have to look, just, I read, I've become a label reader for everything... Oh, yeah, now I, everything I buy I always read the labels, even if I'm tempted to just throw the item in the basket, I always end up reading it afterwards because I freak myself out that I'm going to hand her something that she can't eat.”

The product risk drives some allergic consumers to devote their energy to reviewing and attempting to understand the product labelling. Value negotiations around health, with the need to avoid certain foods, are important for these participants, leading to strategies that can include reading the ingredients every time as a rule.

When considering the risk of a product, the concept of the home being a sanctuary for the allergic individual came up frequently. For some participants, the ingredients list serves as a gateway for entry into the home. With this, they attempt to control some of the product risk within their home.

- Cathy (PA): “We want him to be able to open up the cupboard and eat whatever he wants here, in this small space, because I feel really strongly about that, that this is his, I can't imagine, like for him it's so stressful, everything he puts in his mouth he has to think about, so we want him to be able to do it, so now he can be involved with that decision, which helps.” (Also see quote <sup>143</sup> in Appendix N)

A few participants further their attempts to reduce PR in their homes by telephoning the manufacturer and ensuring the manufacturing processes are also clear of peanuts, before an item can enter the home. The consistency and rigour of these efforts to manage PR in the home can bestow a feeling of power and control over the situation, along with meeting the parent's perceived obligation to his or her child.

- Sheri (PA): “One hundred percent of the time, every ingredient, we are label checkers, we call and verify, we don't use shared lines, we don't like cross-contamination, we won't buy, even for those of us in the family without a food

allergy, nothing comes in the house if it has, fruit, but that's only an issue if he consumes it, no product enters the house if it's made in a facility or on a line with nuts.”

In managing the time risk, some participants mention using the bolded ingredient as a first stop in their information search, and only if peanuts are not present do they read the rest of the ingredients list.

- Teresa (AA): “I look for the bold first, because it'll often save you time, right? Like if your bolded part says nuts, then you don't have to read anything, and then if there is no bolded part, then I just scan it.”

Products with lower complexity (less than five ingredients for example) may be seen to be less likely to contain peanuts. However, to manage the PR, participants report still checking the ingredients list to make sure the product is peanut free on the ingredients list.

- Beth (AA): “I'd probably say 'this is a vegetable based product, I could be 99% sure there's going to be no nut product in this', but even then you want, I'd usually, if it has an ingredient list that's more than five ingredients I usually will grab it and just double check as I've been, I've been surprised before.”

The effort of reading the ingredients list is an issue that participants mention for products from low to high complexity. Many participants believe that they must read the ingredients every time in order to understand the PR for themselves or their child, and this strategy was identified by several participants.

#### 5.6.2 Higher PR of consumer missing allergens on the label

**This section examines the concept epitomised by the phrase: ‘I worry about missing something when reading the label’**

The ingredients list can be intimidating for some people, as the ingredient names may be in their Latin forms, rather than plain English. The worry about missing something on the ingredients list is present for participants, especially the parents.

Both the length of the ingredients list and the items listed leads to concern. The time required to read the ingredients list must be balanced with the need to check all of the ingredients listed.

- Jennifer (PC): “Like some snack foods, some cookies and some crackers have like, these mile long...The ingredients list is so long that you, 'is the word peanut hidden in here somewhere or have they used a different word for peanut?', which you know sometimes can happen.” (Also see quote <sup>144</sup> in Appendix N)

The ability for lay consumers to understand all of the ingredients is a concern, with some participants reporting a lack of confidence in their ability to identify all allergens in the ingredients list.

- Sasha (PA): “Completely, so um, yeah, you have to read all the ingredients, and you need to basically have a minor in biochemistry to know the renaming of everything.”

This concern is supported by the variety of names for key allergens. Many participants have more than one allergy, and checking for all possible allergens can be difficult. For example, peanut can appear in an ingredients list as any of the instances listed in Table 22.

Arachic oil	Arachis	Arachis Hypogaea
Artificial nuts	Beer nuts	Boiled peanuts
Cold pressed peanut oil	Extruded peanut oil	Expelled peanut oil
Crushed nuts	Crushed peanuts	Dry roasted peanuts
Earth nuts	Goober peas	Goobers
Ground nuts	Ground peanuts	Hydrolyzed peanut protein
Hypogaeic acid	Mandelonas	Mixed nuts
Monkey nuts	Nu nuts flavoured nuts	Nut pieces
Nutmeat	Peanuts	Peanut butter
Peanut butter chips	Peanut butter morsels	Peanut flour
Peanut paste	Peanuts sauce	Peanut syrup
Spanish peanuts	Virginia peanuts	

Table 22 Possible names for peanut on ingredients list.

Source: Indorato (2014).

Health Canada’s enhanced labelling requirements do not permit some of these names without the word peanut also appearing on the label. However, some items such as plant sterols and refined peanut oil are not identified as allergens because they do not contain protein residues at levels considered by Health Canada to be

hazardous to allergic individuals (Government of Canada, 2016). Many participants avoid products with plant sterols or refined peanut oil as they are unwilling to accept the heightened PR these products present (see Appendix G for more details).

Other products that do not fall under the labelling requirements, such as non-food items, items ordered online, or foods from other countries, may also pose a risk. Non-food items that can contain peanuts include ant baits, bird feed, mouse traps and pet food, cosmetics and sunscreens, craft materials, medications and vitamins, mushroom growing medium and stuffing in toys (Government of Canada, 2016). The seemingly ubiquitous nature of peanuts causes some participants to be constantly on alert.

- Trisha (PC): “I definitely feel like things are more risky, because we have to be on alert all the time, wherever we go, whether it's, it's not just food, it's whether it's in sunscreen, whether it's in soap, things like that, um, as well as just feeling like being out in public is always a risk we take.”

The PR from peanuts is seen to be present in all aspects of life and can involve value negotiations around safety and health.

High involvement with food products is seen with a number of participants' approaches to product labelling. The ingredients list is used in tandem with the 'May Contain' labelling and the Peanut Free Symbol.

- Megan (PC): “I check the ingredient list, check for 'May Contain' statement, check for a contains statement, Peanut Free Symbol, I'm looking for all those things.”

While reading the ingredients list, the bolded ingredients and 'May Contain' list are used not to quickly eliminate certain products, but also to reinforce the consumer's only understanding of the product contents.

- Mackensey (PC): “So, I scan the entire list but what I find really helpful are the bolded, so contains peanuts, or 'May Contain' peanuts or something like that, so although I still glance through the entire list, I always look for those lists that they have at the bottom.”

However, participants noted obstacles to their ability to read the ingredients list. The small font size was the most reported issue, with age-related vision deterioration noted as an impediment to reading lists. Some participants mentioned that they found this frustrating and troubling to not be able to see what was in the product.

- Roger (AA): “Sometimes the uh, printing is quite small on these, especially items that have tons of ingredients, so um, you know, increase the print size I guess for those of us approaching fifty and you know our eyesight is dimming a little bit.” (also see quotes <sup>145</sup> <sup>146</sup> in Appendix N)

Beyond the small font size, the ability to read the ingredients was also hampered for some by the font colours used on the packaging. In situations of low contrast between the font colour and packaging, some participants found lists difficult to read.

- Kim (PA): “Hmm, so now my eyesight's failing and I need reading glasses, so it would be nice if some of the print were bigger and if they didn't have like, a light coloured print on a lighter coloured label, it needs to be so that I can read it.”

The worry of missing something important on the ingredients list may affect the consumer's psychological risk of protecting themselves or their dependent from the physical risk of allergens.

### 5.6.3 Higher PR from 'May Contain' product labelling

**This section examines the concept epitomised by the phrase: ‘Why is it ‘May Contain’? I don’t understand the risk.’**

Participants report a level of confusion surrounding Precautionary Allergen Labelling (PAL) such as ‘May Contain’ statements. To understand the risk from CC, there is a desire to understand how a product can come to possibly contain peanuts. It may be due to the use of shared equipment by the manufacturer for peanuts and other products, a product handling issue or other factor (these and other hidden sources of allergens were detailed in Figure 19). This concern by participants is driven by a lack of information on the physical risk of a product.

- Mackensey (PC): “It's confusing because we don't know if that means it was handled improperly or if it actually does contain it, it's not clear.”

This uncertainty for consumers about products with 'May Contain' statements can lead to value negotiations for some participants that prioritise health and the allergy over other values in the face of concerns about the physical safety of the food.

In Canada, there are standardised Canadian labelling formats for ingredients lists, including formats for contains and 'May Contain' statements. However, no regulatory requirement exists for the inclusion of a precautionary statement, so whether to include a 'May Contain' statement is the choice of the manufacturer (Government of Canada, 2012).

- Christine 1 (PA): "Make all the companies have to put a 'May Contain' traces of statement on it too. Make it law." (also see quote <sup>147</sup> in Appendix N)

The diligence on the part of manufacturers and regulatory manufacturing standards for consumer foods is also brought into question. For example, cleaning protocols and acceptable standards for food products (Barbieri et al., 2014; Huang, Hsu, Yang, & Wang, 2014) differ from the more stringent standard used for pharmaceutical products (Crevoisier et al., 2016; Sargent et al., 2016). It has been suggested that manufacturers look to new and improved allergen detection methods for their application in food production (Muraro et al., 2014).

- Beth (AA): "To me is sort of like, why aren't we cleaning our equipment and stuff like that. Like does it need to be there, why aren't we manufacturing things separately in a way that, like, even for all kinds of food allergies, you should be able to buy a product and read the ingredients and know that those are the only ingredients, like why should we have to consider that perhaps there may be all these other things. Like I don't know if it's food, food manufacturing standards should maybe come up a little bit."

Other international markets also face challenges when it comes to PAL. Recent Australian research by Zurzolo et al. (2016) has highlighted the difficulty for consumers and health care professionals to interpret risk information when the PAL is present. Also, in cases where no 'May Contain' statement is present, consumers are not aware whether the peanut risk is low, or if it is just not reported. These situations present different risk profiles, but still confuse the consumer and impede the ability to understand the physical risk from the food product. While PAL formats, such as 'May Contain' statements in Canada, differ from those in Australia, the

Canadian participants also report a significant level of confusion with the PAL statements

Many participants view the motivation behind the inclusion of a 'May Contain' statement to be a form of legal protection for the manufacturer. They perceive that by warning consumers of the possibility there may be peanuts present, the manufacturer's responsibility to actively ensure products are free from CC is removed. A few participants expressed frustration at this practice. They noted that if they took a risk and ate what they considered to be a lower risk 'May Contain' product, but subsequently had a reaction, they believed that the use of a 'May Contain' statement effectively waived the manufacturer of liability.

- Carly (AA): [How do you feel when I product you want to eat has a Peanut Free Symbol?] "Agitated mostly, it's just, I want to have something, it's usually something so simple or something that shouldn't have nuts anywhere near it or in the product itself, like it has no, like Caramilk bars, they're 'May Contain' peanuts, but it's chocolate and caramel and it's just, like ahh, I want to have this but I know I can't, because you'll, if I do have a reaction, you'll completely be safe, and I don't want to bother with that."

The choice by manufacturers to not produce products in a nut-free facility also causes frustration for a few participants. While manufacturers with nut-free facilities are seen as making an effort for their allergic consumers, the manufacturers with facilities that are not nut-free are seen as not making an effort and using the 'May Contain' statement to protect themselves.

- Roger (AA): "I find it annoying, um, because we know these companies can have nut-free facilities, I don't understand why more don't and you know, I find it frustrating, that they're not making more of an effort, some of them"

The use of PAL in situations where consumers perceive a low opportunity for CC also frustrates participants. Products that appear to consumers as having a very low likelihood of containing peanuts but also have a 'May Contain' statement leads to confusion about the risk. This confusion may lead to an increased potential for the consumer to eat those products they believe to be lower risk, despite the 'May Contain' statement.

- Tanya (PA): “I think that it's too broad a catch all for all manufacturers, but at the same time, I'd rather be safe than sorry. . . . I usually feel annoyed or disappointed, because I've finally picked out that that's the product that I wanted and a lot of the time, 'May Contain' peanuts will not contain peanuts, because it's, it's powdered mashed potatoes and it says it 'May Contain' peanuts, and it's not going to contain peanuts, but they've just put that on there, so a lot of the time, I'm just frustrated.”

This perceived over-labelling of 'May Contain' is also attributed by participants to be a legal protection for manufacturers. For consumers that avoid products with 'May Contain' statements, the presence of the PAL on products that may not have come into contact with peanuts limits their food choices.

- Vilma (PA): “I think what would be really nice, if everything didn't say 'May Contain' traces of peanuts, I don't see that happening in my lifetime, because of the legal issues, but that is very annoying, because that, you can pick up a popsicle, a water popsicle, an ice popsicle that says 'May Contain' and so that I find very annoying.”

For some participants, their value negotiations around PAL have led them to strategies of complete avoidance of food items that have these statements.

A number of participants developed strategies involving pragmatic approaches to managing the risk of 'May Contain' items. Some use the product category and perceived simplicity of the product to consider accepting the risk. In these cases, the participant may purchase the product with the PAL but only allow it to be eaten in their own home. This helps manage the risk of reaction by situating it in a known environment (see quote <sup>148</sup> in Appendix N). For parents, the choice of purchasing a 'May Contain' product involves their sense of obligation to their child. If they do purchase it, they may supervise the consumption and consumption environment to provide a measure of control over the risk.

- Courtney (PA): “If we've picked up, umm, a cake for example, normally like we'll pick it up and you're just hoping it's peanut free but we have to still go and ask, like if it's peanut free, a lot of the times if it does say 'May Contain', we may still pick it up if we're eating it here in our home, in our own

supervision. We won't let him have things that 'May Contain' outside of the home."

While many adults with allergy participants admit to eating products with 'May Contain' statements, some are conflicted about that decision. The risk of a product, signalled by the PAL, may override the desire for that product.

- Roger (AA): "Yeah, um, I will admit that I sometimes risk the 'May Contain', uh, if it's something like, uh, you know, like something, like maybe ice cream or something that I've never had an issue with before, um, but uh, what was the something recently, I think, I went to the Loblaws bakery and there was a, you know, what appeared to be an irresistible piece of cake, like a chocolate cake or something I wanted, but when I could see that they're baking there, like I had it in my hand, it was going into the cart, it was in mid-air, and then I was just like 'I can't do this', you know 'cause this is the kind of thing where it's really going to happen."

For other participants, a 'May Contain' statement for peanuts leads them to avoid the product entirely. In these cases, the communicated information leads to the complete avoidance of the physical risk from the product.

- Jennifer (PC): "I make sure there's no 'May Contain', on it, if there's a 'May Contain', I don't even consider buying it." (Also see quotes <sup>149 150 151 152</sup> in Appendix N).

The complete avoidance of items with a 'May Contain' statement on the label is a strategy noted primarily for 'parents of children' and 'parents of adolescents'. With their responsibility to the allergic child/adolescent, the obligation to avoid harm to their dependent is enacted.

Many participants use the 'May Contain' statement as a shortcut or 'first stop' when they read the ingredients. If it says 'Contains' or 'May Contain', that can eliminate the product from consideration; if it passes the test and has no concerning allergens listed, in many cases participants still read through the ingredients.

- Vilma (PA): "We tend to go right down to the bottom to say what it 'May Contain', before going through the four million things we can't pronounce,

um, you know because that's your first indication and then if it then might say that, we'll look at the other stuff to see how that is.”

The consumer's PR of the manufacturer may lead them to check the labelling and ingredients list more thoroughly.

- Carly (AA): “I skim right to the bottom automatically because that's usually where it is in big bold printing, like ‘May Contain’ peanuts or has been in contact with, but ah, if I'm really not sure of the company or if I feel like slightly uneasy I just take a skim through anyway.”

The Peanut Free Symbol may be the first stop for consumers before the consideration of the ‘May Contain’ statement, and subsequently the ingredients (see quote <sup>153</sup> in Appendix N).

Many participants spoke of the role social media played in increasing their risk concerns. Some felt that their risk perception of packaged foods has increased due to exposure to social media, but many appreciated the role others played (via social media) in making them aware of potential issues.

- Danielle (AA): “Before I joined these allergy groups on Facebook, I honestly never thought about companies not labelling properly, it was just something that I never thought about so I look at it, I read it, if it doesn't say ‘May Contain’, I buy it, I go home, I eat it.”

The confusion and uncertainty faced by some consumers over the PAL may affect how they perceive the risk of the products concerned.

#### 5.6.4 Lower PR of food products with simple ingredients

**This section examines the concept epitomised by the phrase: ‘I perceive less risk from foods with simple ingredients’**

In trying to manage the risk of food products, some participants actively choose food that they perceive to be lower risk due to its simple ingredients (see quotes <sup>154</sup> <sup>155</sup> in Appendix N). As discussed earlier, some types of unpackaged foods are seen as presenting a higher physical risk due to possible CC. Other types of unpackaged foods, such as fruits and vegetables, were declared as being preferred by participants because they are single-ingredient items (see quote <sup>156</sup> in Appendix N).

However, the perceived simplicity of a product with few ingredients may bring risk if that perception is relied upon to the extent that consumers fail to read the ingredients—there may be ingredients listed or PAL that consumers should be aware of.

- Catherine (PC): “I didn't even look at it, like for a long time to be honest, but I know that it's so plain... I just assumed it wouldn't have peanuts, I just didn't think it would.”

Consumers may manage food allergy PR by actively choosing simpler products that they feel are lower risk. It is one of a number of strategies employed by participants to minimise the physical risk of the allergy while addressing their personal responsibility and obligation to the allergic individuals.

#### 5.6.5 Lower PR of some products with 'May Contain' labelling

##### **This section examines the concept epitomised by the phrase: 'I take the risk of buying products with 'May Contain' statements'**

Some participants report that they will eat a product with a 'May Contain' statement if it is something that they have tried before or if they have never had a problem with products that have a 'May Contain' statement. The comfort in eating these products was present most often for adults with allergies, but also with parents of children.

- Angela (AA): “‘May Contain’ peanuts, if I'm familiar with it and have used it before and feel like it's probably fine, I will probably still get it.” (Also see quotes <sup>157</sup> <sup>158</sup> in Appendix N)

For parents of children that buy 'May Contain', some try and avoid but sometimes purchase, while others are happy to purchase if they feel comfortable with the product (see quotes <sup>159</sup> <sup>160</sup> in Appendix N). Non-problematic experiences eating 'May Contain' products can give consumers the confidence to continue purchasing these items. For some it is driven by a pragmatic approach to testing out peanut exposure, while for others it is an opportunity to have a favourite food.

- Vilma (PA): “Things that she has generally, yeah, like some of the stuff say 'May Contain', I think, very rarely, yeah the Cadbury Chocolate Fingers, they say 'May Contain', she's always eaten them and they've always been fine.” (Also see quote <sup>161</sup> in Appendix N)

While avoiding products that contain peanuts was noted as the top priority for almost all participants, for food products with 'May Contain' statements, other priorities can come into play. Priorities such as taste and price may carry more weight in the consideration of the item.

- Kristi (PC): "We do buy 'May Contain' items, I would say that it's maybe not the highest, it's the highest in terms of whether it's actually contained in it, but once it's not any ingredient listed, then it's sort of, it's still a high consideration, but um, then it's sort of other factors like the taste and the price will come into it a little bit more."

As discussed in 5.6.3, there is a perception that manufacturers may over-label some products. The frequency that manufacturers label 'May Contain' on products leads some participants to take the risk of a reaction from consuming products they believe to be of lower risk.

- Danielle (AA): "Some people don't trust them but, I honestly thought there was more of a problem with over-labelling 'May Contain'. You see stuff like frozen vegetables in the store that say, 'May Contain' peanuts, and it's like, 'do they really? or are they just trying to cover their butt if someone has a reaction'?"

The choice of simple products with one or few ingredients is made by a number of participants who see this action as lower risk. Products such as fruits and vegetables are seen as lower risk, despite not having packaging to protect from CC in store. The strategies for participants varied widely regarding food choice of items with PAL, with value negotiations involving health, taste, cost and other factors.

## **5.7 + - PR of new products**

**This section examines the concept epitomised by the phrase: 'I need to understand the risk of new products'**

Novelty requires the interplay between value negotiations to develop suitable strategies. The psychological risk of new products is a factor for many participants, making them hesitate to try something new. Their ability to assess the physical risk of new products may be limited due to a number of reasons, including challenges in obtaining required information. The time risk of searching for a new product was

another major influence, along with the financial risk where the possibility of choosing an unsuitable item could result in waste.

#### 5.7.1 Higher PR of new products requires investigation by the consumer

**This section examines the concept epitomised by the phrase: 'I seldom risk trying new products due to the effort required'**

Many participants shared that they do not often try new food products (see quote <sup>162</sup> in Appendix N). When attempting to try new items, some participants planned specifically to look at the items in a set timeframe and frequency, as significant effort was involved in finding suitable foods.

- Allison (PC): "I have a system, we buy the same ones and then if I'm shopping without my kids then I have extra time, so I actually have a, every two weeks I go in and I say to myself that I'll look at twenty new products and see, just because it's too exhausting to try and look every time, if you go to the same ones, double-check the label and every two weeks or so, I'll have a look and see if there's anything new."

While this strategy for trying new items works for Allison, the effort required in reading ingredients dissuaded some participants from trying new items, instead leading them to stick to their regular products (see quote <sup>163</sup> in Appendix N). The hard work many participants felt was associated with trying a new food product leads some to use referral and word of mouth to bring their attention to new foods to potentially try.

- Christine 1 (PA): "There's times where there's something that I, something new, I was like 'oh, that looks good', and then I read it and I'm like 'oh crap, I can't have it' and I put it back... It's hard, it's extra work, that's why I go to the, I never try new stuff, but if I find out like from my brother or my friends or whatever then 'woohoo' I started buying it."

The time risk of this hard work in buying new products is also present, both in store and once returning home. The effort required and time costs involved are then considered when approaching new food items.

- Kim (PA): "Oh well, I always check before I'll buy it, just 'cause they'll always bring out new things and I'll look at it and I'll go 'oh, we can't have that'... Multiple visits to multiple stores and probably like ten to fifteen minutes

reading labels and coming home and phoning, so there was a lot of time involved.”

The effort required to find suitable new products dissuaded many participants from looking and resulted in a few participants developing strategies to help manage the risks involved, after their related value negotiations.

#### 5.7.2 Higher PR of new products requires alertness from the consumer

**This section examines the concept epitomised by the phrase: ‘It is important to pay close attention when trying new foods’**

Anxiety around trying new foods was present for some participants. Only once they had eaten the food without incident could they relax and consider consuming the rest of it and perhaps purchasing it again. Interestingly, this hesitation was also present for products that were labelled peanut free, which may present less initial risk.

- Samara (AA): “If it's something new, I think it always takes, just that first time to try it, even if it says peanut free, you're kind of like 'what are you going to do?', you always like to know, like okay that one was good and then like next time you feel better about it.”

A level of hypervigilance over the new food item purchase was also present. This took the form of paying close attention to all the information about the product.

- Sarah (PC): “Just, looking, definitely it takes me a lot longer to shop now especially if I'm buying something new, just always reading the ingredients because you never know if something's changes, the manufacturing process, so you just need to be extra vigilant about that.”

This extra vigilance also extends to closely monitoring the person consuming the items, to make sure that the new food does not cause any sort of allergic reaction.

- Jennifer (PC): “I mean they don't say that they have peanuts or anything and there's no ‘May Contain’ statement, but it is a new product so I will still keep an eye on her when we do eventually use them.” (Also see quote <sup>164</sup> in Appendix N)

This need to pay attention relates to personal responsibility for the adults with allergies, and obligation for the parents of allergic children.

### 5.7.3 Lower PR from new products that have symbols on packaging

**This section examines the concept epitomised by the phrase: 'I use symbols to find new products I feel are lower risk'**

The use of symbols was mentioned as another strategy to help seek new food. A mother of a child with multiple food allergies was able to find 'good' food in part through the use of symbols on packaging. In the case of the biscuits being discussed, the multiple allergen-free symbols on the front of the package attracted her to the product and instilled confidence for the purchase. This confidence was bolstered by having a manufacturer that she felt understood the physical risk from allergies.

- Allison (PC): "I stumbled across them and you know beyond having really simple ingredients it screamed, like it's got all, even the front thing, dairy free, peanut free, nut free, gluten free, allergy free, no corn and it say no soy and that was kind of like, 'oh okay'. And then they're quite expensive, but besides the ingredients and it had this description, you know, they're made by a mom with food, with a child with food allergies, I'm like 'done!', like you've gone out and made yourself a company, I'm going to support that."

For another participant, the nut free symbols attracted her to select a new brand of cupcakes for her daughter's sports team. Additionally, the low price and perception of good value helped reinforce the potential for future purchases by decreasing the financial risk of buying the product.

- Cathy (PA): "There's these cupcakes you can get at Longo's now, I think it's their home brand, but I'm not sure, but they've a whole series of nut free ones, and I've never, I don't typically buy them, but I bought them for a team thing and they were really good, and I was like, 'well that's a good deal', 'cause they were cheap too, I was like 'wow, they're inexpensive and they got the thumbs up from everybody', so I was happy with that."

Another participant spoke of her use of other indicators, in this instance a Kosher symbol, to help her understand the PR of a new product. She ascribed the Kosher brand a lower PR due to the perceived conscientiousness of handling and

production of the food (see quote <sup>165</sup> in Appendix N). For these lower PR foods, allergen-free and Kosher symbols reassured participants about their choice of a new product. The use of specific symbols on food labelling formed strategies for these participants to aid in their food choice process.

#### 5.7.4 Lower PR from new products when consumers have guidance

##### **This section examines the concept epitomised by the phrase: 'Others help guide me to try new products'**

When the personal recommendation for a new product comes from someone with knowledge of peanut allergy, many participants appreciated this advice. For one adult participant, the advice came from her nutritionist roommate and close friend.

- Beth (AA): "I purchase a lot of the same products, but I'm still open to trying something new, if I see something that looks interesting and yeah, looks appealing. Um, Sarah, actually, my roommate is a nutritionist so she's really into food as well so she sometimes finds stuff in the market that she's like 'you gotta try this, it's great!', so yeah, so she turns me on to new things."

Another adult participant had two childhood best friends with anaphylactic peanut allergies who gave advice on new products to try.

- Carly (AA): "I do try and try new products, especially if someone else recommends it to me, or especially if they have a peanut allergy. I have a lot of friends with peanut allergies, we seem to swarm together, so if they tell me like, 'hey this is really good', then I generally give it a shot, but, I'm pretty customer loyal."

Within another participant household, the adult uncle of the allergic adolescent was a source of new product information, with his obligation to his nephew leading him to suggest options suitable for someone with a peanut allergy.

- Christine 1 (PA): "My brother when he comes shopping with me he looks at new things and he'll find stuff and I'm like 'oh, hmm cool, I had no idea'."

The support for the purchase decision by knowledgeable others helped participants develop strategies to manage the product and psychological risks involved.

## **5.8 +- PR from food product categories and country of origin**

**This section examines the concept epitomised by the phrase: 'I feel products are safe when I understand the risk'**

Participants often spoke of foods that were 'safe' and 'unsafe'. Safe food items met participants' accepted level of PR, with items seen as being of higher risk rejected as unsafe. In this research, the term food safety is used in the "context of absence of harmful substances or when those are above legal limits" (Anklam, 2015), where harmful substances are the allergens of the participant family. The description of foods as safe by participants means that the products have a lower physical risk from their allergens, and does not include food risks such as bacterial or viral contamination. Following the six dimensions of risk as presented in the literature review Chapter 2 Table 2, 'safe' is considered as a part of physical risk, consistent with the work of Robert N. Stone and Grønhaug (1993). I have chosen to address 'safe' as lower PR and 'unsafe' as higher PR; however, with the food categories considered by these consumers, there is a higher degree of PR overall.

### **5.8.1 Higher PR from certain food product categories**

**This section examines the concept epitomised by the phrase: 'I feel that certain types of foods are unsafe, physically risky'**

Where products are sold and how they are packaged leads to concerns about safety. Bakeries were of high concern to many participants due to CC, as discussed in 5.5.2. Figure 20 shows types of packaged foods that participants viewed as having a higher risk. This elevated risk came from the possible presence of peanuts in different formats.

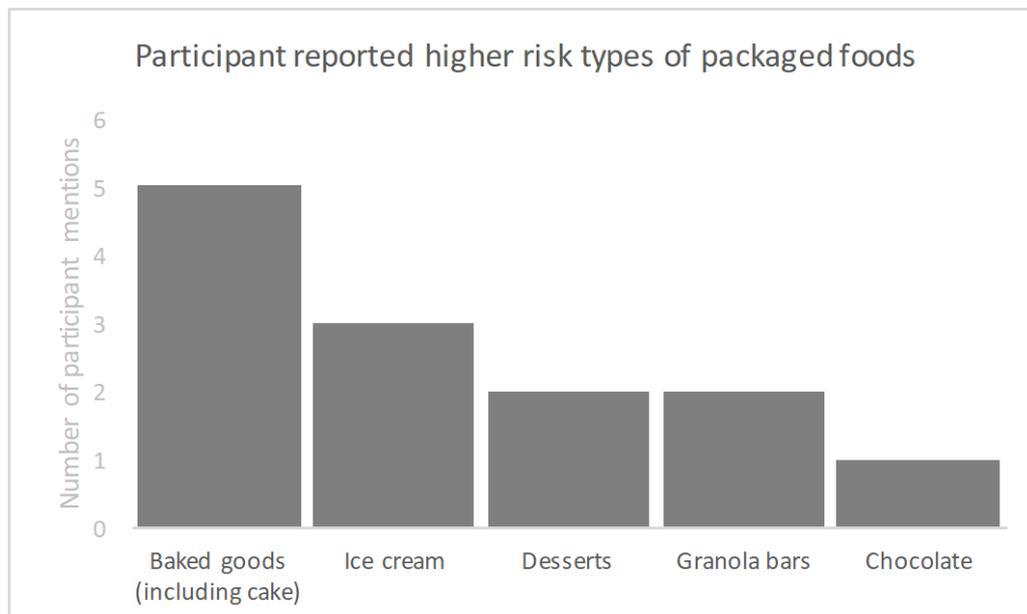


Figure 20 Participant reported higher risk types of packaged foods

Baked goods, desserts, ice cream and chocolate were all mentioned by participants as higher risk due to potentially containing peanuts. Different types of nuts or nut products, including peanuts, are used in these types of foods. As mentioned in 5.5.2, peanuts and peanut butter are popular ingredients in Canadian bakery products and in other snack-related items.

- Angela (AA): “Chocolate and dessert related, ice creams possibly, um, certain chocolate bars and certain chocolate things that I guess I've always thought, mmm that looks good, except for the nuts.” (Also see quote <sup>166</sup> in Appendix N)

One participant also mentioned items that may be fried in peanut oil, as another high-risk type of food. Peanut oil is used for applications that include frying, due to its stability at high heat and high percentage of nutritious unsaturated fatty acids (Jin, Ma, Li, & Cheng, 2016)

- Roger (AA): “Obviously lots of desserts contain nuts and uh, the other issue is anything um, that's been fried that might contain peanut oil.”

Peanut flour is used in some cereal (granola) and protein bars as a higher-protein alternative to regular wheat flour (Stratakis, 2014). In addition to protein enrichment, peanut flour is gluten-free and a popular alternative to wheat flour in gluten-free products (Sozer, Holopainen-Mantila, & Poutanen, 2016).

- Beth (AA): “This is a new thing that they're doing now where they put peanut flour in as a thickener, and I really liked Kashi, like the cereal and I then I was like, 'nope can't eat their granola bars', um, but yeah, granola is one of those ones with cereals, that I find you constant, really need to be vigilant.”

Participants are concerned about some foods having a higher risk of the presence of peanuts. This presence may take the form of peanuts, peanut butter, peanut oil and peanut flour. Often these forms of peanut may not be apparent if relying on visual inspection of the food. The worry of such 'hidden' peanuts may heighten PR for participants and require strategies of avoidance.

Special occasions, such as birthdays and Christmas celebrations, are a time when different foods can come into the home. The food choices in these context- and culture-specific occasions command certain dishes (Cuevas, de Guia, & Demont, 2017). Baked goods, such as birthday cakes, are noted above as presenting a physical risk to consumers. The tradition of nut consumption at Christmas is well-established in Western countries, particularly walnuts, hazelnuts and Brazil nuts (Little, Jemmott, Surman-Lee, Hucklesby, & De Pinna, 2009; McNeil, 2014).

- Courtney (PA): “The chocolates around Christmas-time, when you get around Christmas-time that's when you really have to be careful because a lot of things do have nuts, hazelnuts, things like that and they don't really say hazelnut on it, it's kind of just in there so, around Christmas-time it's the worst.

Celebrated holidays are a time where the gifting of food is common. Both homemade and packaged foods are given and received. This introduction of potentially high-risk items into the home requires personal responsibility for older allergic consumers and an obligation for parents of allergic children to avoid an allergic reaction.

Asian cuisine, including Thai, Indian and Chinese foods, were highlighted as presenting a higher PR. While peanut oil and peanut snacks are consumed frequently in the Asian subcontinent (Arya, Salve, & Chauhan, 2016), the recipes and ingredients from those regions are often used in restaurants offering that cuisine in Canada. Participants reported negative emotions indicating fear of those types of

cuisines and either avoidance or high levels of caution when considering these foods.

- Fiona (PC): “Thai food scares me.”

Some participants reported that they entirely avoid Thai, Indian and Chinese foods due to the PR of peanuts in the food.

- Helen (AA): “A lot of the Asian foods, specifically Thai being a big one, yeah I don't, I mean I don't cook it, I don't consume it myself [...] I know they do use a lot of peanuts either whether they do them raw or they have them contained within so I usually avoid that at all cost.”

A few participants spoke of their disappointment in not being able to eat these cuisines due to the risk involved (see quote <sup>167</sup> in Appendix N).

For another participant, Thai and Asian food simply warrants a higher level of vigilance and care taken to avoid foods with peanut ingredients and CC.

- Roger (AA): “Thai is always red alert for potential peanut situations. . . Thai food or some of the Asian food is probably the biggest risk in terms of a cuisine, ah so I'm the most careful about those sorts of things.”

The higher PR of certain types of foods is driven in part by the likelihood of inclusion of peanuts and the opportunities for CC. Situations such as these also involve adults with allergies taking personal responsibility for their allergy and parents to fulfil their obligation to keep their children safe from their allergens.

#### 5.8.2 Higher PR from country of origin

**This section examines the concept epitomised by the phrase: ‘I worry about some countries of origin’**

Many participants are concerned about where the food they are buying is produced. The product risk may be driven by the physical risk of ingredients or manufacturing processes that are not legal to be used in products made in Canada.

- Danielle (AA): “So I think more, like if it's illegal here we shouldn't be allowed to import it because there's a reason it's illegal.”

The country where the product is made can influence the PR of the food. As discussed in section 5.8.1, some Asian countries regularly use peanuts in their food and participants worry about the risk of CC due to production in other countries.

China was mentioned as being a country of concern for peanut CC, even for types of foods that would not normally contain peanut.

- Jennifer (PC): “Yesterday I was out shopping and I was comparing different pepperonis and there was a couple of different pepperoni sticks made in China and I was like hmm, I'm not even going to bother.”

These product risk concerns are not isolated to Asian foods, but also apply to foods from places such as Mexico and South America, where nuts are consumed more often as inclusions in products such as chocolate.

- Kim (PA): “I won't buy stuff that's like made in China and things like that... I don't have a problem with things made in the US, but I do have a problem with things like made in Mexico, or South America or China, where you're especially with nuts and chocolate over there, so I just feel better about Canadian and American, 'cause I understand their labelling laws better.”

For other participants, different labelling requirements and styles present a psychological risk to the consumption of items from regions such as Europe and even the United States, which was noted as lower risk by some other participants.

- Christine 1 (PA): “I won't buy anything that's made in Europe. Or outside of Canada and the United States. 'Cause I know their labelling isn't the same so, yeah, pretty much... Even when I go shopping in the States I really don't buy food there 'cause I don't know what's safe.”

Labelling and importation laws differ by country. Although there are Canadian requirements for labelling that have to be met, often imported packaging looks different than the usual styles seen in Canada. Concerns especially arise when considering the optional ‘May Contain’ statement. With different manufacturing and product-handling practices, concerns arise about whether the risk of CC is being managed in a way acceptable to the allergic consumer.

- Danielle (AA): “The labelling laws are different, the importing laws are different [...] since they say they're from a different country I kind of wonder if they're held to the same labelling laws as us and even though you don't have to label ‘May Contain’ here, I kind of trust the companies will, whereas ones that are imported, it's like in Thailand, do they really know about the

peanut allergy problem in Canada? And are they going to label it on their ramen noodles? So.”

The combination of cuisines with large amounts of peanut consumption and CC physical risk concerns, along with a potential language barrier drives a psychological risk for some participants. With peanut allergy awareness being rarer in some regions of the world, the awareness levels of PAL and ability for some manufacturers to properly label in their non-native language drives PR.

- Megan (PC): “I feel like probably Asian foods present the most risk. In terms of understanding, in terms of labelling, you know often the language piece, you can see some products have other languages written on them and they may have been produced in other places that may not be as aware.”

Some imported products have a nutritional facts panel and ingredients list conforming to Canadian standards as a sticker placed over the international labelling. This raises concern in a few participants concerned about foreign manufacturers' understanding of Canadian standards and makes them feel uncomfortable. Thailand, for instance, has no food allergen labelling legislation, with manufacturing protocols for allergens ranging from excellent export quality to needing improvement depending on the company (Waisarayutt et al., 2014).

- Sasha (PA): “Buying a product that is made outside of North America is a bit of a challenge to me, because then you get the secondary label put on top and I'm just not comfortable, to be honest, to be truthful, on that type of product, if it's something that my kids are going to be eating, yeah.”

Some foods are seen to present greater perceptions of risk, often because of how they are manufactured or presented for sale. Certain countries of origin for a cuisine or food product can also lead to concerns about risk.

### 5.8.3 Higher PR from 'unsafe' products

**This section examines the concept epitomised by the phrase: ‘I’m disappointed when something is unsafe’**

Many participants expressed dismay and disappointment when a product they want to eat is perceived as unsafe for them. These feelings are evoked by many different scenarios. From an insider-outsider perspective, disappointment was seen when

others (outsiders) offered food that they believed to be suitable for the allergic individual, but the allergic individual saw that it was unsuitable. These scenarios can involve the workplace.

- Amanda (AA): “Sometimes I'm upset, especially if you're really if you really do want sometime, uh I know at work I've had people bring in things and they're all like 'oh!', thinking it's nut free and I look at the ingredients and I know that it's, I can't touch it, so you know if sort of lets you down a little bit.”

Everyday scenarios with others can result in uncertainty about whether a food is suitable, leading to worry and apprehension for the allergic family.

- Angela (AA): We still sometimes worry, because people will say 'oh yeah, there's nothing in here that you can't eat', but they are wrong.

While other parents may mean well, not having the allergy in a household can result in the allergy not being top of mind when other parents purchase items, such as cakes. The allergic individual is then unable to consume the item due to the perception that it is unsafe.

- Carly (AA): Sometimes parents just forget, just because it's not their kid and they don't really register that until they get there and they're like 'oh, I bought this cake from Zehrs, I don't know if that's okay', and it's like 'oh well'.

Even for the insider, there are concerns based on his or her obligation to the allergic individual. For some participant parents, they worry about being sure that a product they accepted is safe, and question their memory and resort to relying on their documented decisions.

- Christine 1 (PA): It's hard for me too because my memory's so short that it's like, is this safe or not? I don't remember so I don't buy it until you know I come back and check my book, you know.

The decisions made by participants about what is safe and unsafe for their child/adolescent are based on their obligation to find suitable products for their households. This limited set of 'safe' products allows them to shop more efficiently in store, as they can rapidly avoid all products they view as unsafe.

- Kim (PA): “I just know what's safe and what isn't now, so now I can get in and out fairly quickly.”

For adult participants, their sense of personal responsibility drives them to seek out items they perceive as being safe and avoid those seen as unsafe. For adolescents starting to take personal responsibility, inattention can result in risky behaviour leading them to eat unsafe foods.

Some participants spoke of their disappointment when characteristics of a product are changed and a previously safe product is perceived to become unsafe. This can occur in situations where the ingredients of a product are altered, and consumers find out by noticing changes on the ingredients list.

- Kristi (PC): “I find it really difficult when they switch ingredient lists and things that were safe are no longer safe, or you know, and then trying to make the decision.”

In some cases where the product has changed from safe to unsafe, this change is only discovered once the product has been purchased and into the home (see quote <sup>168</sup> in Appendix N). This can lead to additional concerns if the unsafe product is handled, such as being placed on a cutting board, resulting in allergen contamination on a surface or utensil in the home. The value negotiations around safety and the physical risk involved can lead to participant strategies around their acceptable decision rules.

#### 5.8.4 Lower PR from classifying select foods as 'safe'

**This section examines the concept epitomised by the phrase: 'I seek out 'safe' foods, that I feel present a lower risk'**

Eating safe foods, representing a lower physical and performance risk, was seen as being a top priority for most participants. Some participants used their perception of a lower PR product as being a 'right of entry' into their home.

- Allison (AA): “That's my only priority, is like it's gotta be safe to get into my house. Other than that, if it is we'll try it, I mean we don't have a huge amount of selection so, yeah, if it's safe it's coming into my house.”

For others, the priority is for safe, lower PR that infers a sense of 'liking it', and only then are other factors considered.

- Carly (AA): “Priority is obviously to keep it safe, if it has an allergy, a Peanut Free Symbol then I know I'm going to generally just like it off that basis alone, but ah, taste or what it looks like, or what it is in general. Not so much a pull, I don't really, if I know it's going to be safe, that's my number one priority”

The selection of food products for children includes a consideration of whether they will eat it. The priority is the allergen—to minimize the physical risk to the child with allergies—but this is followed by the willingness of the child to eat the food. The phenomenon of children as picky eaters is well addressed in the literature (C. M. Taylor, Wernimont, Northstone, & Emmett, 2015; Thompson, Cummins, Brown, & Kyle, 2015; van der Horst, Deming, Lesniauskas, Carr, & Reidy, 2016).

- Kim (PA): “The kids do eat cookies, but they're also kind of picky, so I just buy the kinds that they like, that are safe... The allergy is the number one priority.

A financial risk exists for consumers when buying products that are not consumed, such as when children refuse to eat certain foods.

Some participants used the product's brand to decide what they felt was safe for them. Of the brands mentioned, President's Choice (PC), including Blue Menu, has peanut free products that include a Peanut Free Symbol and peanut free labelling as seen in Figure 21.

- Sarah (PC): “President's Choice, I feel really safe with those.” (Also see quote <sup>169</sup> in Appendix N).



Figure 21 President's Choice cereal bar (my photo)

Enjoy Life brand products are marketed as being allergy-friendly, gluten-free and free of Canada's priority food allergens. They have allergy free symbols and allergy free labelling on them as seen in Figure 22.

- Trisha (PC): “Enjoy Life is one that I would say we buy, like the chocolate chips from them, granola bars from them as well, because I know they're safe.”



Figure 22 Enjoy Life cereal bar (my photo)

Other participants chose safe items by manufacturer and then used secondary priorities, such as price, to decide between their options.

- Danielle (AA): “I've always eaten Chips Ahoy! and the Rainbow Chips Ahoy!, so for stuff like cookies I tend to stick with the ones I know I've always been safe, and then if I'm going to pick between the Rainbow ones or the normal ones, or the Oreos, I'll look for which one's on sale and I'll go with that one.”

The use of the brand or manufacturer PR to assess the PR of the product may lessen the psychological risk of the product.

For a number of participants, the perception that a product is safe precedes their liking of the product. Products labelled as peanut free are seen by some as being safe (see quote <sup>170</sup> in Appendix N). For other participants, the absence of peanut in the ingredients list is sufficient for them to perceive the product as safe and lower risk.

- Fiona (PC): “Most crackers are safe or cookies and most cookies are safe for him now that we know, as long as they don't have peanut in them. So I don't think I do a lot of comparison as long as the ingredients list is clear, then we'll go back to that.”

The liking of and perception of the product being safe leads some participants to anticipate an absence of problems for allergic individuals, such as a reaction.

- Mackensey (PC): “I guess safe, like I know that he's going to be okay with eating it... It makes me feel safe, and I'm not concerned that he's going to have any issues with it.

Value negotiations around safety can lead to strategies of selecting 'safe' products. The perception of a product as safe relates to a lower psychological risk from the product. The peanut free labelling may give participants a sense that there is a lower physical risk from the product.

#### 5.8.5 Lower PR from a preference for domestic made products

**This section examines the concept epitomised by the phrase: 'I feel safer with made-in-Canada products, they are less risky'**

A number of participants prefer made-in-Canada products and gave a variety of reasons why. These reasons span the areas of physical risk, performance risk and psychological risk. For some participants, it was the ease of accessing Canadian manufacturers to seek information about the products. The perceived responsiveness of Canadian manufacturers, compared to those in other jurisdictions, was seen as a positive.

- Allison (PC): “We try if we can to buy Canadian things because then we, it's easier to contact them and get in touch with them, they seem to be more responsive, so and it's nice to shop local if you can.”

Canadian food labelling is seen as a positive feature; participants noted that they understood the Canadian labelling practices and were happy with them (see quote <sup>171</sup> in Appendix N). Along with the labelling, Canadian rules on allergen labelling were seen as less risky than those on imported foods. The ranking from lower to higher PR for many participants was Canada, then USA, and then rest of the world (see quote <sup>172</sup> in Appendix N). This labelling, combined with manufacturing practices in Canada, instils confidence in some participants. The management of the physical risk in a production facility, such as cleaning the equipment sufficiently to avoid CC, is seen to be sufficient to overcome the psychological risk from the food produced.

- Sarah (PC): “I feel good, I'm really happy that we're in Canada because they label properly, I do trust that they wash, even if it's a facility that does a couple of other things on it, they wash, I'm good, I have to trust that, I can't go crazy

with what people are eating at their lunch and usually food companies are very strict, so I do feel pretty safe with that.”

When considering PR, the enforcement of allergen regulations was also a factor for a few participants, going beyond just the labelling and rules to ensure that the labels are accurate and that the stated rules are being followed (see quote <sup>173</sup> in Appendix N). The preference for North American products was driven for some participants by a lower PR from a manufacturers' better understanding of allergens, especially peanut. The PR from other regions can come from a belief that these markets do not take the peanut allergy seriously enough, given that peanuts are a common part of cuisines and the rarer occurrence of the peanut allergy in those regions.

- Teresa (AA): “North America is probably a lot safer, I know um, when you travel to another country they don't seem to have any grasp of an allergy, will just feed you a nut or shellfish anyway, they just think you don't like it, so, I would prefer to stick to places that understand it.”

In these cases, select participants see a lower psychological risk from made-in-Canada products, combined with perceptions of lower performance and physical risks for these products. Previous value negotiations and PR can lead to consumer decision rules of purchasing made-in-Canada products.

## **5.9 Interrelationship between PR and trust**

As discussed earlier, while this chapter is focused on PR strategies, the themes identified also involve trust. The choices I made to include some themes under PR and others under trust were not straightforward and were subject to my considered judgement. The interrelationship between PR and trust is seen in all the sections and subsections, as presented below. Again, for this section, 'higher' and 'lower' are used as greater-than-neutral and less-than-neutral, and a specific measure of what constitutes either is not defined.

<b>+ - PR and consumer search for product information</b>	
<b>Higher PR with</b>	<b>Lower trust</b>
+ Consumer time spent to get information	- Lower cognition-based trust from the difficulty in getting answers from manufacturers, with negative assessments of the manufacturers' information and competence
+ Consumer concerns about accuracy of information	- Lower cognition-based trust from negative judgements of reliability - Lower experience-based if past experiences with the manufacturer have been unsatisfactory
+ Manufacturer not sharing information with consumer	- Lower cognition-based trust from difficulty in getting information - Lower affect-based trust from worry and lack of reassurance
<b>Lower PR when</b>	<b>Higher trust</b>
- Manufacturer is responsive to consumer	+ Higher cognition-based trust from answers + Higher experience-based trust if the participant has had satisfactory responses in the past
- Consumers feel capable of assessing their risk	+ Higher cognition-based trust if the direct knowledge is sufficient + Higher affect-based trust if the reputation of a company is sufficient for the choice + Higher experience-based trust if the participant has had personal experience with the company + Higher personality-oriented trust if generally inclined to trust
<b>+ - PR of CC</b>	
<b>Higher PR from</b>	<b>Lower trust</b>
+ CC in packaged food	- Lower cognition-based trust from risk of CC - Lower affect-based trust from word-of-mouth
+ CC in unpackaged food products	- Lower affect-based trust from worried feelings and a lack of attributes to reassure the consumer - Lower cognition-based trust may be present because of the impediments to obtaining direct knowledge about the products and the potential for insufficient protection against CC
<b>Lower PR when</b>	<b>Higher trust</b>
- Food product packaging CC	+ Higher personality-oriented trust where there is a personal disposition to trust + Higher affect-based trust where a company's reputation guides the confidence in the packaging
- Individual food product packaging CC	+ Higher cognition-based trust from direct knowledge about the product and CC potential
<b>+ - PR and food product nutritional labelling</b>	
<b>Higher PR from</b>	<b>Higher trust</b>
+ Effort needed to read ingredients	- Lower cognition-based trust due to the challenge in obtaining product information from the ingredients list
+ Consumers miss labelled allergens	- Lower cognition-based trust when judging product suitability with uncertain information
+ 'May Contain' product labelling	- Lower cognition-based trust when product information unclear - Lower personality-oriented trust if consumer is not comfortable with the 'May Contain' statement
<b>Lower PR of</b>	<b>Higher trust</b>
- Food products with simple ingredients	+ Higher cognition-based trust may exist when products have simple ingredients, as the direct information search is made easier

- Some products with 'May Contain' labelling	+ Higher personality-oriented trust may lead some participants to be comfortable about 'May Contain' products. + Higher experience-based trust, with familiarity of products through past experience (see quote <sup>174</sup> in Appendix N)
<b>+ - PR of new products</b>	
<b>Higher PR of</b>	<b>Lower trust</b>
+ New products requires investigation by the consumer	- Lower cognition-based trust of the product due to difficult information search by consumer - Lower experience-based trust may have a role if there has been difficulty obtaining information on similar new products in the past
+ New products requires alertness from the consumer	- Lower cognition-based trust if the information quality is seen to be lacking - Lower affect-based trust may be involved if an emotional hesitation towards new products is felt
<b>Lower PR from</b>	<b>Higher trust</b>
- New products that have Symbols on packaging	+ Higher affect-based trust from confidence in Symbols, such as external approval seals. The third parties putting the symbol on the product are seen to warrant the product
- New products when consumers have guidance	+ Higher affect-based trust is present when third parties inform the purchase through their recommendations and referrals
<b>+ - PR from food product categories and country of origin</b>	
<b>Higher PR of</b>	<b>Lower trust</b>
+ Certain food product categories	- Lower cognition-based trust if the information quality is seen to be lacking - Lower affect-based trust may be involved if an emotional hesitation is felt towards new products
+ Country of origin	- Lower cognition-based trust from regional knowledge and judgements related to their potential for peanut content - Lower affect-based trust due to a lack of indirect attributes to reassure the consumer and uncertainty about the products.
+ Unsafe products	- Lower cognition-based trust as the information consumer obtain may be incomplete or unsatisfactory for them to decide
<b>Lower PR from</b>	<b>Higher trust</b>
- Classifying select foods as 'safe'	+ Higher cognition-based trust as consumers are able to obtain evidence to support their decision
- A preference for domestic-made products	+ Higher cognition-based trust as specific information may be available to directly guide the purchase choice + Higher affect-based trust may be present as emotion guides the purchase, supported by Canada's reputation for quality foods + Higher experience-based trust if consumer has extensive experience consuming made-in-Canada products compared to food from other countries (see quote <sup>175</sup> in Appendix N)

Table 23 Interrelationship between PR and trust

For each of the higher or lower areas of PR identified, the inverse lower or higher in trust was located. Note that I was not measuring the amount of PR, as one might do

with a Likert scale, therefore, solely correlations between a higher PR linked to lower trust and lower PR linked to higher trust were found. In each of the subsections of PR, I identified a corresponding type of trust. For the types of trust, cognition-based trust and affect-based trust were attributed most often, followed by experience-based trust, and then personality-oriented trust. These results support an interrelationship between PR and trust in the narrative themes discussed by participants.

### **5.10 Conclusion**

In this study, PR plays a significant role in the conceptualisation of consideration sets for individuals managing severe food allergies. In this narrative thematic investigation, five PR themes were identified: (1) PR and the consumer search for product information, (2) PR of Cross-Contact/Cross-Contamination (CC), (3) PR and food product nutritional labelling, (4) PR of new products and (5) PR from food product categories and country of origin. 23 subthemes were identified, with 13 being higher PR subthemes and 10 being lower PR subthemes.

The food choice value negotiations and risk dimensions were seen to form strategies to manage the PR from products. When considering food choice theory, each participant shared in their quoted excerpts their unique life courses and influences. The value negotiations involving health, nutrition and safety were important to developing PR strategies. Convenience—particularly consumers' time investment needed to manage food selection for the allergic individuals—also played a significant role in forming the PR strategies. For the risk dimensions, while physical risk featured most prominently in participants' responses, the other forms of PR also played a role.

It can be suggested that physical risk held prominence due to the nature of the peanut allergy risk in the form of inadvertent peanut inclusion in products or CC. The life-threatening nature of this physical risk may also contribute to its primary position. The psychological risk, social risk and performance risk of products followed, appearing in many of the narrative themes, at times in addition to physical risk. Finally, I noted the time risk and financial risk as PR, particularly related to shopping behaviour in store. The risk dimensions were often present in different configurations in the narrative themes shared by participants.

At the end of the chapter, I presented the interrelationship between PR and trust for the themes and subthemes found for PR. I determined an interrelationship, as discussed in the section, due to the way the risk dimensions appear to relate to the types of trust. The next chapter, presents the themes and subthemes relating to trust for participants, and the interrelationship comparison between trust and PR.

## 6 Trust

### 6.1 Introduction

The chapter format consists of broad themes and subthemes that reflect the narrative of the interviews conducted. As participant interviews contained fewer distinctive themes and stories regarding trust than PR, this chapter is shorter than that on PR. The stories that participants told are included as excerpts from the interview transcripts, with commentary following the excerpts to elaborate on their position. As with the previous chapter, the decision to include some concepts under PR and others under trust was made based on a considered judgment in an attempt to best reflect the greater focus of the narrative responses from participants.

### 6.2 Types of trust

To explore the themes and sub-themes of the participants, the chapter begins by basing the investigation in the literature. As presented in Chapter 2, this study uses the definition of trust from Moorman et al. (1992) as “a willingness to rely on an exchange partner in whom one has confidence”. trust is rooted in relationships; for the participants, trust can be in the products, brands, manufacturers and people. Using the types of trust in Table 7 (repeated below for reference), the strategies emerging from the identified themes and subthemes are explored.

Cognition-based trust	<ul style="list-style-type: none"> <li>• ‘Trust from the head’, grounded in judgments based on evidence of the entity’s competence and reliability, as well as information gathered under specific circumstances (Chua et al., 2008).</li> <li>• Is based on the direct knowledge that the consumer has about the purchase choice relating to reliability, quality and protection; it is facilitated by brand image, perceptions of information quality and observations of protection from the features of the entity (S. C. Chen &amp; Dhillon, 2003; Corritore et al., 2003; McAllister, 1995).</li> </ul>
Affect-based trust	<ul style="list-style-type: none"> <li>• ‘Trust from the heart’, rooted in bonds derived from a consumer’s emotion and their sense of other’s feeling and motives (Chua et al., 2008).</li> <li>• Looks at indirect attributes that will reassure the purchaser such as reputation, external approval seals, recommendations, referral, feedback, and word-of mouth; there is a reliance on third-parties to inform the purchase rather than the purchase obtaining the information directly (D. J. Kim et al., 2008; McAllister, 1995).</li> </ul>
Experience-based trust	<ul style="list-style-type: none"> <li>• Relates to the personal experiences that the consumers has had with the entity, such as brand, vendor or product, and is based on familiarity derived from those experiences (Huchler &amp; Sauer, 2015; D. J. Kim et al., 2008).</li> </ul>
Personality-oriented trust	<ul style="list-style-type: none"> <li>• Antecedents are largely stable, including a disposition to trust, an individual shopping style and are reflected in the shopper’s habits and personality related preferences (D. J. Kim et al., 2008).</li> </ul>

(Table 7 repeated)

### **6.3 Food choice: strategies related to trust**

In the food choice model, the role of trust can be seen throughout. It may initially be considered under life course, where personal experience, upbringing and life role may lead to a disposition to trust. Then trust may be viewed in influences, as personal factors where psychological traits and preferences can drive the subsequent value negotiations. When considering the value negotiations, for example, trust in a product may justify paying a higher price for it, trust in a manufacturer may mean less time spent reviewing the labelling of the manufacturer's product, trust in a brand may reassure a parent about nutrition, and trust is crucial in managing relationships. Like PR, trust is not seen as a separate value negotiation. Instead, the types of trust are woven through the value negotiations, although they are not as clearly aligned as the PR dimensions. The types of trust are broader and not as distinct as the PR dimensions, likely resulting in this looser alignment. The trust strategies resulting from these negotiations are discussed in the following sections.

### **6.4 + - Trust from comfort level and experience**

**This section examines the concept epitomised by the phrase: 'I trust based on my comfort level and experience'**

When considering trust situations, participants referenced situations where they relied on the feeling of 'comfort level', as well as their experience to decide how much they trusted a product, brand or manufacturer. The following subsections share the participants' views on areas of higher and lower trust based on these feelings.

#### **6.4.1 Higher trust from consumer positive intuition and instinct**

**This section examines the concept epitomised by the phrase: 'I trust it, because I follow my gut'**

Some participants noted an internal locus of trust to guide some choices, instead of a reliance on external cues. The level of comfort in these situations was not attributed to certain characteristics of the packaging or product, but instead to a feeling. For some, personality-oriented trust may play a role with a general disposition towards trust. Adults with allergies were the cohort that most often reported 'gut feel' and comfort level as trust factors.

- Samara (AA): “If it's not a brand I've used before, like I kind of try to listen to my gut, even if it doesn't say, and I'll be like, 'no, I think I'm going to wait and get it elsewhere' or I buy it, you know, like trying to just listen to like how comfortable I feel.”

The adults with allergies may have developed this comfort level with managing their allergies over time and having experienced a greater number of scenarios involving peanuts. Experience-based trust may play a role in these instances. Age was referenced as contributing to personal learning about the allergy.

- Beth (AA): “I think at my age too, I know what I can and can't eat.”

This idea of self-reliance based on ‘gut feel’ is related to the idea of personal responsibility. The ability to use ‘gut feel’ is seen in trust-based decisions that go beyond a simple ‘yes or no’ dichotomy.

- Allison (PC): “I think when it's you, you have much more control over what you want to do, I'm an adult, I have you know like you can weigh the pros and cons, when you have a child, there are no pros and cons, it's either yes or no, that's, there's no sort of like.”

In some cases, ‘gut feel’ was referenced as serving a positive role in keeping participants safe, leading them to double check their original choices.

- Beth (AA): “I picked it up to buy it and threw it in my cart, didn't even really think about it, but I thought, you know as I was walking around the grocery store, that I would double check and it had shrimp paste in it, right down at the bottom of the ingredients, and I was 'can't, can't eat that'.”

The intersection of ‘gut feel’ and trust is referred to as the second part of intuitive trust. Intuitive trust is the answer to “Does it feel right?” with the first part being the raw emotional response and the second part being the ‘gut feeling’ (Pinto, Slevin, & English, 2009). The emotional nature of this trust positions it as affect-based trust, where it is rooted in consumer feeling.

#### 6.4.2 Higher trust from childhood product and brand usage

**This section examines the concept epitomised by the phrase: 'I trust it, because my parent trusted it in my childhood'**

Parental use of a product as a reason for trusting a product was most often expressed by the adult participants (see quote <sup>176</sup> in Appendix N). Participants in their early twenties and the youngest adult participants ascribed parental purchase as a reason why they trust a product (see quotes <sup>177</sup> <sup>178</sup> in Appendix N). Childhood consumption of food was also noted as a reason for trusting a product. Trust is thought to develop during childhood when an infant seeks and is helped by their caregivers leading to the propensity to trust (Julian B. Rotter, 1967). These trust examples are rooted in affect-based trust where the parent serves as the third party relied up on to inform the purchase.

This discussion borders on the concepts of emotional attachment, where some studies suggest trust is an antecedent of emotional attachment (Vlachos, Theotokis, Pramadari, & Vrechopoulos, 2010) while others disagree (Grisaffe & Nguyen, 2011). The linkage of trust to loyalty exists in the consumer literature, including in the satisfaction-trust-loyalty paradigm (Singh & Sirdeshmukh, 2000; Yim, Tse, & Chan, 2008) and when exploring trust, loyalty and commitment (Foroudi, Suraksha, Kitchen, Melewar, & Foroudi, 2016). Emotional attachment, satisfaction and loyalty are beyond the scope of this study.

#### 6.4.3 Higher trust from uneventful product consumption experience

**This section examines the concept epitomised by the phrase: ‘I trust it, because it hasn’t killed me (or my child) yet’**

The repeated consumption of a product with an absence of prior negative reactions was given by participants as a reason to trust.

- Angela (AA): “I trust this product because I've eaten it lots of times and it's been okay.”

The absence of prior issues combined with the perceived plainness or simplicity of a product was a reason for some participants to trust a product (see quote <sup>179</sup> in Appendix N). Value negotiations around health and sensory perceptions may be involved in these situations.

Adults with allergies were the cohort that most often reported past experience in supporting their trust of a product.

- Danielle (AA): “I trust this product because it's, it's not labelled in a way that I should worry about it and because I eat them and my friends with allergies eat them and I don't know, I just, I trust them.” (Also see quote <sup>180</sup> in Appendix N)

This trust through personal experience can also be considered from the perspective of personal responsibility, especially for the adult participants. This experience-based trust stems from familiarity derived from the personal experiences that participants have had with the product.

In this area of prior experience, experiences communicated through social media from other ‘peanut allergy parents’, such as the favourite foods of other ‘allergy kids’ or new ‘friendly’ food discoveries were discussed as leading to trust in those products. Therefore, this is akin to ‘it hasn’t killed someone else’s child yet’.

- Carmela (PC): “It's pretty easy now, like if you're a part of like a ‘no nuts’ group, you can just ask and pretty much instantly you'll have an answer, yeah, so it's really nice.”

This affect-based trust comes from the referral and word-of-mouth of other parents who are informing the purchase.

The initial consumption of a food product was treated as a trial experience for some, that when successful led to trust in the product.

- Mackensy (PC): “I trust this product because <my son> has tried it and he hasn't had a reaction to it.”

The building of trust in food from before the initial trial through to repeated use, allows participants to select foods that they feel are suitable for their families. This experience-based trust comes from familiarity with the product that was built from the initial trial.

The history of a product in relation to manufacturer recalls was also mentioned, with the absence of any recalls attributed as a rationale for trusting that product or brand.

- Sasha (PA): “I trust this product because as of yet, it hasn't let us down. Um, yeah. They haven't had any recalls that we're aware of, or

anything like that, so, nothing to challenge that trust.” (Also see quote<sup>181</sup> in Appendix N)

The higher involvement of peanut-allergic consumers with their food may lead some to pay greater attention to product recall information. Most participants reported receiving product recall information through Government of Canada, provincial or Food Allergy Canada emails, in addition to seeing recalls talked about on social media. This could involve both cognition-based trust, where the direct judgements on the product are made based on the product information, and affect-based trust, where the feelings of trust are derived from a third party, such as the government, not finding any reason for concern about certain products.

#### 6.4.4 Lower trust from consumer uncertainty about food

**This section examines the concept epitomised by the phrase: ‘Should I trust it? Am I trusting too much?’**

Uncertainty regarding trust was discussed by participants from all three cohorts. Participants referenced social media, specifically peanut allergy mothers’ groups, as showcasing different levels of trust in food, making participants question their own trust levels. Where third parties, such as peanut allergy mothers’ groups, are used to determine participants’ own trust levels, affect-based trust is involved.

- Megan (PC): “I don't entirely trust this product, I probably trust it more than some people do, but then I sort of question, am I being not cautious enough, are other people being overly cautious, so it's a hard one.”

Parents with children also mentioned anxiety as a factor that made them trust foods less.

- Amanda (PC): “Usually anxious when it comes to food, um, I check all labels, all ingredients and if anyone bakes anything, or anything like that, I'm usually very apprehensive, so, yeah.”

Some participants were generally more anxious than others. Personality-oriented trust may be lower for those with greater apprehension towards food. The apprehension towards trust can also be seen as a reaction to participants’ own potential complacency regarding the allergy. This was seen particularly in situations of post-allergic reaction, where trusting assumptions led to an experience with

anaphylaxis. These situations were noted both for parents of adolescents and adults with allergy.

For Cathy, two years before the interview, her allergic son had consumed a butter tart, purchased from a shop they had been using for years. The family trusted both the shop and the food product, but consumption of the butter tart triggered an anaphylactic reaction. Two years later, that incident still affected her ability to trust foods.

- Cathy (PA): “A product that we had a comfort level with was obviously, we shouldn't have, so that was a big wakeup call to us that we need to not assume something safe.”

Danielle had two anaphylactic reactions in the year prior to the interview. She spoke about how other people with peanut allergies she knows—a university friend and a work colleague—are seemingly less conscientious about avoiding potential allergens. Meanwhile, there were products that she was comfortable consuming that others were not. This leads to confusion for her as to what she is willing to trust.

- Danielle (AA): “I'm like a little bit 'am I trusting too much?' like I don't know, that's the one thing, is, am I trusting it too much.”

Not all participants had direct experience of an anaphylactic reaction. For those that had experienced anaphylaxis or had children who had experienced anaphylaxis, it affected them deeply, and they told their accounts of reactions in detail. These anaphylactic reactions challenged the trust of those participants and impacted on their willingness to trust, especially in the time shortly after the reactions. In these instances, their experience-based trust was lowered due to the personal experiences of allergic reactions from food.

#### 6.4.5 Lower trust from negative consumer intuition or instinct

**This section examines the concept epitomised by the phrase: ‘I just don't trust this, I'm not comfortable’**

In households where food purchase activities are shared, lack of control over certain purchases made by the partner can become a trust issue. For Angela, she asked her husband to pick up ginger snap biscuits when he was shopping, but he purchased a product that she was not familiar with and that had a ‘May Contain’

statement on the packaging. She wasn't comfortable with the product and did not trust it. Angela's cognition-based trust was lowered as she did not have the direct knowledge required to discern the suitability of the biscuits.

- Angela (AA): "I don't trust this product because it actually says 'May Contain' and since I haven't had it before, it's not worth it to me to bother, yeah, because I know there are alternatives that I can have anyway, yeah."

When talking about alternative products that she had tried instead of her usual purchases, Christine 1 talked about her reduced trust of Kellogg's since they started using peanut flour for some American cereal products, leading to uncertainty for her about Kellogg's Canadian cereal products. Her comfort with and trust in Kellogg's was diminished due to their US ingredients change, and led to Christine 1 purchasing a competing brand instead.

- Christine 1 (PA): "The only alternative I can think of is switching from Kellogg's cereal to General Mills because Kellogg's now's having peanut flour in their products, I'm happy with that, not happy with Kellogg's... Yeah, like the Kellogg's, like I said. Um, you know, I stopped buying the stuff for him because of that. I can't remember if there we other ones or not. That's the biggest one that sticks in my memory, though, just I don't trust them... Kellogg's where I was leery, it was like a crap shoot or a Russian roulette as far as I'm concerned with them now"

For Christine 1, affect-based trust was lowered as third parties—in her case Facebook allergy groups—shared information about the US manufacturer's inclusion of peanut flour in its products and this feedback led to unease for her towards Kellogg's.

This sub-section looked at where products failed to gain trust and where products were subject to lowered trust. In the first instance, the trust in a new product was hampered due to the 'May Contain' statement and unfamiliarity with the product. In the second instance, a trusted manufacturer and brand injured the trust of a consumer through a change to product ingredients in a foreign market.

## 6.5 + - Trust in brands and manufacturers

**This section examines the concept epitomised by the phrase: ‘I trust certain brands and manufacturers’**

The trust of certain brands and manufacturers by participants was selective and driven by many factors. For these situations, affect-based trust, cognition-based trust and experience-based trust were present in different configurations. This section explores trust towards peanut free brands and companies versus those that handle peanuts in their manufacturing facilities.

### 6.5.1 Higher trust in peanut free brands and companies

**This section examines the concept epitomised by the phrase: ‘I trust it, because it’s a peanut free brand or company’**

Many participants said that they trusted products that were from peanut free brands or manufacturers. The peanut free brands and manufacturers mentioned by participants are listed in Table 24 below. Of these, Dare (this is the name of the name of the manufacturer and the name of Dare's main brand) was the most frequently trusted.

Dare	<ul style="list-style-type: none"><li>Danielle (AA): “I like them because they're peanut free. I like that Dare is committed to that and yeah, just like them.” (Also see quotes <sup>182</sup> <sup>183</sup> <sup>184</sup> <sup>185</sup> in Appendix N).</li></ul>
Quaker	<ul style="list-style-type: none"><li>Carmela (PC): “Quaker, that one's the best price and peanut free.”</li></ul>
President's Choice	<ul style="list-style-type: none"><li>Megan (PC): “Sometimes PC products, because they make peanut free products. (Also see quote <sup>186</sup> in Appendix N)</li></ul>
Chapman's	<ul style="list-style-type: none"><li>Regina (PA): “Chapmans for instance because it is summertime, right with their ice cream, they have a no peanut, no peanut in their plant, so typically for ice cream, because the kids all want treats, that's the brand that we would buy.”</li></ul>
Enjoy Life	<ul style="list-style-type: none"><li>Trisha (PC): “I rely heavily on the Enjoy Life brands, I think it's fantastic because it's also dedicated egg free as well and shellfish, everything, so I love their products, they're expensive but I will buy them for granola bars and things like that, for snacks.”</li></ul>
Wrigley's	<ul style="list-style-type: none"><li>Christine 1 (PA): “Wrigley's because I know that they're peanut and tree nut free as well.”</li></ul>

Table 24 Participant trust in brands and manufacturers

The brands and manufacturers that have peanut free labelling on their products, such as Dare and Enjoy Life, came out as the most frequently trusted because their facilities are reported to be peanut free. For these brands, their reputation and Peanut Free Symbols reinforce affect-based trust for some participants. Cognitive-

based trust is also present for a number of participants, where direct knowledge of the manufacturing practices and quality allow for judgements on product suitability. Participants have used many of these brands and manufacturers for a long time and their trust is experience-based, stemming from personal experience with the products. Some of the brands and manufacturers noted in Table 24, such as President's Choice, Quaker and Chapman's, produce both peanut free and peanut-containing items, and while some participants still trust the peanut free labelling, others do not, as presented in 6.5.3 below.

#### 6.5.2 Higher trust in National brands

**This section examines the concept epitomised by the phrase: 'I trust large national name brands'**

Some participants report a greater trust of large, national-name brands. Many of these responses did not contain a rationale for why there was trust of the national brands over the smaller brands. For those participants that did attribute a reason, the ability to understand the brands was given.

- Kim (PA): "I trust Kraft, I understand Christie, I understand um, I just understand those ones I guess."

This trust through understanding may be a part of cognition-based trust where the direct knowledge about a product leads to the understanding mentioned. Experience-based trust may also play a role as extensive personal experience with the national brands may support its trust.

- Trisha (PC): "Brand wise, the bigger brands I tend to trust a little bit more, because I feel like they would have that, that they wouldn't want that liability on their hands."

From a cognition-based trust perspective, national brands may be judged to have greater controls in place during the manufacturing process in order to guard against the liability involved should a product unintentionally contain peanuts.

#### 6.5.3 Lower trust in brands not exclusively peanut free

**This section examines the concept epitomised by the phrase: 'I don't fully trust brands that have both peanut free and nut products'**

Some participants had low levels of trust for brands that included both peanut free and nut products; these were seen for those with and without nut allergies other than peanut. There is lower affect-based trust when participants are influenced by others that provide negative feedback about the product.

- Christine 1 (PA): “Well, he likes Ritz crackers a lot, but with Christie you have to read the label every time and then it's still a trust factor with some of them because you know that it's in the facility, so and even with President's Choice, some moms aren't comfortable with them, they think they get different answers the different times that they call.”

Other participants have a lower cognition-based trust as they evaluate the direct knowledge of the specific circumstances in which the products are being made.

- Carly (AA): “It comes down to what the company mostly produces, so if I know that they're going to be a major nut producer, whether it's in like baked goods or if it's in their cereal or what so have you, then I know to be a bit more wary.”

Lower affect-based trust may also be present where the manufacturer or brand is known for its nut products and its reputation for making nut products makes the participants feel uneasy.

- Cathy (PA): “Some brands I don't, just 'cause I associate their name with peanuts, like Hershey's for instance I have, it takes me a few times reading their label, even though I know they do have a peanut free line at Halloween.”

Cognitive-based trust, affect-based trust and experience-based trust may all play a role in some instances. In Sheri's example, she has less cognition-based trust in Kraft after a change in ownership, as her perception of the brand quality and direct knowledge of the reliability have diminished. Her affect-based trust has lowered due to the third-party feedback she has received about Kraft from others, leading to her feelings of uncertainty. Additionally, her experience-based trust in Kraft from years of purchases was reduced, as with the new ownership she is not confident that her historical trust towards the brand remains valid.

- Sheri (PA): “I like Kraft, but now that Mondelez owns Kraft, I don't think, I don't have the same confidence, and I hear certain products are from nut free and not”

Many types of trust may be in play when there is heightened uncertainty involved regarding a product. In these cases, personality-oriented trust will also play a role as participants' personality-oriented preferences and habits influence choices.

#### 6.5.4 Lower trust in shop label products

**This section examines the concept epitomised by the phrase: ‘I don't fully trust shop label products’**

There was lower trust reported for shop label products. Premium shop label brands such as President's Choice (PC) have some products with the Peanut Free Symbol and were most often described as being trusted. This trust was described as conditional upon telephone contact with the manufacturer, and some participants reported inconsistent responses as being both a trust and PR issue with shop label brands. This was explored earlier in the chapter on PR, that discussed participant contact with manufacturers. The non-premium, low-cost store brands, including No Name (Loblaw Discount) and Great Value (Walmart) were most often reported as not being trusted.

- Christine 1 (PA): “The only one I do is PC and I have to call them. I know Great Value (Walmart store brand) is bad, No Name is bad, so.”

Cognitive-based trust is lower for some participants because they lack the direct knowledge necessary for them to make informed judgements about the product due to the manufacturer of the shop label products being unknown.

- Tanya (PA): “I just don't feel as comfortable with the No Name ones, because I don't know who's making them and I don't know the quality control, if they're being as careful to make sure there's no cross contamination, because I don't know what else is being made at those locations, so I like the name brand in this case.”

A few participants also expressed lower affect-based trust because of their feelings of apprehension towards No Name products that do not have a known reputation.

- Regina (PA): “I don't typically buy a lot of No Name products because I'm a little bit concerned about just the No Name.”

Shop label products have more unknowns, including which manufacturer is producing the products, and this negatively impacts on many types of trust.

#### 6.5.5 Lower trust in unfamiliar brands and manufacturers

**This section examines the concept epitomised by the phrase: ‘I don't fully trust it, because it's from a company I don't know’**

A lack of knowledge about a manufacturer or brand can influence lower cognition-based trust for the participants as they do not have the evidence required to make an informed decision.

- Regina (PA): “I typically stay clear of the brands of the brands I don't recognise and stay close to the brands that that I am a hundred percent fully aware of, because sometimes if you go to a Whole Foods, or something like that, you'll find brands that you don't know, so I don't do those brands.”

Affect-based trust can also be lower as the consumer does not know the reputation of or feedback about the product.

- Samara (AA): “I think like some of the health food products are like, different, like granolas, you'll be like, if it doesn't say ‘May Contain’ peanuts on it, but it's a brand I've never seen before, I've never used before . . . we kind of like know what's good or what's not, or if we hear of a brand, we'll go back and get it, but I usually I guess, stick to brand I already know.”

When there is little experience with the product, there can be lower experience-based trust present as there is a lack of familiarity with the manufacturer or brand.

## 6.6 + - Trust in the Peanut Free Symbol

**This section examines the concept epitomised by the phrase: ‘I mostly trust the Peanut Free Symbol’**

The Peanut Free Symbol was given as a reason by some participants for trust in a product, for some it is used almost as a guarantee and the first choice in the consideration set. However, this trust was not universal and doubts regarding the Peanut Free Symbol were found, especially when the product was not nut free. The

over-use of the Peanut Free Symbol was a concern, with some participants worrying that it had lost its rigour through a perceived ubiquity. Other participants' trust in the Peanut Free Symbol was negated by concerns about the packaging of the product and whether there had been CC with peanuts.

#### 6.6.1 Higher trust in the Peanut Free Symbol to be peanut free

**This section examines the concept epitomised by the phrase: 'I trust the product with the Peanut Free Symbol to be peanut free'**

Many participants trust the Peanut Free Symbol, treating it as a sort of guarantee that the product is peanut free. Most participants had never considered that a product with a Peanut Free Symbol might not be peanut free.

- Fiona (PC): "If there's a peanut free label on it we know there's a total absence." (Also see quote <sup>187</sup> in Appendix N)

The Peanut Free Symbol reassures some participants by identifying a product that they perceive as being safe (see quote <sup>188</sup> in Appendix N). The trust of a product can facilitate the consideration set formation but also reassures, giving peace of mind to participants about their food choices (see quote <sup>189</sup> in Appendix N). The efforts made by a manufacturer to offer products with a Peanut Free Symbol were appreciated by many of the participants. These efforts combined with the Peanut Free Symbol reassured and engendered trust of the product being discussed (see quote <sup>190</sup> in Appendix N).

The certainty with which some of participants saw products with peanut free labels as peanut free had a caveat, whereby the product had to be Canadian. The widespread use of the Peanut Free Symbol in Canada leads to the trust of the product.

- Danielle (AA): "It's pretty widespread here, like it's, in Canada it's not a problem. If it has the Peanut Free Symbol, I automatically trust it." (Also see <sup>191</sup> in Appendix N)

Trust due to the Peanut Free Symbol can be classified as affect-based trust, as the indirect attribute of the Symbol is used by the consumer to inform their purchase.

#### 6.6.2 Higher trust in the Peanut Free Symbol as consumer preference

**This section examines the concept epitomised by the phrase: ‘I trust the Peanut Free Symbol it is my go-to choice’**

The Peanut Free Symbol is trusted by some participants and provides a reassurance for them about the product. This affect-based trust informs their purchase. The symbol itself is also trusted to help inform those with potential language or comprehension issues to select suitable peanut free products.

- Jennifer (PC): “It's nice just to have the symbol, I think especially for people that come from another country and don't necessarily speak English, right away, just to have that symbol right there and like oh yeah, I know that I can buy this, this is safe.”

The Peanut Free Symbol can also be trusted to serve as an indicator of suitability for products intended to be consumed in schools or other external locations that are peanut free environments.

- Tanya (PA): “It makes things easier quicker, that I can gravitate to those items so that I can know that they're peanut free and I can have confidence in her taking them to school, because then the school also knows they're peanut free.” (Also see quote <sup>192</sup> in Appendix N)

The trust in the Peanut Free Symbol leads some participants to have it as their first choice. This affect-based trust reassures participants in their selection and makes their shopping journey easier.

- Megan (PC): “The Peanut Free Symbol is obviously the sort of first choice, you get a little 'yes!' when you see that.” (Also see quote <sup>193</sup> in Appendix N)

Familiarity with products that have the Peanut Free Symbol can also produce experience-based trust as the participants have personal experience using these products successfully.

The Peanut Free Symbol is so trusted by some participants that they do not read the ingredients if the symbol is there. Those participants trust the product, and by extension the manufacturer, to keep them or their child safe.

- Sarah (PC): “Oh, I don't read the ingredients actually <laughter> so just as soon as I see the peanut free, I don't even read the ingredients, I just feel safe with buying the product.”

This trust in the Peanut Free Symbol makes it easier for some participants to quickly and easily choose food for their family. The visibility of the symbol combined with the trust in the symbol are sufficient to discard the need to read the product labelling (see quote <sup>194</sup> in Appendix N). Other participants balance the need to read the product label with their trust of the Peanut Free Symbol. They trust the product and manufacturer enough not to read the ingredients every time, yet conduct sampling 'spot checks' to ensure that their continued trust is justified.

- Megan (PC): “When I'm buying the same thing over and over again, I don't often check the label, I kind of more do spot checks which I, isn't great but if I'm looking for anything new or different then I'm checking labels, I'm happy when I see a Peanut Free Symbol”

Here again, affect-based trust is involved with consumers' trust in the Peanut Free Symbol as a third-party reassurance towards their purchase. For consumers that also focus on the manufacturer and brand, cognition-based trust is used to gain the direct knowledge necessary for confidence in their choice.

### 6.6.3 Lower trust from confusion about 'nut free' products

**This section examines the concept epitomised by the phrase: ‘I don't fully trust when the product is peanut free but not nut free’**

Some participants said that their trust can be challenged when a product is peanut free, but not nut free. This leads to confusion about whether to trust that the product is safe for them.

- Amanda (AA): “Sometimes it's a little, when it says peanut, and then but it's not nut free, so it's kind of confusing in that way. . . . Like sometimes it can be just peanut free, sometimes it can be just nut free, um sometimes I'm not quite certain that they were completely safe with it, so.”

A number of participants do not trust items that contain nuts to be peanut free, even if it has a Peanut Free Symbol. A product that is not nut free could cause a person with an allergy to nuts to react; however, even people with peanut but not nut allergies may not trust these products.

- Cathy (PA): “That Peanut Free Symbol has to be peanut and tree nut, like that drives me crazy that it's just peanut free, 'cause I know people will buy it, even if

it's not me, I know someone else who is not as invested in the process, will buy those thinking, with the best intention in the world, that they're safe, and they're not, so that's, that drives me crazy.”

There is a desire for the Peanut Free Symbol to instead be a peanut+tree nut free symbol. Some participants voiced that this modification to the symbol would help them to trust it.

- Christine 1 (PA): “I wish that they would do a peanut+tree nut free symbol instead of just the peanut free. And when I call the manufacturers I tell them that, like when I call and find out that it's tree nut free too, 'why don't you put that on the label?'. It's not only easy for me but it's easier for the parents.”

Where there are nut free symbols, a few participants question whether it refers to peanuts or tree nuts. Their trust in the allergen-free symbol is lessened by the perceived inconsistency in use of the symbol's meaning.

- Megan (PC): “I mean some of the Peanut Free Symbols, some of them are nut free and they don't clarify whether it's peanut or tree nut, some of them say peanut only and they actually are 'May Contain' for tree nuts. Like the inconsistency is very frustrating.”

Lower cognition-based trust can be driven by the uncertainty about the production of products with and without nuts and the concern that manufacturers are not exhibiting competence when they do not differentiate clearly between peanuts and tree nuts.

#### 6.6.4 Lower trust from symbol overuse and potential deception

**This section examines the concept epitomised by the phrase: 'I don't fully trust that the symbol isn't a scam, like greenwashing'**

I noticed cynicism towards the Peanut Free Symbol from some participants. The potential trust in these products is tempered by a concern that the symbol is a 'scam' and is being used indiscriminately as a marketing tool to sell products.

- Beth (AA): “It's hard to know, it's really hard to know with food manufacturing, I mean I guess there's always a chance that, and it's like with green washing, they could just start throwing that label on anything right and maybe they're getting another market and maybe it's a scam, it's hard to say.”

Products that do not usually include peanuts were given as an example by some participants of the problem they see with the symbol. The trust in the symbol is eroded by its use in situations where it is perceivably irrelevant (see quote <sup>195</sup> in Appendix N).

Other participants applaud and trust companies that have made the effort to be peanut free. They see the Peanut Free Symbol being used by manufacturers that they feel have not made a comparable effort, and trust less in the symbol for that reason.

- Danielle (AA): “There are so many companies that have gone above and beyond and become allergen free and there are other ones that just kind of pretend and go along with it.”

A few participants feel that the perceived overuse of the Peanut Free Symbol confuses consumers by being ubiquitous in the store. Where items do not have the symbol, there are questions about whether the product is suitable for consumption. This is often in situations as detailed above where the product in question would not normally include peanuts.

- Samara (AA): “I think that people are getting a bit confused about, does everything have to say peanut free like actually on it, if it's safe to eat and so, it makes, so there's a bit of confusion around like what's the safest and that.”

Confusion around whether to trust the Peanut Free Symbol can lower the affect-based trust in both the symbol and the products that use it. The participants may feel that there are not enough external reassurances for them to be able to trust in the symbol.

#### 6.6.5 Lower trust in product packaging

**This section examines the concept epitomised by the phrase: ‘I don’t fully trust the packaging material of a product with the Peanut Free Symbol’**

Sasha works in the food industry and has lower cognition-based trust in the packaging of food products, based on her direct knowledge of food manufacturing facilities and procedures.

- Sasha (PA): “My problem with the Peanut Free Symbol, is the contents, um, may be from a certified peanut free facility, but that doesn't, like the box is not safe,

um, and it's it's [sic] a challenge, I, you have to get past the packaging, so the peanut free, yes, I, it's good, because the contents that they're going to put in their mouth are peanut free, um, but the actual box on the outside, that's a little bit harder, and that to me is, equally challenging.”

Lower affect-based trust may also be involved; although the Peanut Free Symbol provides reassurance about the contents of the package, there is no corresponding symbol of reassurance that the packaging itself is peanut free and has not come into contact with peanuts.

## 6.7 Interrelationship between trust and PR

+ - Trust from comfort level and experience	
Higher trust from	Lower PR
+ Consumer positive intuition	- Lower psychological risk about a product may allow the participant to rely on gut feel
+ Childhood product and brand usage	- Lower psychological risk from parental use of product, as parent has obligation to their child
+ Uneventful product consumption experience	- Lower performance risk from used successful prior use - Lower psychological risk from belief - Lower physical risk due to the successful past experience
Lower trust from	Higher PR
- Consumer uncertainty about food	+ Higher physical risk from products, especially those not labelled as peanut free (see quote <sup>196</sup> in Appendix N) + Higher psychological risk from uncertain and distrust
- Negative consumer intuition and instinct	+ Higher psychological risk of the product playing a role in the feeling of discomfort towards the product
+ - Trust in brands and manufacturers	
Higher trust in	Lower PR
+ Peanut free brands and manufacturers	- Lower physical risk associated with peanut free manufacturing processes and facilities (see quote <sup>197</sup> in Appendix N)
+ National brands	- Lower psychological risk due to company knowledge - Lower physical risk due to specific allergen protocols used in large food manufacturing facilities (see quotes <sup>198</sup> <sup>199</sup> in Appendix N)
Lower trust in	Higher PR
- Brands not exclusively peanut free	+ Higher physical risk from CC in a facility that produces peanut free products as well as products containing nuts. + Higher psychological risk from consumer uncertainty
- Shop label products	+ Higher physical risk may come from the manufacturing facilities not being transparent to the consumer + Higher performance risk from unknown origins + Higher psychological risk from consumer uncertainty
- Unfamiliar brands and manufacturers	+ Higher psychological risk from unfamiliarity + Higher physical risk from the unknown in manufacturing + Higher performance risk from an unfamiliar company
+ - Trust in Peanut Free Symbol	
Higher trust in	Lower PR
+ Peanut Free Symbol to be peanut free	- Lower physical risk of products with a Peanut Free Symbol. - Lower psychological risk symbol reassures consumer (see quote <sup>200</sup> in Appendix N)
+ Peanut Free Symbol as consumer preference	- Lower physical risk from symbol viewed as 'guarantee' - Lower psychological risk from Peanut Free Symbol being reassuring to consumer (see quote <sup>201</sup> in Appendix N)
Lower trust from	Higher PR
- Confusion about 'nut free' products	+ Higher Physical risk from peanuts in facility, peanuts CC the product directly or nuts CC with peanuts + Higher Psychological Risk from vigilance required
- Symbol overuse and potential deception	+ Higher Psychological Risk from potential deception + Higher Performance Risk due to symbol overuse
- Product packaging	+ Higher physical risk from packaging and peanut CC

## 6.8 Conclusion

Trust plays a significant role in the conceptualisation of consideration sets for individuals managing severe food allergies. Three trust themes emerged from the study: (1) Trust from comfort level and experience, (2) Trust in brands and manufacturers and (3) Trust in the Peanut Free Symbol. 15 associated subthemes were also presented, with 7 for higher trust and 8 for lower trust.

From Food Choice theory, I highlighted that the life courses and influences of individual participants shaped their responses. The value negotiations of health, safety and managing relationships were most frequently involved in the formation of trust strategies. Of the types of trust; cognition-based trust, affect-based trust and experience-based trust were frequently referenced. Cognition-based trust appeared in both high and low levels as participants sought direct knowledge about the manufacturer, brands and products. Affect-based trust was noted most often for products that have the Peanut Free Symbol, which serves as an external mark of assurance, but also for feedback and referrals about suitable products from others, including Facebook allergy groups. Experience-based trust was present for many participants because they rely on successful, prior personal experiences with a product as the reason for future consideration. Personality-oriented trust featured in the responses less frequently than other types of trust, but it has an overarching impact on all the responses, based on each participant's individual disposition to trust, habits and shopping preferences. The different types of trust were often present in different configurations in the narrative themes shared by participants.

The end of the chapter presented the interrelationship between trust and PR, relating to the themes and subthemes found for trust. Again, as between PR and trust, I noted an interrelationship, as the trust dimensions appears to relate to the types of PR. The next chapter discusses the results pertaining to trust, PR and their interrelationship, drawing from the discussion in this and the prior two chapters.

## **7 Contributions and Conclusion**

### **7.1 Introduction**

This chapter is the culmination of the study. Investigating PR, trust and their interrelationship in the conceptualisation of packaged food consideration sets by consumers managing severe allergies was a significant but ultimately successful undertaking. To begin this chapter, I share an overview of the research. Having worked through an early iteration of the literature review, I created a conceptual model for this study many years ago. How this initial conceptual model changed and evolved through the study is presented in the discussion of the revised conceptual model. I then present the major results of the study on PR and trust with key themes and subthemes generated through the research. The major contributions of the study are then shared and discussed. I proceed to reflect on the study, on how the choices I made shaped the study, what could have been done differently and where this research could lead, including for practice. I end the chapter and this dissertation with a final conclusion that takes a parting look on the material presented.

### **7.2 Overview of this research**

Results from this research have provided sufficient evidence to relate PR, trust and their interrelationship to the conceptualisation of packaged food consideration sets. The consumer literature has a long tradition with PR (Jacoby & Kaplan, 1972; Robert N. Stone & Grønhaug, 1993; J. W. Taylor, 1974), and specifically PR and consumer food research (Grunert, 2002; V. W. Mitchell, 1992). Recent consumer PR research has concentrated on the expansion of the risk elements. Meanwhile, consumer food risk research has focused on risk from the food itself, such as contamination or quality issues. This research instead looks at perceptions of risk from food that stems from the consumers' life-threatening food allergies, where the PR is heightened.

Similarly, trust has a tradition in consumer research, including consumer trust and brand trust (Delgado-Ballester & Munuera-Aleman, 2001; Sirdeshmukh et al., 2002). Where trust is involved in consumer food decisions, the literature has focused on trust for specifically identified foods, such as functional or organic foods (Siro, Kápolna, Kápolna, & Lugasi, 2008). Even in the limited literature involving PR, consumer trust and food allergies—such as from the food science discipline in the

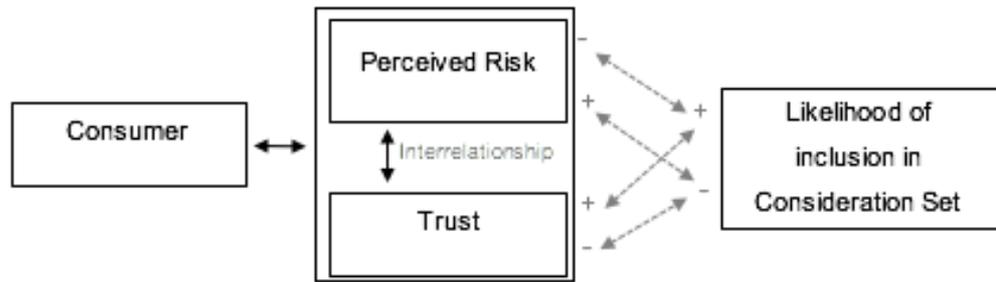
case of novel foods examining whether consumers would trust modifications to food to reduce its physical risk from allergenicity—the focus remains on the food itself, rather than something intrinsic to the consumer. In this research, the consumer is the subject, where their need for trust in food stems from a serious health condition, in this case anaphylactic food allergies. The interrelationship between PR and trust relating to food for these allergic consumers has not been examined previously. From a consumer-marketing perspective, the heightened PR for consumers with food allergies and the interrelationship with trust has implications for brands, manufacturers and retailers.

Guided by the relativist perspective, a narrative approach consisting of qualitative methods was used. Data generation took the form of in-depth interviews and supporting materials from cupboard analyses and purchase logs/receipts. Based on the existing literature and exploratory interviews, I developed an interview guide to explore PR and trust. I used this interview guide, with an oral history-style interview approach, to examine the conceptual model as derived from the literature. I conducted interviews with thirty households split into three cohorts. These cohorts are 1) Adults with allergies, 2) Parents of adolescents with allergies and 3) Parents of children with allergies. The interviews led to a wealth of participant data, which was then coded and analysed using NVivo. From this I derived themes and subthemes for PR and trust respectively and then examined the interrelationship between the PR and trust results.

The analysis of the themes and subthemes arising from the interviews was grounded in food choice theory and specifically the food choice process model from Connors et al. (2001). The food choice process models have traditionally been a part of the nutritional sciences discipline; however, I contend that they hold relevance for the consumer food marketing discipline. The conceptualisation of consideration sets as part of the food choice process can be located in the most advanced stage of the strategies.

#### 7.2.1 Discussion of conceptual model evolution

Figure 14 presented the initial conceptual model developed for this research. It is included again below for reference.



(Figure 14 repeated - Initial conceptual model)

Seeking to explore the research questions, the initial model presents consumer, perceived risk and trust, and their consideration set. The wording chosen towards the consideration set was 'likelihood of inclusion in the consideration set'. As the research progressed, the initial conceptual model was reassessed to reflect how participants experienced PR and trust and the interrelationship of the two.

What I had presented as the consumer was intended to represent the consumer's experiences and contemplations. In the revision of the conceptual model, I have relabelled the consumer as 'consumer factors and values' to reflect the intent to capture the elements that the consumer brings to the food choice in the model.

In what, from participants' responses, appeared to be a relative inverse relationship between PR and trust, I have kept the relative polarities as originally presented. The use of the '+' for higher and '-' for lower is a visual shortcut for the model. Understanding the higher and lower as a range, versus a straight continuum or absolutes, continues to allow for the nuances of the qualitative responses from the relativist perspective. This connection is discussed further in the next section.

The final segment of the initial conceptual model involves the 'Likelihood of inclusion in Consideration Set'. However, the study demonstrated the interrelationship between PR and trust and their role in the conceptualisation of the consideration set. While the initial conceptual model hypothesised a relationship and used dashed connectors, the results of the study lead me to use solid connectors in the revised conceptual model. These connectors have a double-ended arrow for the interrelationship between PR and trust, as the two are linked but not necessarily simultaneously, as discussed below in the results. The connectors go from PR, trust

and the interrelationship as three solid arrows leading to the final rectangular box. In the final rectangular box, the original wording of 'Likelihood of' was questioned during the research. In addressing the research questions and with the design of the study, this wording does not properly represents the intent. 'Likelihood' is typically a measurement factor from an objective quantitative approach. It would better be explored through a statistical approach, perhaps through a Likert scale-style evaluation. The research question instead sought to uncover the conceptualisation of the consideration set. The multi-dimensional nature of the conceptualisation of the consideration set and the qualitative approach intent is better represented in clearly wording this as 'Conceptualisation of Consideration Set'. This revised wording more accurately represents the original intent for the initial conceptual model and complements the study design. That the study findings support the revised wording is discussed further in the contributions section.

The modifications to the conceptual model resulting from the research are seen in Figure 23, this revised conceptual model is one of the contributions of the study and is discussed in 7.4.1. The resulting model can be located in an adaptation of the food choice process model as discussed below in the contributions section below in 7.4.2.

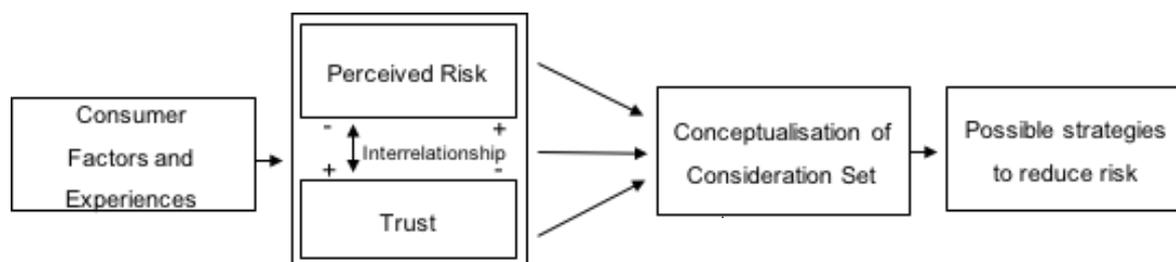


Figure 23 The Revised Conceptual Model

The next section presents the major results of the research. It shares the results following the exploration of the research questions. The section addresses PR, trust, the interrelationship between PR and trust

### 7.3 Addressing the research questions

The study investigated PR and trust in the conceptualisation of packaged food consideration sets. This investigation was driven by three main research questions

that pertain to 1) PR, 2) trust and 3) the interrelationship between PR and trust. The research questions are answered in their three respective subsections below, with the research questions repeated in the bold font.

### 7.3.1 PR results

#### **What is the role of PR in the conceptualisation of packaged food consideration sets by consumers managing severe allergies?**

In this study, I identified a number of themes and subthemes pertaining to PR from the interviews conducted with the participants. The five themes and 23 subthemes emerged from the coding of the participants' responses using NVivo. Previously discussed in detail in Chapter 4, the themes are presented below in Table 26.

PR Themes	PR Subthemes	
	Higher PR	Lower PR
+/- PR and consumer search for product information	<ul style="list-style-type: none"> <li>• with consumer time spent to get information</li> <li>• with consumer concerns about accuracy of information</li> <li>• with manufacturer not sharing information with consumers</li> </ul>	<ul style="list-style-type: none"> <li>• when manufacturer is responsive to the consumer</li> <li>• when consumers feel capable of assessing risk</li> </ul>
+/- PR of Cross-Contact/Cross-Contamination	<ul style="list-style-type: none"> <li>• from CC in packaged food products</li> <li>• from CC in unpackaged food products</li> </ul>	<ul style="list-style-type: none"> <li>• from food packaging CC</li> <li>• from individual food product packaging CC</li> </ul>
+/- PR and food product nutritional labelling	<ul style="list-style-type: none"> <li>• from consumer effort needed to ingredients list</li> <li>• of consumer missing allergens on the label</li> <li>• from 'May Contain' product labelling</li> </ul>	<ul style="list-style-type: none"> <li>• of food products with simple ingredients</li> <li>• of some products with 'May Contain' labelling</li> </ul>
+/- PR of new products	<ul style="list-style-type: none"> <li>• of new products requires investigation by the consumer</li> <li>• of new products requires alertness from the consumer</li> </ul>	<ul style="list-style-type: none"> <li>• from new products that have Symbols on the packaging</li> <li>• from new products when consumers have guidance</li> </ul>
+/- PR from food product categories and country of origin	<ul style="list-style-type: none"> <li>• from certain food product categories</li> <li>• from country of origin</li> <li>• from 'unsafe' products</li> </ul>	<ul style="list-style-type: none"> <li>• from classifying select foods as 'safe'</li> <li>• from a preference for domestic made products</li> </ul>

Table 26 PR themes and subthemes from the study

These themes demonstrate that PR plays an important role in the conceptualisation of packaged food consideration sets for consumers managing severe food allergies. That the PR spans the consumers' need for information, concerns about CC, confusion over food product labelling and wariness about new and certain types of products demonstrates its applicability to this study and the conceptualisation of considerations sets in this context.

The study found that PR plays a role in the conceptualisation of packaged food consideration sets and this role draws from all six dimensions of risk. Key themes emerging from the study are consumer focused and often incorporate multiple dimensions of PR.

### 7.3.2 Trust result

#### **What is the role of trust in the conceptualisation of packaged food consideration sets by consumers managing severe allergies?**

In the study, I uncovered three main themes pertaining to the conceptualisation of packaged food consideration sets. These were presented in Chapter 5 and are seen in Table 27 below.

Trust Themes	Trust Subthemes	
	Higher trust	Lower trust
+/- Trust from comfort level and past experience	<ul style="list-style-type: none"> <li>from consumer positive intuition and instinct</li> <li>from childhood product and brand usage</li> <li>uneventful product consumption experience</li> </ul>	<ul style="list-style-type: none"> <li>from consumer uncertainty about food</li> <li>from negative consumer intuition or instinct</li> </ul>
+/- Trust in brands and manufacturers	<ul style="list-style-type: none"> <li>in peanut free brands and companies</li> <li>in national brands</li> </ul>	<ul style="list-style-type: none"> <li>in brands not exclusively peanut free</li> <li>in shop label products</li> <li>in unfamiliar brands and manufacturers</li> </ul>
+/- Trust in the Peanut Free Symbol	<ul style="list-style-type: none"> <li>in the Peanut Free Symbol to be peanut free</li> <li>in the Peanut Free Symbol as consumer preference</li> </ul>	<ul style="list-style-type: none"> <li>from confusion about 'nut-free' products</li> <li>from symbol overuse and potential deception</li> <li>in product packaging</li> </ul>

Table 27 Trust themes and subthemes from the study

These themes demonstrate that trust plays an important role in the conceptualisation of packaged food consideration sets for consumers managing severe food allergies. The trust present in these themes helps one understand how the consumer navigates the consideration set formation by using internal and external factors to guide them.

### 7.3.3 Interrelationship between PR and Trust, and Trust and PR

#### **What is the interrelationship between PR and trust in this context?**

There appears to be a relative inverse relationship between higher and lower levels of PR and higher and lower levels of trust in the formation of packaged food consideration sets for consumers managing severe food allergies. This relationship is demonstrated in Table 28 and Table 29 below. Where negative PR exists, also does higher trust for the themes presented, however, the types of trust and PR related per theme are subject to the situation of the context represented in the them or subtheme. At times, more types of trust are present than PR dimensions or vice versa, there does not appear to be a discrete linkage between an individual PR dimension and an individual type of trust.

<b>+ - PR and consumer search for product information</b>	
Higher PR	Lower trust
+ Time risk and physical risk	- Lower cognition-based trust
+ Psychological risk	- Lower cognition-based and experience-based trust
+ Physical, time and psychological risk	- Lower cognition-based and affect-based trust
Lower PR	Higher trust
- Psychological and physical risk	+ Higher cognition-based and experience-based trust
- Psychological risk	+ Higher cognition-based, affect-based, experience-based and personality-oriented trust
<b>+ - PR of CC</b>	
Higher PR	Lower trust
+ Physical risk	- Lower cognition-based and affect-based trust
+ Physical and psychological risk	- Lower affect-based trust - Lower cognition-based trust
Lower PR	Higher trust
- Physical risk	+ Higher personality-oriented and affect-based trust
- Physical risk	+ Higher cognition-based trust
<b>+ - PR and food product nutritional labelling</b>	
Higher PR	Higher trust
+ Time, physical and psychological risk	- Lower cognition-based trust
+ Physical and psychological risk	- Lower cognition-based trust
+ Psychological, physical and social risk	- Lower cognition-based and personality-oriented trust
Lower PR	Higher trust
- Physical risk	+ Higher cognition-based trust
- Psychological and financial risk	+ Higher personality-oriented and experience-based trust
<b>+ - PR of new products</b>	
Higher PR	Lower trust
+ Time, financial, physical and psychological risk	- Lower cognition-based and experience-based trust
+ Psychological risk	- Lower cognition-based and affect-based trust
Lower PR	Higher trust
- Financial risk, physical risk	+ Higher affect-based trust
- Psychological risk and social risk	+ Higher affect-based trust
<b>+ - PR from food product categories and country of origin</b>	
Higher PR	Lower trust
+ Physical and psychological risk	- Lower cognition-based and affect-based trust
+ Physical and psychological risk	- Lower cognition-based and affect-based trust
+ Physical, psychological and performance risk	- Lower cognition-based trust
Lower PR	Higher trust
- Psychological, financial, physical and performance risk	+ Higher cognition-based trust
- Physical, performance and psychological risk	+ Higher cognition-based, affect-based and experience-based trust

Table 28 Study PR themes with PR dimensions and related type(s) of trust

<b>+ - Trust from comfort level and experience</b>	
Higher trust	Lower PR
+ Personality-oriented, experience-based and affect-based trust	- Lower psychological risk
+ Affect-based and experience-based trust	- Lower psychological risk
+ Experience-based, affect-based and cognition-based trust	- Lower performance, psychological, and physical risk
Lower trust	Higher PR
- Affect-based, personality-oriented and experience-based trust	+ Higher physical and psychological risk
- Cognition-based and affect-based trust	+ Higher psychological risk
<b>+ - Trust in brands and manufacturers</b>	
Higher trust	Lower PR
+ Affect-based, cognition-based and experience-based trust	- Lower physical risk
+ Cognition-based and experience-based trust	- Lower psychological risk - Lower physical risk
Lower trust	Higher PR
- Affect-based, cognition-based, experience-based and personality-oriented trust	+ Higher physical and psychological risk
- Cognition-based and affect-based trust	+ Higher physical, performance and psychological risk
- Cognition-based, affect-based and experience-based trust	+ Higher psychological, physical and performance risk
<b>+ - Trust in Peanut Free Symbol</b>	
Higher trust	Lower PR
+ Affect-based trust	-Lower physical and psychological risk
+ Affect-based, experience-based and cognition-based trust	- Lower physical and psychological risk - Lower psychological risk
Lower trust	Higher PR
- Cognition-based trust	+ Higher physical and psychological risk
- Affect-based trust	+ Higher psychological and performance risk
- Cognition-based and affect-based trust	+ Higher physical risk

Table 29 Study trust themes with types of trust and related PR dimensions

## 7.4 Major contributions

There are three original contributions of this study as detailed in this subsection.

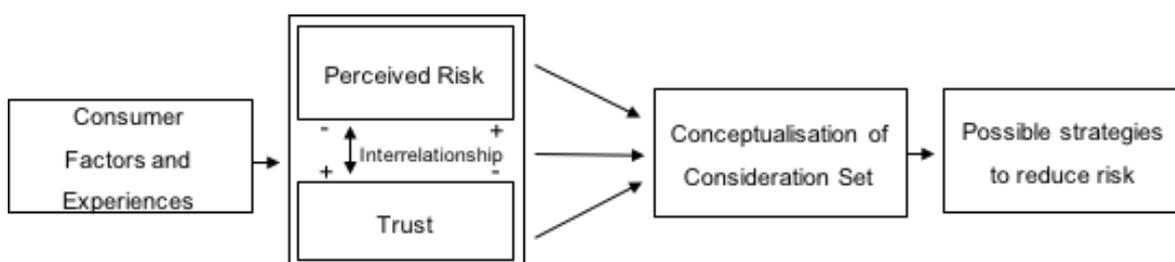
- 1) Identified and described the interrelationship between PR and Trust in the conceptualisation of packaged food consideration sets
- 2) Expanded the strategies of the Food Choice Process Model within consumer marketing
- 3) Modelled the role of relationships in the conceptualisation of packaged food consideration sets for consumers managing severe allergies

A methodological contribution of the study is expanding the use of oral history methods in the consumer marketing discipline as presented in Chapter 3.

#### 7.4.1 Identified and described the interrelationship between PR and trust in the conceptualisation of packaged food consideration sets

As presented in Chapter 2 (2.6.3) some previous research on the interrelationship between PR and trust theorises an inverse relationship between PR and Trust. However, the research in this area has focused consumers in an online environment and has tested various empirical hypotheses. This is the first study to qualitatively examine these concepts from a consumer household perspective with health concerns. Beginning with the research questions, the in-depth interviews led to the generation of data, which was then categorised into PR and trust themes and subthemes. Emerging out of these subthemes were comparisons between the PR dimensions and the elements of trust. These are presented in detail in Table 28 and Table 29. While Das and Teng (2004) splits PR and trust into their functional and psychosocial perspectives and Yang et al. (2015) uses the risk dimensions leading to total risk, no prior studies use the six dimensions of PR aligned with the types of trust to explore the PR-trust interrelationship. Rooted in the data generated from the participants, these dimensions were used to frame the PR and trust constructs shared in the themes and subthemes.

Figure 23, repeated below, visualises the interrelationship between PR and trust in the process of the consumer conceptualising their consideration set for packaged food.



(Figure 23 repeated)

This study and this resulting model were able to show the relative inverse relationship between PR and trust, and a relative inverse relationship between trust and PR in the conceptualisation of consumer sets. This study is the first to make such a connection in this context. These findings detailing how PR and trust interrelate in the context of severe allergy has significant implications for marketers, both researchers and practitioners.

### 7.4.2 Expanded the strategies of the food choice process model within consumer marketing

The discussion of the study has been rooted in food choice theory and framed by the food choice process model. The role of life course and food choice influences were first presented. This was followed by a linkage of the value negotiations to the six PR dimensions in Table 21 and types of trust in 6.3.

During the course of this study, it became apparent that the practised strategies between PR and trust as represented in the revised conceptual model can be located as an elaboration within of the strategies of the food choice process model. How PR and trust interrelate and lead to the conceptualisation of a consideration set is visualised in Figure 24.

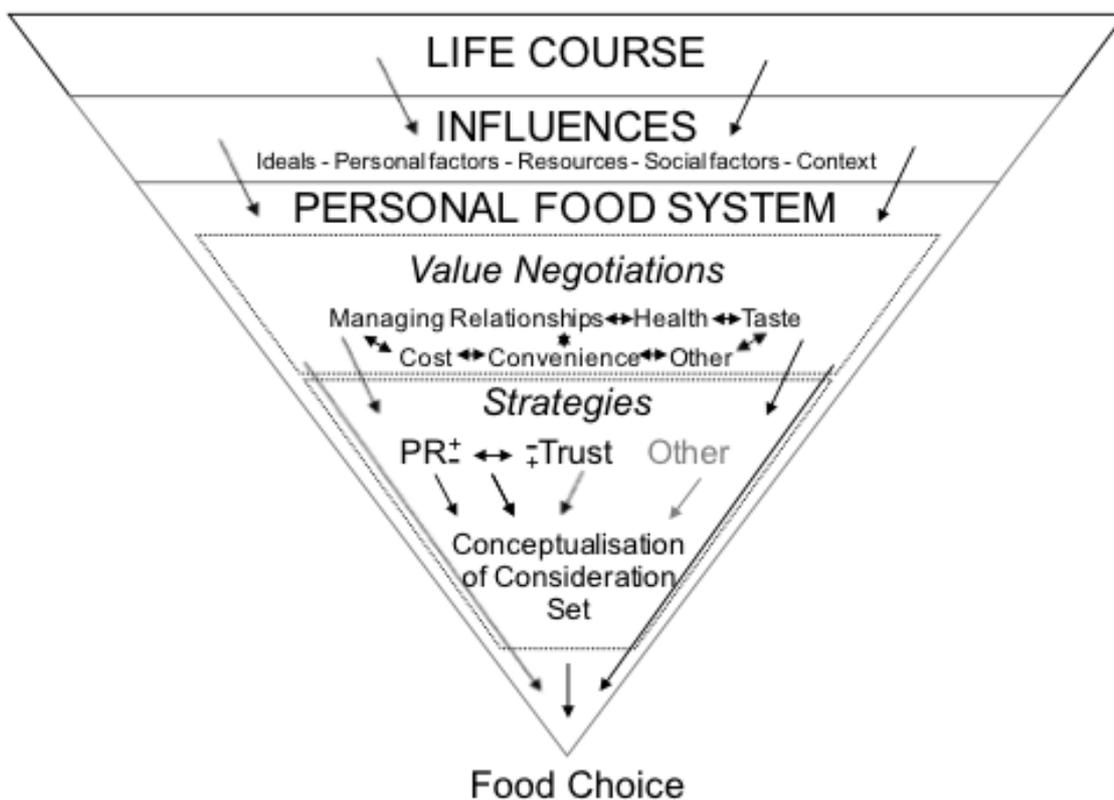


Figure 24 Visualisation of food choice process model, incorporating PR and trust strategies and the conceptualisation of packaged food consideration sets.

Adapted from Connors et al. (2001)

In this visualisation, PR, trust and their interrelationship are located in strategies as part of the Personal Food System, in addition to 'Other' strategies that also derive from the value negotiations but are beyond the scope of the study (which is focused on PR and trust).

Based on my literature search, the many iterations of the food choice process models are based in the nutritional science discipline (Connors et al., 2001; Falk et al., 1996; Furst et al., 1996; Sobal & Bisogni, 2009). Recent work on factors influencing the food choices of food-allergic consumers by Sommer et al. (2012), the first to investigate the influence of food allergy on individuals' food choices, is also from the nutritional sciences perspective. This study is the first to bring these areas into the consumer marketing discipline and concentrate on the strategies of the food choice process model in this context.

At this time, the scope of this visual elaboration of the food choice strategies is limited to the context of the conceptualisation of packaged food consideration sets for consumers managing severe allergies, but needs to be explored further to assess suitability for understanding other contexts, as discussed below in subsection 7.7 Future research areas.

#### 7.4.3 Modelled the role of relationships in the conceptualisation of packaged food consideration sets for consumers managing severe allergies

In the food choice process model, relationships play an important role throughout, as presented in Chapter 4 section 4.4.3. The life course is characterised by upbringing by parents, family culture and participating in a family. Of the influences, social factors focus around families and households. The dimensions of the social framework are the nature of interpersonal relationships, social roles and meaning, including power issues and conflicting priorities (Furst et al., 1996).

For participants, I found key relationships and responsibility towards the allergy. These relationships are illustrated in the model in the form of a modified Venn Diagram seen in Figure 25. This model was previously explained in 4.4.3.13 Relationships: visualisation of role of relationships, including a detailed call-out version of the model.

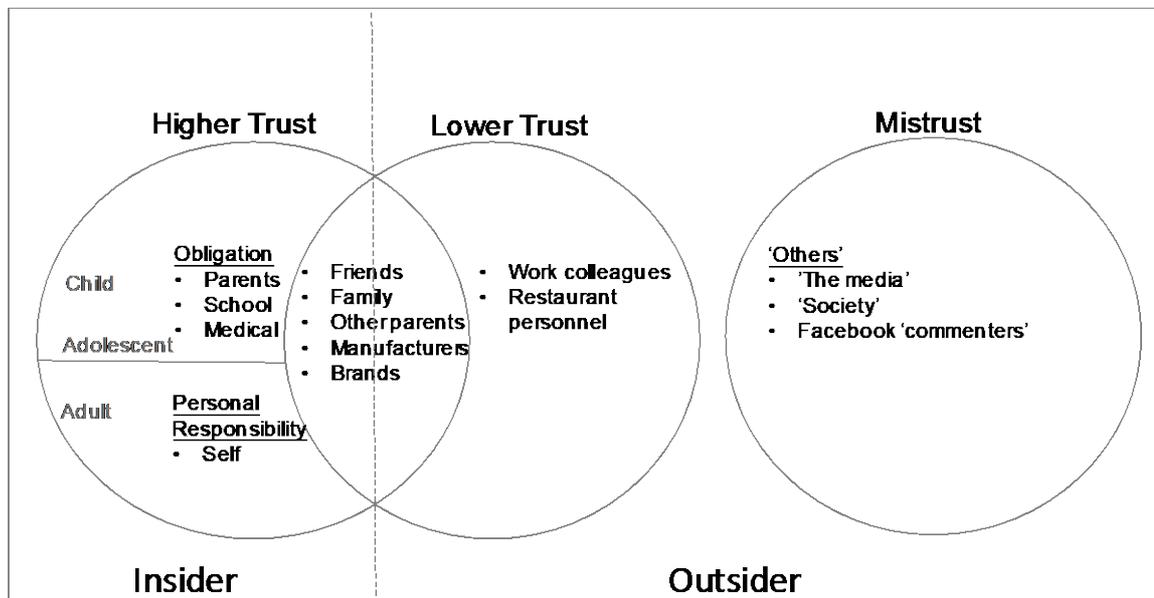


Figure 25 Visualisation of the role of relationships in conceptualisation of packaged food consideration sets for consumers managing severe food allergies.

In my literature search I was not able to find any similar models or representations of these relationships in this context. Research on risk-taking and coping strategies for adolescents with food allergies, potentially assisted by friends and third-parties such as a school nurse, was presented by M. A. Sampson et al. (2006) from the perspective of allergy and clinical immunology with a focus on safety. Their work is very different than the consumer marketing perspective investigated by this study and did not present the lived role of relationships.

My visualisation is a novel way to communicate the nature of the relationships uncovered as part of the study, as voiced by participants and then relates them as insider and outsider based on the participants' understanding. The responsibility to the allergic individual changed between the three life stages of child, adolescent and adult.

### 7.5 Reflection on the philosophical approach adopted

The research adopted a relativist perspective in exploring the interrelationship between PR and trust in the conceptualisation of consideration sets. The relativist perspective allowed me to approach the narratives of participants with an understanding that my 'truth' differs from each of their unique 'truths'. I found the narratives of the participants to be compelling particularly from this philosophical perspective as I was able to uncover how they viewed the world without being forced

to uncover a singular 'truth'. The detail and emotion with which participants shared their stories led me to believe that I was capturing some of their 'truth' in the narrative.

## **7.6 Reflection on study limitations**

This section reflects upon the limitations of this study and discusses additional considerations. Limitations of time, cost, sample composition and context were introduced in the Methodology chapter, section 3.4.2.6. Additional limitations regarding sample size and potential bias are presented below.

Reflecting on the time component of the study, it took longer to recruit and interview participants than expected. I encouraged friends, contacts, family and Facebook groups to share my requests for participants. Many of the requests had multiple 'shares', so my friend or contact connected to their friend or contact and so on, with the snowballing effect going beyond what I had envisioned in planning the study. I drove this process with some urgency as I wanted to complete the interviews before holidays, such as Christmas, arrived and introduced different food occasions. Unlike in the exploratory interviews that I conducted with people I knew fairly well, I had previously met only two participants out of the thirty households I interviewed. Both of the participants I knew were Adults with Allergies; I attended primary school with one and previously worked with the other, with no regular contact between us. This was not by study design, but just how the participant recruitment worked out. After not receiving a reply from the request for participants from Food Allergy Canada, I decided to not specifically pursue these highly-engaged allergic individuals and parents, and instead let a more diverse group emerge. Engaging an organisation such as Food Allergy Canada or an allergist's clinic to recruit participants may have been a quicker way to recruit participants, but I don't have experience with this path in order to know how it would have affected the study due to the potential biases of such as participant population. The participant recruitment took more time than I anticipated, and worried me on some occasions about whether I could populate all three cohorts with participants.

The sample size for the study was determined in advance of the interviews, with the objective of obtaining representation from three cohorts of a sufficient sample size to examine the research questions. The chosen sample size was non-random, using

multiples of ten, with three cohorts of ten participants. Although I sought to investigate the research questions to the point of data saturation, the research practice continued to interview with a premediated approach to the sample size. Boddy (2016) suggests that there is a gap between theoretical expectations and practice with saturation and sample size, and to an extent I do see this as an area I could have paid more attention to as I undertook the interviews. I may have continued past the point of saturation in the later-stage interviews, but continued in order to reassure myself that I wasn't 'missing something'.

The study's focus on the primary food purchaser for the household resulted in the majority of participants being female, as presented in 3.4.2.5.3. The sample's focus on females is a source of bias and a limitation for this study. The literature shows differences in attitudes towards risk and trust by males and females, with females being positive towards shopping but seeking more information than the more functional approach adopted by males (Y. Chen, Yan, Fan, & Gordon, 2015; Malaquias & Hwang, 2016; Nadeem, Andreini, Salo, & Laukkanen, 2015).

Potential bias in participant selection and interviews may have occurred unintentionally. When selecting participants, I chose participants that were located geographically closer to me if I had more potential participants than needed in the same cohort. An example of this is when I chose to go with local participants rather than drive five hours each way to Ottawa to interview prospective participants. With Ottawa bordering on Quebec, there may have been perspectives from a French Canadian background that could have been explored. Bias in the interviews may also have occurred as I 'hit it off' with some participants more than others and this connection often led to longer, more personal and deeper responses from them. As I did the coding I found that I had many more nodes for some participants than I did for others, often based on the depth and length of the interview conducted. As I presented the results, I felt that there was more representation of participants that had been more forthcoming with me than those that hadn't, but the quotes in Appendix N represent a good mix of participant responses and I'm confident that the bias in this regard was small.

These limitations have shaped the study and influenced the interpretation of findings from the research. While limitations for this study were necessary, opportunities for future research were uncovered and are discussed in the next section.

### **7.7 Future research areas**

In pursuing this research, I had to limit the scope of the study and not pursue some interesting avenues in order to focus on the research questions, as discussed in the previous section. While this limited the breadth of the present study, many areas for further research were identified.

To develop a full picture of the interrelationship between PR and trust in the formation of consideration sets, additional studies are needed to explore the generalisability of this dynamic interrelationship beyond consumers managing severe food allergies. Although I made the decision early on to treat PR and trust equally and order the two concepts alphabetically, other researchers have previously arranged PR as an antecedent of trust and alternatively trust as an antecedent of PR. I am intrigued by an idea that the concepts could be each other's antecedents variously by situation. In the participants' responses, some could be construed as placing the concepts variously as occurring one ahead of the other and this is something that can be explored further.

With Figure 24, I proposed an elaboration of the strategies within the food choice process model and food choice theory. While the focus in the prior iterations of the model has been on the influences and later the Value Negotiations, the strategies themselves warrant further examination. I have begun this investigation with this study, but moving beyond the allergy context to determine the broader applicability is a promising area for future research.

In future studies, the relevance of this research can be explored in different contexts. Within the health context, other medical or food-related concerns, such as diabetes or coeliac disease could be used to investigate PR and trust in other higher-involvement food choice situations. While the research found a heightened physical risk through the allergy, as could be the case again with the health contexts mentioned above, research on contexts with other heightened risk dimensions is another future direction.

While the research focused on the strategies and value negotiations in managing relationships aligned to the food choice process model, the role of the life course could be investigated further. The participants' life courses were underlying factors for their food choices and how their life experiences led to their current food choice process is an exciting area. This has the potential to be explored through oral history methods to uncover the life course beginning at or before their birth (assuming recall of parental inputs was available, as some were in the study). Drawing from the interview with Adults with allergies specifically, their life course in relation to food choice influenced by their severe food allergy had cultural and governmental shifts in addition to their experience of 'growing up'. A conceptual model of an individual food choice trajectory is presented in Figure 26 below. I would suggest that the model of the role of the relationships could be a complement to a longitudinal examination of the individual food choice trajectory. In this, the Insider-Outsider perspective could possibly relate to the micro-macro contexts. The progressive moves in cohorts from child to adolescent to adult, along with the move from parental Obligation to Personal Responsibility, could possibly be examined through the lens of transitions and turning points.

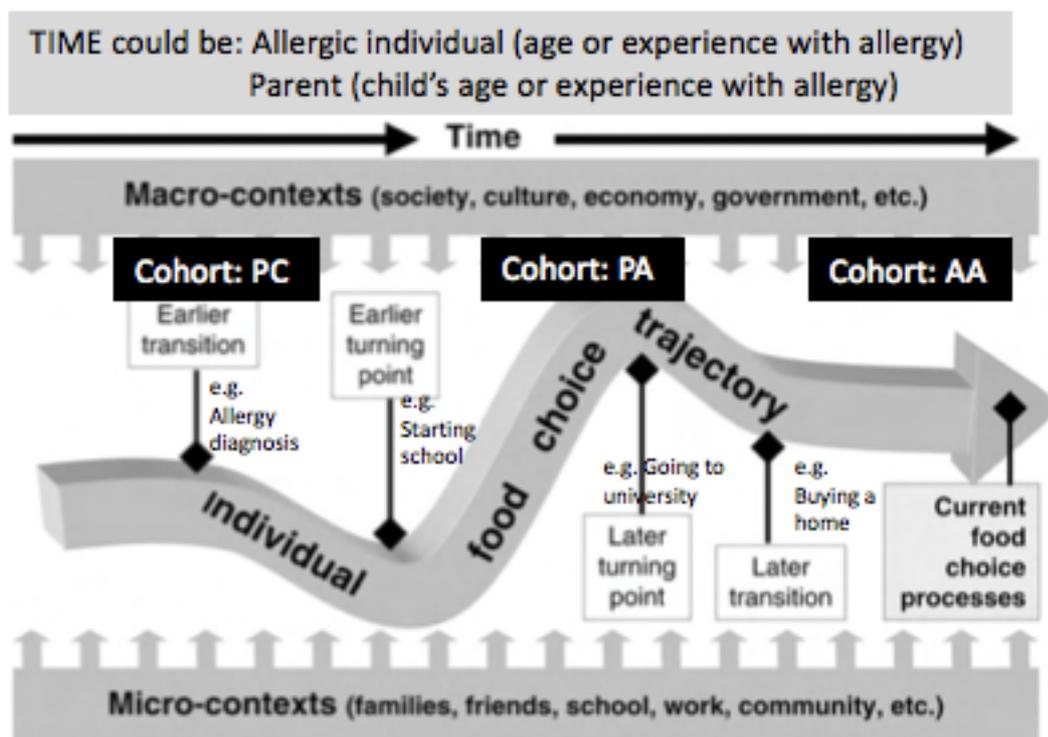


Figure 26 Life Course - Conceptual model of how food choice is shaped by contexts over time to form a food choice trajectory  
Adapted from: Sobal et al. (2006)

The ability for food consumers to use apps to gain benefits, such as earning loyalty points, saving money through price matching and managing purchases through shopping lists, is a promising area for future research emerging from the study. There may be similarities and differences in how these tools are used by consumers with severe food allergies or other health-related conditions and those consumers who do not have factors such as this driving high involvement in their food choices.

Emotions are a potential area of future consumer research in this context. The emotional impact of a peanut allergy on quality of life for parents and children has been previously investigated from a primarily immunological perspective (DunnGalvin, De BlokFlokstra, Burks, Dubois, & Hourihane, 2008; King, Knibb, & Hourihane, 2009; M. A. Sampson et al., 2006). When conducting the interviews, emotional reactions, such as crying, were seen in some participants. These intense emotions were typically seen in Parents of Children with peanut allergies (PC) when they were talking about past allergic reactions in their children and their fears for their allergic children's futures. These reactions suggest a strong emotional connection to the areas being studied and were coded in the NVivo analysis, but

were not specifically pursued in this study—they are beyond the investigation into the research questions and instead are viewed as part of the role of relationships as shown in Figure 17. The emotional reactions seen in this study appear to go beyond the typical consumption emotions seen in the literature outlined in 2.4.2.4.3 and may deserve further examination.

Greater application of the use of oral history methods to enhance the traditional qualitative interviewing techniques presents opportunity for marketing researchers. Oral history methods can help consumer marketing researchers go beyond the initial self-reported feedback from consumers to obtain a rich collection of life narratives, allowing a deeper view of consumers' past experiences and the meanings that shape their current views on manufacturers, brands and products.

## **7.8 Implications and recommendations for practice and policy**

The findings of the study have a number of practical implications. Consumer PR and trust are key concepts relevant to many departments of manufacturers and retailers. From a public relations department perspective, there are lessons from the study as to how consumers who are managing severe allergies expect to receive product information, and the study shares best and worst practices as examples. Having accurate and complete allergen information available in a timely manner can help build trust and lower PR for consumers. For the legal department, the use of 'May Contain' statements as a way to avoid liability, or concerns about the liability from using the 'Peanut Free Symbol', should be navigated to better communicate and offer more choices to allergic individuals. The navigation on liability could be enhanced through improved controls and practices by the manufacturing department. Ensuring comprehensive cleaning and allergen management protocols can reduce the risk of CC for their products. The manufacturing department could also manage lines and facilities towards becoming peanut free and tree nut free for many products, with the goal of having dedicated lines and facilities for these products. I acknowledge; however, that greater controls and dedicated allergen-free lines can come at an extra cost for manufacturers. It is also challenging for companies that use third-party manufacturing facilities, such as Stork and Dove, a biscuit company, where peanut CC occurred in a third-party nut free bakery, resulting in an anaphylactic reaction in a participant's child shortly after our interview. This led to a national recall of affected products and the manufacturer

removing the peanut-free and tree nut-free symbols from their redesigned packaging (Canadian Food Inspection Agency, 2017; Stork and Dove, 2017). The decision for a manufacturer to label as Peanut + Nut Free is often challenging, especially if focusing on the cost-benefit trade-off in relation to profits.

Choices regarding what to include on product packaging are often made by the manufacturer's marketing department. The brand marketing team can decide on the branding and 'look' of the product. In determining the target audience, they will decide whether features such as the Peanut Free Symbol are desired, for example on packaged foods to go in school lunches. This study can aid marketing departments by helping them understand the motivations and needs of consumers managing severe food allergies.

For governments, food product labelling is a serious matter and the ambiguity of 'May Contain' statements and the labelling of 'nuts' versus 'peanuts' were identified in the study as areas requiring prompt governmental attention. Opportunities for improvement in the first area include the need to reduce or eliminate the use of 'May Contain' through better manufacturing processes and requirements. The voluntary use of 'May Contain', being at the discretion of the manufacturer, confuses consumers who are trying to assess their PR. Regulations and specific controls for the use of 'May Contain' as an exception, rather a standard statement, can help provide the information the consumer managing the severe allergy needs. A clear differentiation between 'peanuts' and 'tree nuts' can help resolve the ambiguity that surrounds the use of the term 'nuts'; there is opportunity for government to include this in product-labelling requirements for manufacturers.

For manufacturers and governments there is a need to work together to identify a standard symbol protocol to label allergens and potentially other food concerns such as 'Gluten Free'. Much confusion exists around the variations of the Peanut Free Symbol, Nut Free Symbol and Peanut + Tree Nut Free Symbol, leading the participants to request that a Peanut + Tree Nut Free Symbol be standardised and used for clarity. There are other symbols such as Dairy Free, Egg Free and Soy Free that are of interest to participants based on the corresponding allergies in their household. Organisations such as FARE and Food Allergy Canada are encouraged to continue their advocacy towards allergen labelling.

## **7.9 Conclusion**

In culminating the study, I reflect on the contributions to knowledge it holds and the success to which I was able to investigate the research questions. The quotes from participants, in Chapters 4, 5 and 6 and over two hundred more in Appendix N, were the voices of participants as they guided me to uncover the PR and trust themes and subthemes. Selecting these excerpts from the interview transcripts of thirty households was at times challenging. Limitations to the study, addressed in reference to the study design in 3.4.2.6 and in reflection in 7.6, were necessary to keep the investigation focused on PR, Trust and their interrelationship. The revised conceptual model captures the evolving nature of the study and became a clear visual representation of what I discovered. That the revised conceptual model could then be located within the food choice process model was an intriguing development, ripe for future research. There are many promising areas for future research emerging from this study for the marketing discipline. It is clear that there are applications for practice—including for many departments, especially marketing—and for shaping government policy around allergen regulation and labelling requirements.

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## Appendix A: Research Journal Reflections

My PhD student experience has been a progression over many years. I have journal and research journal notes from this period, along with reflections on the experience, that I will distil in this section. In Chapter 7, I wrote about my reflections on the results and the philosophical approach; this section comes from a more personal angle.

Since matriculating at the University of Gloucestershire as a part-time PhD student in October 2010, I have been fortunate to conduct research that I feel passionate about. In the early years of this period; however, my journals reflect a great deal of anxiety about my attempts to balance full-time employment and my studies. My priority at the time was my job and it was difficult attempting to fit time in to read journals and write. Looking back on this time, I remember how challenging I felt it was to write. Words did not come easily and the task ahead seemed overwhelming. Since then time I have found that, for me, being in the right frame of mind, where I am excited and happy to share the stories, makes writing a joy. The main mistake I made during this time was trying to do too much, and that was distracting me from the core of my research. I was being overly focussed on word counts and not taking a critical approach to the literature. In this period, I wrote many sections that I later heavily edited or removed because they were disconnected from my research questions and the other sections.

Although I had spent a semester at Warwick Business School for my Masters and a year in the Doctoral Research Programme at Aston Business School, I didn't appreciate how different academic writing was in the UK, versus my university studies in Canada. Learning these new ways of approaching the dissertation was accomplished through many research seminars, reading and support from my supervisors. I still don't feel like I have mastered it, yet I do know that this dissertation reflects my best effort.

As I began my first set of exploratory interviews, I wondered what I had taken on in designing my study as I had. These interviews, undertaken in 2013, gave me some ideas about what I should be adding to the interview questions and also what didn't work.

The turning point for my doctoral studies came in the medical leave from my studies I took from September 2014 to December 2015, during my challenging pregnancy and my daughter's first months. In January 2016, I came back healthy and motivated towards my studies. I worked on my Literature Review and Methodology chapters upon my return with a goal of starting the interviews in the summer of 2016. At the start of the summer I refocused and rewrote my interview guide, this time with the intention of it acting as a guide, rather than a list of questions I was seeking answers for. This was aligned with what I had learned in my Oral History Methods training from The Oral History Society, but that I had drifted away from as I tried to design questions to address PR and Trust.

With the second set of exploratory interviews I was much more comfortable using the interview guide and felt prepared for my main interviews. As I recruited participants for my study, what felt like the enormity of the task of completing these 30 interviews led me to worry about whether it could be completed. I was nervous about my first few interviews. I was early for each and waited in my car until the time arrived for my interview. The first home I went to was a beautiful mansion and I was happy that I had worn business attire as it was a formal atmosphere with a great participant who worked for an employer I knew well (although I did not know the participant). She had never been interviewed before and was very excited for the novelty of it, and I did not reveal that it was the first of my main interviews. One of her motivations for participating in the interview was wanting to find out about my thoughts on the Schulich School of Business' MBA, which I hold and she was interested in pursuing. She had looked at my LinkedIn profile for information about me. Sharing this additional common interest helped me relax into the interview process. My second interview was very close to home, by coincidence. While there were three children present for my first interview, they were very quiet (one sleeping and the other two watching television and eating lunch). In the second interview there was a young toddler who was not happy. When I transcribed this interview I was struck by how chaotic the interview sounded with the constant interruptions by the child and the parent's attempts to appease him. He was given his iPad, food and attention, but was inconsolable. It was beneficial to the process to have this type of experience early, as it taught me about adaptability and made me further appreciate the gift of my participants' time. In these first interviews I was concerned about interview length, at around an hour. I hoping to extend the interview length to about

1.5 hours, without overstaying my welcome or being overly repetitive with my questions. After several interviews, I was able to incorporate more ideas into my interview guide, which resulted in additional relevant data for analysis, and also extended the interviews. I also became more relaxed with the interviews.

As mentioned in Chapter 1, I have a background in Sales including cold calling, so interviewing 'strangers' came easily enough to me and I feel that I was able to put my participants at ease, for the most part. Looking back on the 30 interviews, as to be expected I connected more with some participants than others. Coming away from the interviews, some participants added me as Facebook friends and others still regularly message me. The personal nature of my questioning led most participants to open up to me about very emotional times. Many of my participants became emotional or cried as they recalled scary allergy experiences—fortunately on these occasions the children were not in the room to witness their parent crying, as I didn't want to upset them too. A couple of my participants gave consistently shorter answers than others, which seemed to be driven by personality or circumstance; one had a sleeping baby in the next room and gave me a time limit at the start of the interview. There were a lot of animals present for my interviews. I love dogs so was happy to see them when I arrived at a home. I am allergic to some dogs and sometimes noticed minor reactions. Some participants put their dogs into another room for the interview, while other dogs lay near me and had me scratch their heads. There were a number of cats. As I'm allergic to cats I didn't touch any of them, but didn't experience any reaction that affected my ability to conduct the interview. When transcribing, there were periods of loud meowing on some recordings, additionally many of the cats enjoyed rubbing against the microphone, causing it to fall over. Two households had birds; I didn't interact much with them beyond a Senegal Parrot that joined us at the table for the interview. The animals were not something I had anticipated as part of the interviews, but my interaction with them made me feel welcomed, and very likely also helped put my participants at ease.

I was treated like family by many of my participants, which was an unanticipated but moving experience. As discussed earlier, this Insider perspective allowed me unique access to the participants. With this in mind, I consciously kept my expression neutral during the interviews. I remember coming home from some

interviews and telling my family, in very general terms, about some of the participant views that differed greatly from my own. That and my journaling provided an outlet for reflection on these differences and supported my intention to share my participants' stories. From a risk perspective, I am willing to accept more risk than levels shared by my participants. In speaking with participants that tolerate much lower levels of risk, it was important that I not let my experiences or practices influence their answers. At times it made me nervous as I'd often stop at Tim Hortons (a ubiquitous Canadian coffee and doughnut shop present in almost every Canadian town) to use their bathroom and buy a coffee. Many of my participants do not trust Tim Hortons and avoid the stores completely, as they sell baked goods with peanuts or peanut butter in them. In one town, I stopped in at a Starbucks to use their bathroom and again to buy a coffee. It is yet another store that I accept the risk of it having nuts in baked goods on premises, but most of my participants do not. I made sure to clean my hands carefully before visiting my participants' homes (and only ever bought coffee, not baked goods), but did not share where I had been prior, as it may have alarmed them.

Some of my participants asked about my experiences, where I ate, where I had travelled, and where I had worked. My participants had different levels of apprehension and fear towards travelling especially. I tried to share my experiences honestly, in a sense of reciprocity from the deeply personal questions I had asked them, but at times tailored my responses to respect their comfort levels. This was to ensure I didn't alienate myself from them and that they would continue to identify with me as someone who shares their allergy experiences, helping the interviews to proceed smoothly. My participants shared personal stories, times they sought professional counselling and help for their emotional needs and stories of failed relationships, both parental and spousal. Most of these stories came out when the microphone was turned off. The intimacy of telling personal stories in their homes led some of my participants to continue the conversation for long periods post-interview. My longest visit with a participant was over three hours, but most were between two and three hours. When booking my interviews, I hadn't anticipated the amount of total time that my visits with participants would take. In later interviews I adjusted the intervals between them so that I had ample time for each interview. In the earlier ones I wasn't rushed but did find myself checking the time to see how I was doing. Due to the long distances I travelled for many of the interviews, I could

often only manage one interview per day. When I drove for several hours to and from an interview, it was very tiring. I also found conducting the interviews to be mentally and emotionally exhausting, so spacing my interviews was helpful. Towards the end of my interview period I completed two interviews per day on two Saturdays, this was for adult participants and a parent of an adolescent. All were only available on the Saturday as they worked full-time in the week and I was eager to include their stories in my data set. At that point, I was very comfortable with interviewing and I paid close attention to make sure I wasn't repeating any questions as with the more than 20 interviews completed, some responses seemed to blur in my mind, especially when I was tired.

My last interview was conducted drinking tea on a sofa with the participant's whole family involved. The father and son were at the kitchen table playing with a toy and listening to the interview. My participant, the mother, was sitting on the sofa with me and her young daughter who had curled up on my lap. The whole family participated and interacted in the interview and it was a great experience to cap off the interview portion of my study. I was riding a high that I had completed my interviews and had such worthwhile experiences in the process. While I had been transcribing throughout the interviews, it became my main activity once the interviews were finished, due to the number of recorded conversations that needed to be transcribed. How I transcribed is covered in Chapter 3. Although I found the transcription to be tedious, listening back to the interviews was fascinating. In the midst of the interview I was trying to continue the discussion flow by asking well-placed questions, while keeping track of what they had said and what I had already asked. This, matched with crying children, barking dogs, ringing telephones and many other interruptions, made for a sensory-rich environment. However, nuances in tone, pauses and other intonation by participants was easier to pick up on from the recordings, some of which I did not catch in the interview. My interview notes came in handy in some instances so that I was clear about the noises in my recordings, such as crying by participants, which sounded different for each. I disliked listening to my own voice in the recordings, but did see incredible growth during this process for me, both as an interviewer and a researcher. I found the whole interview process, from participant recruitment to participant transcript, to be very intellectually and emotionally rewarding.

The process of coding and analysis was more iterative than I had expected, with my codes being changed and refined as discussed earlier. This required an extra push of motivation for me to keep going, especially when things felt like they were progressing slowly. When moving from NVivo to sharing my results, I consolidated some of the codes to reflect the major themes shared by participants. Working on the Food choice, Perceived Risk and Trust chapters while drafting the conclusions chapter felt more purposeful in the writing. This period also involved work/rework on the earlier chapters, to make sure that the dissertation was presenting a cohesive representation of the topics being investigated and was aligned to my research questions. This PhD research, as presented in this dissertation, has been the most difficult work I have ever done. However, it has led to a deeper understanding of the topic and transformed my skills as a researcher.

## Appendix B: Trust across the disciplines

<p>Sociology</p> <ul style="list-style-type: none"> <li>• Trust as both an outcome and the response to the growing complexity in a society (Luhmann, 1968; Meyer, Ward, Coveney, &amp; Rogers, 2008). <b>Trust as social structure</b> and how to build and sustain Trust in a society (K. Cook, 2001; Lewicki &amp; Bunker, 1995; D Harrison McKnight &amp; Chervany, 2000; Van Zwanenberg, 2003) and the position and role of Trust in social systems (Anakpa &amp; Yuan, 2013; J. D. Lewis &amp; Weigert, 1985)</li> <li>• <b>Trust in relationships</b> between networks, society, and as a result of social structures, rules, national and cultural backgrounds (Bjørnskov, 2008; Freitag &amp; Bühlmann, 2009; Rothstein &amp; Eek, 2009; Rothstein &amp; Uslaner, 2005)</li> <li>• The ability of Trust to generate cooperation on a large scale in order for societies to function (Balliet &amp; Van Lange, 2013; Fukuyama, 1995; Putnam, 1995).</li> <li>• <b>Luhmann’s concept of Trust:</b> Familiarity is a precondition of Trust, while Trust is an essential prerequisite for social behaviour (Luhmann, 2000; Luhmann et al., 1979).</li> <li>• <b>Barber’s concept of Trust:</b> Bernard Barber (1983) sees social interactions as involving elements of cognition, emotion and morality (Sztompka, 1999). He investigates the tension between Trust, whether in individuals, institutions or systems, and criticism comprised on distrust, distance and conflict.</li> <li>• <b>Giddens’ concept of trust:</b> Anthony Giddens (1990) examines trust in a society within the context of modernisation and the evolution of the modern society. He proposes that members of a society are losing control to, and becoming dependent on, expert systems of knowledge, which are becoming pervasive in nearly all aspects of social life. Giddens (1991) views Trust as the medium of interaction between the members of the society and the expert systems of the modern society .</li> <li>• Trust has been featured with growing frequency in theorisation about modern society (Misztal, 2013). <b>Trust functions at the interpersonal level</b> where it leads to micro level social order and thus lowers the requirements for monitoring or regulating the members of the society (K. S. Cook, Hardin, &amp; Levi, 2005). Trust is not simply constructed from personal traits or learned behaviour but rather comes from the environment around an individual (Deutsch, 1958).</li> <li>• <b>Disposition-based Trust</b> explains the tendency for people to Trust if there is not a specific reason not to Trust (Julian B. Rotter, 1967; Julian B Rotter, 1980). While <b>Development-based Trust</b> sees the capacity to trust as being influenced by experiences in childhood (Hernandez &amp; Santos, 2010; Lewicki &amp; Bunker, 1995).</li> </ul>
<p>Psychology</p> <ul style="list-style-type: none"> <li>• <b>Basic Trust</b> as the first state psychosocial development to occur, or fail (leading to mistrust), during the first two years of a child’s life (Erikson, 1993, p. 247)</li> <li>• Trust regarded as both a <b>belief and a feeling rooted in personality</b> and psychosocial development (Lewicki &amp; Bunker, 1995)</li> <li>• An expectancy that others can be believed is important for human learning and what is learned is affected by the degree to which this information is believed without independent evidence (Julian B. Rotter, 1967). Trust plays an important role in personality development as well as the development of a social life (Julian B Rotter, 1980).</li> </ul>
<p>Philosophy</p> <ul style="list-style-type: none"> <li>• Trust as an attempt to gain an understanding of human nature (Bailey, 2002)</li> <li>• Philosophers generally take either an <b>optimistic or pessimistic view on Trust</b> (Van Zwanenberg, 2003). The pessimistic view believes that humans are inherently not trustworthy (Bailey, 2002; Hampton, 1988). Conversely, the optimistic view believes we trust others because we believe in their love, sympathy and morality (Bailey, 2002; Hume, 2012; Van Zwanenberg, 2003; Wiley, 2012).</li> </ul>

- Baier (1986) focuses on the **morality of Trust relationships and interpersonal Trust** (Y. D. Wang & Emurian, 2005). Critics of Baier point out that Trust can exist in an absence of reliance and propose that **Trust may be an attitude** rather than a mental state (Pawar, 2009).

## Appendix C: PR, Trust and food allergy - selected study

PR and Trust can relate to food perceptions in a number of ways, especially for individual with specific food-related health concerns. Sampson and Sicherer (2006) performed a study with the American Food Allergy & Anaphylaxis Network (was FAAN now FARE) to study risk-taking and coping strategies for adolescents with food allergy. In this study, individuals with multiple food allergies were included with the respondent group incidence of peanut allergy at 75%. The study found that 82% of respondents reported reading food labels always or most of the time. Trust may play a role, as novelty was indicated by the 15% of respondents that only read the food labels for products they had not eaten before. Similarly, when it came to whether the respondents would eat food with a 'May Contain' allergen statement, 58% said they would avoid the food. However, Trust based on prior experience may play a role here also, as some respondents would eat the food with the warning on it if they had eaten it before and not had a reaction from it. The quantitative methods used in this study, an internet-based questionnaire with 174 respondents limited the amount of further probing possible about why the adolescents chose the responses they did. The survey was based on four 90-minute focus groups that were conducted in two US cities which were used to generate the questions, the survey itself was anonymous which though inhibiting further validation with the group may have allowed the respondents to feel more comfortable sharing their true responses especially as they related to risk-taking behaviour. Observations relating to coping for the participants include the emotional effects, quality-of-life impact, poor communication of the allergy to friends, and the role of social circumstances along with PR as to whether they would carry their SIE.

## Appendix D: Study Information Letter for participants



University of Gloucestershire  
Park Campus, Cheltenham,  
GL50 2RH

<http://www.glos.ac.uk/>

Principal Investigator  
Alison MacDougall,  
PhD Candidate  
The Business School, University of Gloucestershire,  
The Park, Cheltenham, GL50 2RH Cell #: 647-997-6510  
[alisonmacdougall@connect.glos.ac.uk](mailto:alisonmacdougall@connect.glos.ac.uk)

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### Title of Study: Perceived risk, trust and severe food allergies

Dear prospective participant,

I am a doctoral researcher at the University of Gloucestershire. I would like to invite you to take part in a research study. The study is voluntary and you will only be included if you provide your permission. The purpose of this study is to explore how households with a severe peanut allergy choose food.

To prepare for the interview, a purchase log is attached to record items you have bought in the 6 weeks prior to the interview. If you would rather provide me with grocery receipts from this period, that would be fine. The main research will consist of an interview to be done in your home. The total duration will be approximately 1.5hrs. The interview will consist of two parts; the first part will talk about the types of experiences you have had buying packaged foods for your household. The second part of the interview will involve a look inside your cupboard (where I will take a photo) and then the selection of three items for a further discussion.

I will keep all data confidential. I will keep data in a locked office and only I and my doctoral supervisors will have access to the data. I will keep data for five years after the study has finished. After five years, I will destroy the data. Once I have finished the study I will present the results at conferences and publish in an academic journal. When the results are published, only first names will be used. If you would prefer an alias used for the purposes of the study, please just let me know.

By taking part in this study, you may help further the understanding of food choice and severe food allergies. There are no known risks associated with taking part in this study.

The University of Gloucestershire Business School faculty research degree committee has approved this study. Please contact my research supervisor Dr. Philippa Ward, Faculty Research Degrees Director, Faculty of Business, Education and Professional Studies at [pward@glos.ac.uk](mailto:pward@glos.ac.uk) if you have any concerns.

If you would like to participate in this study, please let me know by email. Please read through this letter and consent form, I will have the consent form for you to sign at the beginning of the interview. The purchase log should be completed in advance of the interview and submitted by email or given to me at the time of the interview.

After completion of the interview, I will be happy to give you a \$15 gift card to Chapters Indigo Books as a token of appreciation for participation in the study (one gift card per participating household).

Many thanks

A handwritten signature in black ink that reads "A. MacDougall".

Alison MacDougall

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# Appendix E: Informed Consent Form



University of Gloucestershire  
Park Campus, Cheltenham,  
GL50 2RH

<http://www.glos.ac.uk/>

## Informed consent form

Title of Project:	Perceived Risk, Trust and Severe Food Allergies	
Principal Investigator:	Alison MacDougall, PhD Candidate  The Business School, University of Gloucestershire The Park, Cheltenham, GL50 2RH Cell #: 647-997-6510 <a href="mailto:alisonmacdougall@connect.glos.ac.uk">alisonmacdougall@connect.glos.ac.uk</a>	
Do you understand that I have asked you to participate in a research study?	Yes	No
Have you read and received a copy of the attached information letter	Yes	No
Do you understand the benefits and risks involved in taking part in this research study?	Yes	No
Do you understand that you are free contact the research team to take the opportunity to ask questions and discuss this study?	Yes	No
Do you understand that you free to refuse participation, or to withdraw from the study at any time, without consequence, and that your information will be withdrawn at your request?	Yes	No
Do you understand that we will keep your data confidential? Do you understand who will have access to your information?	Yes	No

I wish to take part in this study:

Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Preferred Contact number: \_\_\_\_\_

Email: \_\_\_\_\_

## Appendix F: Purchase Log Template

Purchase log of items bought for the household

Participant first name:

Date:

	Packaged Cereal (Brand and product name)	Crackers, savoury biscuits (Brand and product name)	Cookies, candy, chocolate (Brand and product name)
Week 1			
Week 2			
Week 3			
Week 4			
Week 5			
Week 6			

## Appendix G: Early Exploratory Interview Working Interview Draft

### Pilot Interview Guide

- “What is your...” (Interviewee) first name and age and gender?
- “How are you related...”(Relationship) to individual with severe food allergy?
  - “What is...” age of individual and gender?
- “Who are the...” others in the household - ages and gender?
- “Tell me about...” (Understand) the severity of allergy and foods involved?
- Who does the food shopping for the household?
- Where do you usually shop for food?
  - Why (do you choose to shop there)?
- Can you describe what it is like food shopping (for someone) with a severe food allergy?
- How, if at all, does the food allergy get considered when you are selecting food?
- Have you ever had/witnessed a severe allergic reaction to food?
  - Can you describe how that that affected you?
  - How did that change, if at all, your approach to buying food?
- When you buy snack foods, such as cookies or chips, what do you look for?
- Describe foods that you trust, what are their characteristics?
- Do you worry about an allergic reaction from food?
  - How do you perceive this risk?
- Can you tell me more about the brands you choose?
- Can you tell me more about the ingredients you look for? Or how you use the ingredients list?
- Can you tell me what influence an allergy free mark or labelling has for you?
- Do you tend to purchase the same products or regularly try new ones?
  - Why is this?

Things to think about:

- do I narrow this to snack food?

better chance of allergic reactions as more inclusion of nuts

- or food in general of which nuts can be a factor in many forms (nuts, nut oils, nut butters)

How much do I tell the interviewees about my subject? do not want to tell them the title of the thesis as it will focus their minds on perceived risk and trust and I don't want to prejudice their responses.

**Alison Interview Guide - August 2016**

**Interviews – Part 1**

- 1) Please state your first name, age and gender
- 2) What is your relationship to the individual with severe food allergy? What is their name and age?
- 3) Are there others in the household? What is their age, gender and do they have food allergies?
- 4) Tell me about the severity of your food allergy and the foods involved
- 5) Who does the food shopping for the household?
- 6) Where do you usually shop for food and why do you shop there?
- 7) Can you describe what it is like food shopping (for someone) with a severe food allergy?
- 8) How, if at all, does the food allergy get considered when you are selecting food?
- 9) Have you ever had/witnessed a severe allergic reaction to food? Can you tell me about how that impacted you?
- 10) How did that change, if at all, your approach to buying food?
- 11) When you buy packaged foods such as cookies or cereal, what do you look for?
  - a. Probe on Brand
    - i. Can you tell me more about the brands you choose?
  - b. Probe on Ingredients List
    - i. Can you tell me more about the ingredients you look for? How you use the ingredients list?
  - c. Probe on Peanut Free Symbol
    - i. Can you tell me what influence a peanut-free mark or labelling has for you?
  - d. Probe on other
- 12) How do you see your allergy amongst the other considerations of when you are buying snack foods such as flavour and taste and other areas in terms of what are your priorities?
- 13) Do you tend to purchase the same products or regularly try new ones? Why?  
Probe on shopping basket/consideration set(s)

- 14) And can you tell me about when you/your child/your teen were/was first diagnosed with a peanut allergy and the years prior to the first reaction?
- 15) Did you ever feel that you/your child/your teen were/was treated differently by anyone at school or friends as you/they were growing up due to the allergy?
- 16) Do you think that your friends and peers approach changed after you/your child/your teen had your allergic reaction? How did that allergic reaction impact you?
- 17) How did you find that progression from you/their being younger and having your parents buy you food/buying food for them, to (them) starting to buy food (yourself), (and now you buy the food for the household)?
- 18) What are the feelings you have towards the packaged foods you buy for the household?
- 19) When you are shopping for foods such as cookies or cereal, how many products do you consider before making your decision? Are there types of food that have a different number of products considered?
- 20) What are your favourite packaged food brands? Why are these your favourites?
- 21) Do you find that you/they prefer eating in your home or outside at restaurants? As in comparison to your/their peers?
- 22) How has the new Peanut Free Symbol and allergy labelling changed how you look at or approach snack foods, if at all?
- 23) How do you see the experience of eating peanut free products impacting on the rest of your household?
- 24) Do you feel that there has been an increase in the prevalence or knowledge about peanut allergies? In what ways?
- 25) How do you think your perspective on peanut allergies would be different if it were you with a child with a peanut allergy versus yourself having the allergy? / if you had the allergy rather than your child/teen?
- 26) Can you tell me about buying different types of food and which foods you feel present the biggest risk from the severe food allergy and why?
- 27) How does food advertising influence you?
- 28) Are you a part of any allergy support groups? How do they influence your food choices?

- 29) Are you a part of any Facebook allergy groups? How do they influence your food choices?
- 30) Are you a part of any mom's Facebook allergy groups? How do they influence your food choices?
- 31) Are there other considerations that influence the foods you buy?

### **Interviews – Part 2 Cupboard Analysis**

- View cupboards containing snack foods in the house
  - Take photos of the items so as to serve as discussion points for the subsequent interview
  - Pay close attention to products with Peanut Free Symbols, those containing nuts and those with ambiguous ingredient lists, all elements that would impact of the consumer perceived risk
- 1) I've taken some photos of your cupboard. Could you please give me a general overview of the products?
  - 2) Could you please tell me about each (or a selection) product individually including why you selected it?
  - 3) Could you please tell me about what other products you looked at before selecting this item?

Appendix I: Sample of Participants' Household Purchase Receipts



# Appendix J: Sample of Participants' Household Purchase Logs

**Purchase log of items bought for the household**  
Participant first name: *Jeffrey*  
Date: \_\_\_\_\_

Week	Packaged Cereal (Brand and product name)	Crackers, savory biscuits (Brand and product name)	Cookies, candy, chocolate (Brand and product name)
Week 1	Kellogg's Special K Van. Almond	Triscuits Quaker Bran Cakes	Cupcake Cupcakes Sour Patch
Week 2	Post Starbuck's Wheat	Chickadee Wheat Thin Calbee Green Beans Green Beans	Bear Bars (Peanut Butter) Squares
Week 3	Kellogg's Rice Krispies (Vanilla)	Whisper from both sides Quaker Crackers	Swedish Biscuits Cellophane Candy
Week 4	Kellogg's Corn Bran	Ritz Crackers	Rice Krispies Squares Banana Bread Snickers Chocolate
Week 5	Kellogg's Quaker Corn Bran	Applegate Bannock (both)	School Sale Crisp Choc Special K Crisps
Week 6	Kellogg's Vanilla Almond Post Wheaties	Compliments Quaker Rice Crackers Chickadee Wheat Thin Calbee Green Beans	School Sale Crisp Choc Special K Crisps

**log of items bought for the household**  
Participant first name: *Jackie*  
Date: *10/16*

Week	Packaged Cereal (Brand and product name)	Crackers, savory biscuits (Brand and product name)	Cookies, candy, chocolate (Brand and product name)
Week 1	Rice Krispies Quaker oatmeal Plain	Baby Munchies vegetable Rice Cakes	Snickers Kit Cotton candy Lemonheads marshmallows Sour Patch Kids
Week 2	Steel Cut Oats Blueberry PC Bran	Baby Munchies vegetable Rice Cakes	Category for cookies Peak Protein
Week 3	Organics PC Healthy Almond granola	Baby Munchies Banana Rice Cakes	Category for cookies Peak Protein
Week 4	Oatmeal Crisp almond General Mills	Rice crackers Mango Bread Snickers Candy	Green Mt. Cookies
Week 5	Quaker oatmeal Plain	Rice crackers no name brand Snickers Candy	PC Zella Candy Syrup

**log of items bought for the household**  
Participant first name: *Christie*  
Date: \_\_\_\_\_

Week	Packaged Cereal (Brand and product name)	Crackers, savory biscuits (Brand and product name)	Cookies, candy, chocolate (Brand and product name)
Week 1	Only M&M's Cereal (M&M's)	Goldfish (PE) Rice (chocolate)	Resident Oat chocolate chocolate dark chocolate Doritos (both PC)
Week 2	Only M&M's Cereal (M&M's)	Wheat Thins (chocolate)	Oreo's chocolate Doritos (both PC) Annie's Crisps Annie's Crisps Annie's
Week 3	Only M&M's Cereal (M&M's)	Triscuits Goldfish, cultured (no no name, sesame rice crackers)	Goldfish Garden of Eatin' Annie's Crisps
Week 4	Only M&M's Cereal (M&M's)	Rice Cakes One Garden of Eatin'	M&M's Crisps (chocolate)
Week 5	Only M&M's Cereal (M&M's)	Resident Oat Pumpkin Crisps Veggie Thin (chocolate)	Maple Cakes (both) Bear Bars (chocolate)
Week 6	Only M&M's Cereal (M&M's)	Rice Cakes no name, sesame rice crackers	PC chocolate chip cookies

**log of items bought for the household**  
Participant first name: *Christie*  
Date: \_\_\_\_\_

Week	Packaged Cereal (Brand and product name)	Crackers, savory biscuits (Brand and product name)	Cookies, candy, chocolate (Brand and product name)
Week 1	Only M&M's Cereal (M&M's)	Almonds Honey Gobs Peanut Butter Flakes	Ritz PC Cheddar Little Penguins
Week 2	Only M&M's Cereal (M&M's)	Kix - for family Fruit Flakes - for daughter	Doritos Doritos Annie's Crisps Annie's
Week 3	Only M&M's Cereal (M&M's)	Used to buy Kellogg's for him	M&M's Crisps Annie's Crisps Annie's
Week 4	Only M&M's Cereal (M&M's)	Now certain General Mills Post at (M&M's)	Walmart Peanut Butter Crisps Annie's Crisps Annie's
Week 5	Only M&M's Cereal (M&M's)		Wrightley's

**log of items bought for the household**  
Participant first name: *Christie*  
Date: \_\_\_\_\_

Week	Packaged Cereal (Brand and product name)	Crackers, savory biscuits (Brand and product name)	Cookies, candy, chocolate (Brand and product name)
Week 1	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 2	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 3	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 4	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 5	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 6	Post Shredded Wheat	PC Shredded Wheat Crisps	

**log of items bought for the household**  
Participant first name: *Christie*  
Date: \_\_\_\_\_

Week	Packaged Cereal (Brand and product name)	Crackers, savory biscuits (Brand and product name)	Cookies, candy, chocolate (Brand and product name)
Week 1	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 2	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 3	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 4	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 5	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 6	Post Shredded Wheat	PC Shredded Wheat Crisps	

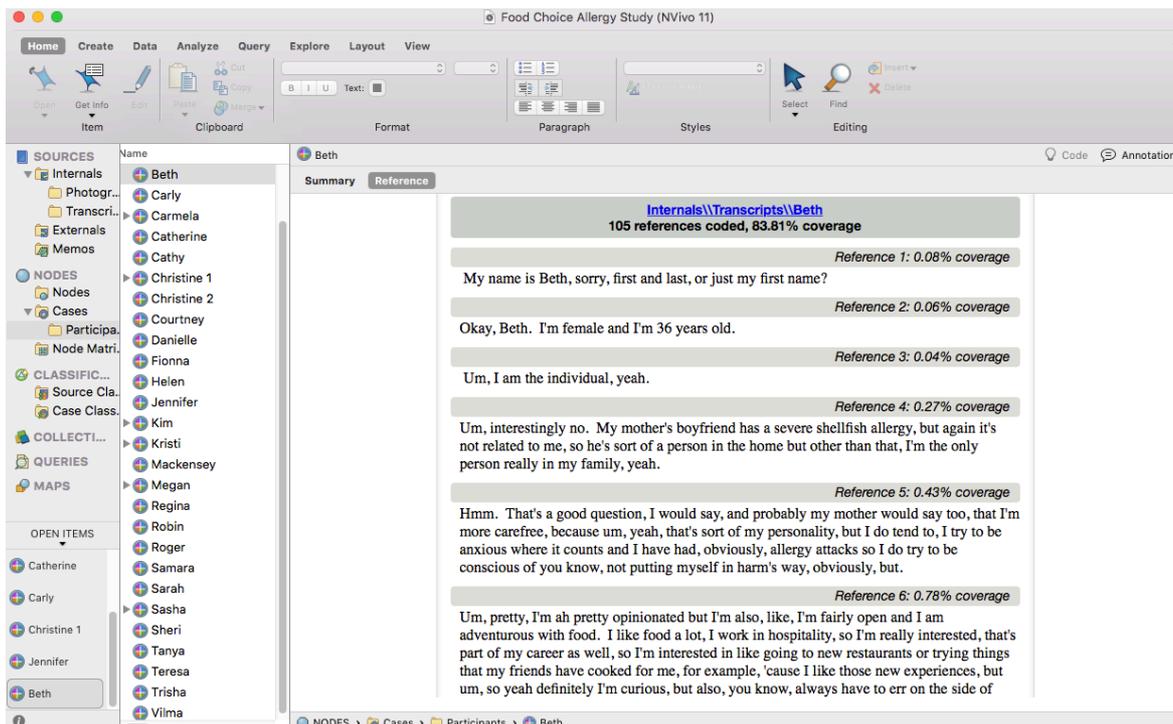
  

**log of items bought for the household**  
Participant first name: *Christie*  
Date: \_\_\_\_\_

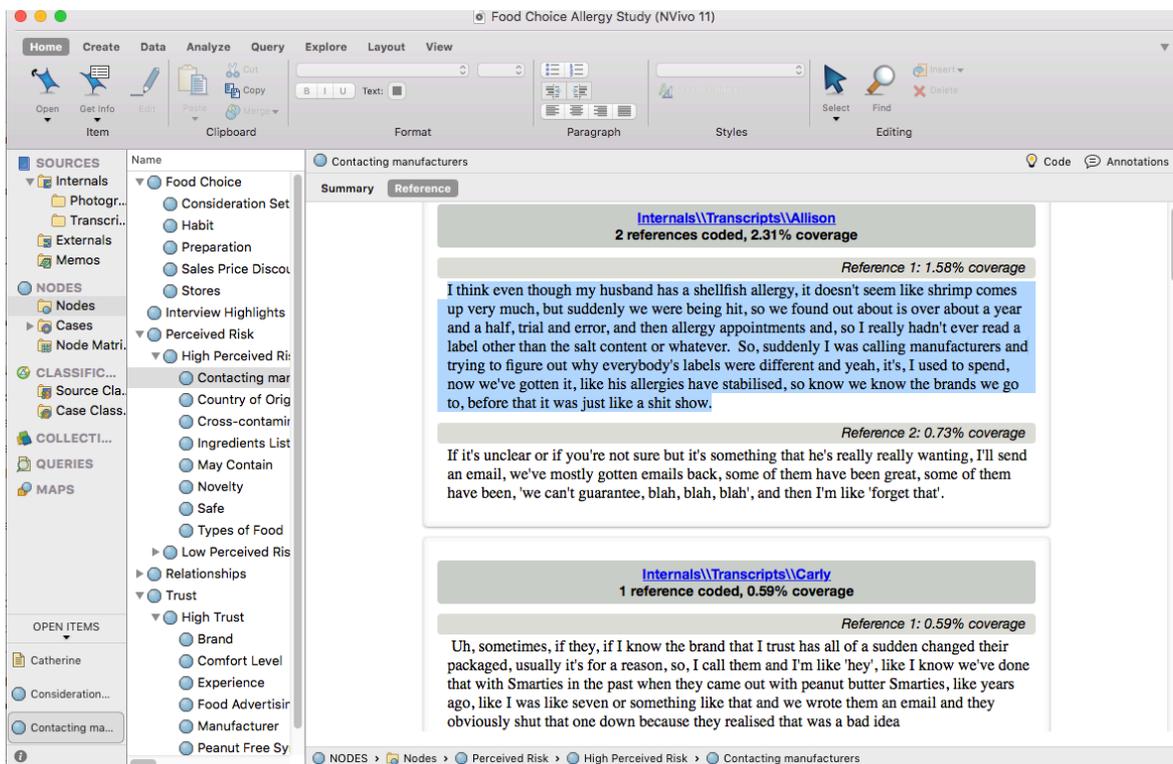
Week	Packaged Cereal (Brand and product name)	Crackers, savory biscuits (Brand and product name)	Cookies, candy, chocolate (Brand and product name)
Week 1	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 2	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 3	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 4	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 5	Post Shredded Wheat	PC Shredded Wheat Crisps	
Week 6	Post Shredded Wheat	PC Shredded Wheat Crisps	

# Appendix K Examples of my NVivo project and coding

## Participant Cases



## Coding of Nodes





## Appendix M: Refined Peanut Oil Additional Information

Refined peanut oil is not subject to the Canadian enhanced labelling regulations based on the degree to which they have been refined. It is up to the manufacturers to assess the amount of peanut protein content in their product and label accordingly (Government of Canada, 2016).

For example, in the photo below, the refined peanut oil is listed in the ingredients, there is no “contains” for peanut, but a ‘May Contain’ which may or may not be related to the oil. As such, in some cases products with high refined peanut oil may not be listed as a food allergen source. Recent studies have found the predicted risk of objective allergic reactions in peanut-allergic users of food products using refined peanut oil to be extremely low (Blom et al., 2017).

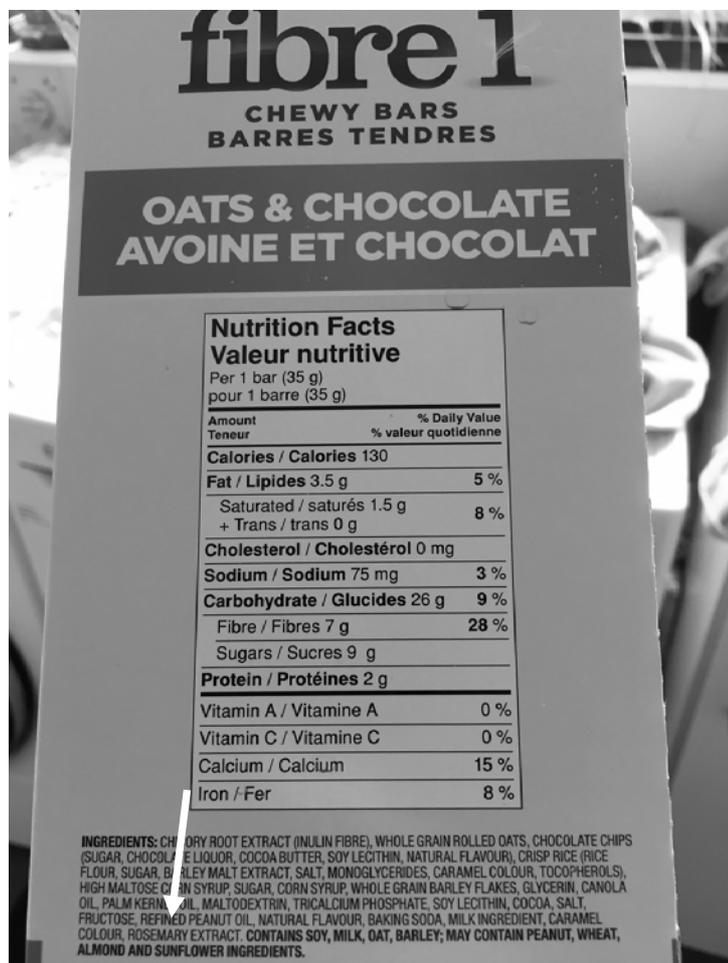


Figure 27 Fibre 1 Chewy Bar with refined peanut oil ingredient  
(my photo)

## Appendix N: Participant Quotes

- <sup>1</sup> Amanda (AA): "Make lists . . . just so I know exactly what I'm going to get."
- <sup>2</sup> Helen (AA): "Usually I have to have a list because I get lost <laughter> in what I really need to buy and then come home and realise that I've missed half of my list."
- <sup>3</sup> Mackensey (PC): "If I'm meal planning I'll definitely have a list to make sure I don't forget anything, but yeah it's just important and also just to not overbuy or under buy and then I don't have to go out again and things like that."
- <sup>4</sup> Sarah (PC): "I have to go with a shopping list because we always forget things so I try to write a list but then depending on whether you are hungry or not then you end up buying things that you probably shouldn't be buying <laughter>."
- <sup>5</sup> Teresa (AA): "Kind of, half a list, yeah. . . . If I remember things, then I'll write them down, but I'm not overly good at that."
- <sup>6</sup> Vilma (PA): "Rarely, very rarely make a list . . . Because I go grocery shopping so often, I'm not one of those once a week or once every two weeks, I go so often that I generally don't miss stuff."
- <sup>7</sup> Samara (AA): "Just like I make a note in the phone, so no, maybe Tim does, I don't like apps that much."
- <sup>8</sup> Angela (AA): "I make sure I have my phone and my money. . . . We have an online hub thing, that we have checkmarks and we both share it, so if he buys something then a check marks my list, it's spectacular, so that we always know what we need and you can, yeah it's cool. . . . So I don't forget something I need."
- <sup>9</sup> Kristi (PC): "I use the Flipp app once in a while, but not a lot."
- <sup>10</sup> Jennifer (PC): "I occasionally use Flipp."
- <sup>11</sup> Kristi (PC): "I do use the PC Plus app."
- <sup>12</sup> Kim (PA): "I use the Air Miles points that are on the Metro app."
- <sup>13</sup> Angela (AA): "A little bit. I still do always check, but if I really like it I'm probably still going to buy it."
- <sup>14</sup> Sheri (PA): [How much does the price of a product influence your choice] "Not at all."
- <sup>15</sup> Teresa (AA): [How much does the price of a product influence your choice?] "Doesn't really."
- <sup>16</sup> Kim (PA): "It's not necessarily the price of the product, it's like if it's on sale, because I do have a high grocery bill and I do buy premium. . . . I'm not always just shopping for a bargain."
- <sup>17</sup> Christine 1 (PA): "If it's peanut/tree nut free, the price probably doesn't affect me, it's I'll buy it anyway because it's safe for him to eat."
- <sup>18</sup> Jennifer (PC): "I don't mind spending a little bit more if it means the safety of my child, right, if I know she can eat it and nothing's going to happen to her."
- <sup>19</sup> Samara (AA): "I think the price of the peanut free stuff is annoying"
- <sup>20</sup> Sasha (PA): "I think it's a 60/40 split, and the sixty percent that are sympathetic or aren't, understanding and empathetic are the quiet ones, and then you have forty percent of the population who are not sympathetic and don't want to be, and they're the loud ones."

<sup>21</sup> Teresa (AA): "I think people think that you're faking it, or they don't understand it, people don't take it seriously, but I mean it's a fine line that you walk between stressing the importance of an allergy versus being needy or whatever, you know, like people, I don't really know how to explain that, you know, people treat you like it's difficult for them, even though it's really not a big deal for them."

<sup>22</sup> Carly (AA): 'It comes down to the individual people when you talk to them, you know some people are 'oh yeah, like totally get it, let me help you, I'll be understanding' and some people are just 'ahh, it's, you're faking it or oh, like there's no way you can prove that or you just want special treatment', and it's like 'no, I don't'."

<sup>23</sup> Beth (AA): "I think if you know someone, or you've experienced it, you're obviously a lot more sympathetic . . . There's always the occasional people who think it's funny or not a big deal."

<sup>24</sup> Helen (AA): "I think there's a lot of misinformation out there, people that don't have the allergy themselves or don't live in a household, don't recognise how significant it is."

<sup>25</sup> Sarah (PC): "Until you've experienced the allergy and saw the reaction and understood that it is life and death, then you get it.... I think you're always going to have ignorant people, unfortunately, that don't get it but."

<sup>26</sup> Christine 2 (PA): "I think until you're face-to-face with it in your life you don't really understand. Because I think I probably would have said 'oh yeah, I get it' but then, when you're the mom or you're the person, it just brings it home."

<sup>27</sup> Megan (PC): "...You really don't understand it until you live with it. And it's so easy to forget, it's so easy to miss, so I kind of understand, but then it's hard to know, do they not care, did they just miss, were they trying?"

<sup>28</sup> Danielle (AA): "If you don't live it every day you don't think about it, so just, it's hard to expect people that don't need to. It's like me not understanding someone in a wheelchair every day, it's like it's hard to expect everybody to understand everything, but being more open and laws. We need labelling laws."

<sup>29</sup> Beth (AA): "It's definitely always there for me . . . I think at my age too, I know what I can and can't eat"

<sup>30</sup> Roger (AA): "I've been much more diligent about managing it as an adult, that I ever was as a kid, you know.... I've had some [allergic reactions], it used to be when I was a kid, I'd have something [an allergic reaction] at least once a year, you know, I'd stupidly take a bite of a cookie at a kid's party or something without asking and peanut butter in it, or whatever, um, as an adult I'm been more conscientious, but I've had certainly three or four reactions as an adult."

<sup>31</sup> Carly (AA): "The transition is just, been like I have more choice in what I eat, so I feel a bit more comfortable, like trying new things out knowing that I'm an adult and I can make these decisions and I'm trying new recipes, and I'm trying to make things a lot more from scratch, so that is a bit more of a comfort, whereas when I was a kid, like my parents were just more concerned of keeping me safe... I can trust my instinct more because when I was a kid, if I had an itchy throat or is I started getting hives, I wouldn't necessarily tell them right away, it's just like a little kind reaction to kind of be like, ugh I'll just push that aside, but now that I'm older, the moment

something happens, I'm like 'okay, something has happened in my body, I need to figure this out'."

<sup>32</sup> Helen (AA): "...I'm kind of my own spokesperson and in terms of educating others, like I said my employer, there's a number of us that have nut allergies and other food sensitivities that are not necessarily nut specific, and so anytime that there's something, usually my big mouth gets me in trouble, which is fine, but yeah so I mean I kind of self-promote that or provide that knowledge base..."

<sup>33</sup> Samara (AA): "It's a hard balance of, you know, you need to advocate for yourself for sure, but then, I think then also that you need to do it in a way that it connects with people, because I think when sometimes when it comes from a place of fear or blame, then people get like turned off from it, right, so I think it is important how you communicate and do it."

<sup>34</sup> Teresa (AA): "Um, from very, very young, my parents always told me to look at the ingredients on everything, from very young I could identify the words that I needed to look for, so I wouldn't say there's been a huge change, they always left that with me."

<sup>35</sup> Robin (AA): "Again, this goes way back, like when I was pretty much born, is really when I had all these allergies so, I've just lived with it, all these years and learned to just go around and not, you don't eat at certain places and you know, if you go out for dinner it's like 'sorry, I don't trust this place', I don't, I just do that."

<sup>36</sup> Vilma (PA): "I actually once bought a box of granola bars that didn't have the sign of no peanuts and it was a mistake on my part, it wasn't deliberate and uh, I actually sent it to school with my child, who then, to this day has accused me of trying to kill her, yeah so that was actually good, because it shows that she actually did check, before she ate, which shows you how much she trusts me yeah, there you go."

<sup>37</sup> Megan (PC): "To me that's [adolescence] the scariest time, 'cause developmentally as a teenager you don't have an appreciation of risk, you kind of think you're immune to all things and nothing can hurt you and you minim, 'oh, it's fine, it'll be fine', and they'll be far more independent and doing it on their own and I can imagine other kids being more bullying at that age and be like 'c'mon'."

<sup>38</sup> Allison (PC): "...my girlfriend is now a high school teacher and something happens to teenagers, their brain just kind of like kicks out, they want to be included, they want to do things that are risky or whatever and I'm like 'yeah, smoke, yeah do. But please God don't, like share french fries with your friends' right, like but they're going to like. I'll brace myself ten years from now, that that's going to happen."

<sup>39</sup> Carly (AA): "I would hope that by the time these students are entering high school and university that they take on that policing, so to speak, of what's okay and what's not. I mean given their age range and whatnot, there is that element of you know it's not going to happen to me, I'm okay, or you know there's sort of that immortality..."

<sup>40</sup> Trisha (PC): "I worry about him as a teenager because I know that that demographic is notoriously tough for not carrying their Epi's because they think it will be okay, and then something terrible happens and then it's not okay."

<sup>41</sup> Cathy: "I've caught him a couple of occasions without an EpiPen recently and I can't believe it, like we've gone our whole life with this, but I think it's just that he always has to have a bag with him to have an EpiPen...he was actually really upset about it, said 'like great, now', he was worried that I'd make him to back to wearing a pouch, like 'I'm not going to do that, you're sixteen, like I get it', they don't want to do that, they're not going to, they would rather take a chance with their life than wear a pouch..."

<sup>42</sup> Christine 2 (PA) "...she knows even now what, she asks questions, she knows what she can eat and what she can't eat, she knows the difference of what she can eat when I'm with her and what she can't eat. Um, it's a little disappointing to her sometimes, I had to go to a birthday party, which was really embarrassing for her, 'cause they were going to Yogurty's, [a frozen yogurt shop] so I said, you can either, I can come right at the end, or you can't go...but I think as she gets older, it's really her responsibility, she needs to be aware of what she can eat and she needs to be aware of her surroundings."

<sup>43</sup> Sheri (PA): "...he's so good with asking, but he has a little bit of anxiety when he's at a new friend's house, and they're offering him to stay for dinner, and he doesn't want to be impolite, um and we had it recently where he slept at a friend's place, a new friend, and they offered him breakfast in the morning, and he asked to read the cereal box, and they were really offended, um, but we've taught him since he was three, he was reading labels, looking for bold, identifying the letters, so when he read the cereal box the mother was really offended 'trust me, I wouldn't give you something wrong', there was two nuts in it, macadamia and walnut, and she was like 'ahh', so she actually called me to apologise, and said 'I thought he was just a snooty little kid and in the end he saved his own life, 'cause I would have give him two nuts'. So I feel confident, that unless he sees it, to hear from another parent, he won't eat it, to me, I felt great about that."

<sup>44</sup> Sasha (PA): "The older Riley gets, the less anxious I get, because he does, and I've seen him do it, he does self-advocate and he's very articulate about his concerns..."

<sup>45</sup> Regina (PA): "So the one thing we've always been really strict with her on is that she, we've always tried to let her know that she owns her allergy, she's the one that is responsible for if little Johnny in her class offers her a cookie, she needs to speak up and ask little Johnny if there are peanuts in it, because what we've always said to her is the world contains peanuts, right and you have to go out in the world so therefore you have to own your allergy."

<sup>46</sup> Cathy (PA): "...he is moderately good at it, we've tried training him from a young age to be the one to ask the questions, so he's like most teenagers, a little bit uncomfortable doing that, so he's pretty good at it, but um, not as good as I would like him to be. It's embarrassing, you don't want to call the waiter over and ask about this and that, so we tend to pick places where we know we've had a really good experience talking to them before and we know what their policy is, and you can tell within a minute or talking to someone if they get it, or not..."

<sup>47</sup> Megan (PC): "...his teachers report that he'll ask kind of 50% of the time, if when they're giving him food if it's safe, so I'm hoping that that will improve over time and we're trying. Um, but yeah, he's not there yet."

<sup>48</sup> Catherine (PC): "She's very good at telling people, even when she was younger and she would go somewhere, she would always say "I'm allergic to peanuts" so she's really good at knowing that and speaking for herself."

<sup>49</sup> Jennifer (PC): "So hopefully at a young age, she'll become aware that she needs to ask questions if someone's just handing her food, or just, you know, becoming comfortable rejecting food from people that are handing it to her. And that's, so that's my hope, that from a young age, she'll just be comfortable saying 'nope, sorry I can't have it unless my mom checks it out' and the older she gets, she'll be able to read labels and she should know, I mean, depending on who her friends are at the time, or whatever, hopefully her friends parents will understand the allergy and so, I think it's important that the kid, like she herself does take ownership of the allergy, so that as she goes throughout life, she's not always depending on me, because I'm not always going to be there and I don't want her to be like 18 years old and like 'I better learn about my allergy now', you know."

<sup>50</sup> Allison (PC): "...not only does he understand, he remembers his last anaphylactic, it was very scary for him, so he's he just won't do it. Which is great for us, I feel sort of bad for him, like that's not your job buddy, I'm like that should still be on me, but he's, he wants to buy his own food, he wants to pick out the food, he wants to have that."

<sup>51</sup> Fionna (PC): "I think as he starts to understand his allergy more, it will become more easy as well and the fact that now he's asking if he can eat it, he's taking a more active role in it, or some role in it. Yeah, so I think hopefully it's just going to get easier and become part of life."

<sup>52</sup> Mackensy (PC): "Yeah, I think at least because he's so young that he'll just, you know, he won't know, he'll just have to live with this and become accustomed, so I, hopefully by the time he's an adult or a teenager, he'll understand and he'll be able to make those decisions and hopefully make appropriate decisions related to his allergy."

<sup>53</sup> Trisha (PC): He's always in mind, because I'm still breastfeeding so I think about his allergies as well for myself and what I can eat, so yeah, always on my mind.

<sup>54</sup> Fionna (PC): "...he's so little that I have to control everything he puts in his mouth anyway to protect him from hurting himself."

<sup>55</sup> Vilma (PA): "Um, food choices, just because she diagnosed at the age of about eighteen months, I'd say we've just, we were just very cautious and it was just a way of life. "

<sup>56</sup> Teresa (AA): "...my parents were very concerned about food going forward [after an anaphylactic reaction], maybe even overprotective about food and activity and where you're going and you know, all that stuff, because they had seen something so severe happen to their baby right, so, yeah."

<sup>57</sup> Megan: "I try not to let it affect me, 'cause yeah I feel like, I know how contagious anxiety can be and I really don't want to make him that anxious, I want about it, I want him to be reasonably cautious, you know, sufficiently cautious, but I don't want him to be paranoid or petrified everywhere we go."

<sup>58</sup> Allison (PC): "I think when it's you, you have much more control over what you want to do, I'm an adult, I have you know like you can weigh the pros and cons, when you have a child, there are no pros and cons, it's either yes or no, that's, there's no sort of like...you're an adult, you can make your own decisions, with my four-year-old, like it's sort of hypervigilance is hard to stamp down."

<sup>59</sup> Christine 2 (PA): "...the allergist told me, and I think about it often when I'm worried about her, he said 'she's lived eleven years and not had a big problem' has there been cross-contamination, maybe, maybe not but he said 'you can change your life and become hermits and all your friends are afraid of you, because you're so crazy about it, or you can make some accommodations but still live your life.'

<sup>60</sup> Helen (AA): "Well obviously it's a significant health risk, and I mean I even wonder how these children are being diagnosed or you know what sort of information is being passed on, or is this just kind of the same sort of label that we put on behaviour kids, 'oh, this child is autistic, this child has Asperger's' where it's not necessarily a true diagnosis, it's a blanket statement. And so I worry about that prevalence being almost an artificial percentage, I think parents are very diligent about it to the point where I think some of them may be over-the-top about it, where there's not really a true allergy, but all roads lead to Rome and so I think there's some hysteria perhaps, small percentage I would hope, but I do think that there's a bit of hysteria given that there's so much prevalence that I think every parent's thinking, 'oh my god, is it my kid, is it my kid, is it my kid, is it my kid?' because you just hear so much about it, that it's kind of just a general statement now."

<sup>61</sup> Danielle (AA): "And so it was me, my mom, my dad, if my brother was born yet, he was there but he was an infant, and then my two aunts, their husbands and my grandparents. And we had two bowls of chips and a bowl of nuts, and people were taking from the nuts and then taking from the chips and they couldn't comprehend that that wasn't okay and I'm sitting there eating the chips being all happy, so my mom told them to put the nuts away and they're like 'it's fine, she's not eating it' and my mom was like, 'well you're taking from the nuts, then you're putting that hand into the chips, rummaging around in the chips, taking your hands out, you've touched that chip, she just ate that chip and going to die' and they're like 'you're overreacting' so she took out my EpiPens, slammed them on the table and said 'I hope you know how to use these, 'cause she's going to be dead in thirty seconds and left.'"

<sup>62</sup> Mackensey (PC): "...keeping peanuts in the house has been a bit of a challenge, because my husband wants to continue to eat peanut butter and I don't think it's safe to do so."

<sup>63</sup> Roger (AA): “Well, yeah, that's, I mean even my dad used to eat, I feel like I'm slugging my parents here, but my dad used to still buy peanut butter and eat it, and I don't feel that they were particularly cautious, I mean he would, it's not like he would be eating it right in front of my face, but he would um, you know, just sort of leave the dishes around, with peanut butter on it, or whatever, they really shouldn't have been buying it at all, in retrospect, so um, certainly, and I guess probably, if I'd been a little more insistent, then they wouldn't have, but um, so I don't, I feel they took it seriously to a degree, but it's not like they didn't believe I had the allergy, but they weren't, I think maybe they weren't doing all they could to be proactive.”

<sup>64</sup> Helen (AA): “You know what, at the time it was something that my parents dealt with and so it was done, it was done very privately, like I said it wasn't as open as it is right now, so I'm pleased to see that it's come to the forefront...”

<sup>65</sup> Tanya (PA): “I find that I have to spend time at the grocery store pointing out foods that have peanuts and don't have peanuts, so then if she's out and she's buying food at a vending machine, then she knows not to buy a Mr. Big [chocolate and peanut] bar or she knows not to buy something that's going to have peanuts in it.”

<sup>66</sup> Sarah (PC): “One thing that worries me is dating and you read stories about people who have passed away from kissing a boyfriend or girlfriend that have eaten, they didn't remember that they ate something, so that scares me a bit. And then being a boy, peer pressure like he's not going to want to carry his EpiPen around, well I don't know if that's going to be the case but you hear stories about parents, the kids don't want to carry the EpiPen, they leave the house without it, they want to seem, like their friends will go to Tim Hortons or Starbucks, and guess what, he can't. So I worry about bullying, I worry about a lot with him, just because we want him not to have to worry about that stuff...”

<sup>67</sup> Samara (AA): “...my allergist in Winnipeg was great...”

<sup>68</sup> Trisha (PC): “He's a very well-known paediatric allergist so he's involved in the latest research, so he regularly, he doesn't talk down to me which I really appreciate, he very much involves me with looking at the costs, I mean the risks and benefits of introducing food at a certain time.”

<sup>69</sup> Trisha (PC): “Daycare's fantastic, daycare [nursery] has been absolutely wonderful, it's a home, home setting, so she's very well versed in allergies, she had a, she used to be a nanny and she had a child that was allergic to everything previously, so she's, she's very, um, careful.”

<sup>70</sup> Jennifer (PC): “...they're [her young daughters] going to a home daycare [nursery] and she has never had anyone that has an allergy, but she's been excellent and willing to work with us the whole way, um so she has stopped giving, I know that she used to give peanut butter sandwiches and she doesn't do that anymore...”

<sup>71</sup> Sheri (PA): “Our daycare [nursery] was so fabulous, no products came in, so there was never any guesswork, nobody was treated differently, all the kids got the same snack, I think they were the gold standard.”

<sup>72</sup> Sasha (PA): “We had significant, we actually had to um, remind a daycare about Sabrina's Law. Um, because they refused to allow him to carry his EpiPen. [Alison ‘Hmm’] So yes, he has had some significant, um, I don't know how much of it he remembers, but it was quite nasty for about six months. Um, where the school took it out on him...”

<sup>73</sup> Megan (PC): They're very good, they. The teachers that we've had so far, he's going into grade two, they've emailed when they're doing food activities, they check if they're not sure, but they, the teachers so far have seemed very aware of labelling and how to read labels and the fact that they check in when they're not sure. So, I've been very confident.”

<sup>74</sup> Sheri (PA): “No, in grade two, twice, um, kids thought they were being funny, and there's a lot of them in his class with a nut allergy, thank goodness, they thought they were being funny, one kid brought in a bag of nuts, and was throwing them around the table and one kid brought a peanut butter sandwich, saying 'oh, if I eat this by you, will you die?', thankfully the teacher took it seriously.”

<sup>75</sup> Vilma (PA): “It's a private school so I don't know if they bent over backwards because of allergies, because I know it was very easy for us at school.”

<sup>76</sup> Sheri (PA): “I think there's a lot schools could do. School, we are constantly frustrated with, you know, making products in the school for you know whatever day to celebrate, but it's in the teacher's lounge, and there's tons of nuts in the teachers' lounge, um, the kids with dairy allergies, gluten allergies, why do they need to feed kids, it's a constant frustration for us and we've had it consistently, we actually switched schools it was so bad, um, so I think schools have a responsibility, my son's teams for sports, they don't have a responsibility, I'd appreciate if they don't serve it, but there's no reason the school needs to serve a meal to so many kids with allergies, I think.”

<sup>77</sup> Kim (PA): “High school they don't um, they will sell things with peanuts in them, they're just aware of protocols if somebody gets sick, um, it's difficult I know that he won't eat there, because they have lunch periods all through the day so somebody will come in the cafeteria and the kids won't necessarily clean up and then he'll come eat and he won't know what's been on the table before, so he will not eat at school.”

<sup>78</sup> Danielle (AA): “High school's like a whole different world [than primary school]. They're a little bit, they don't care what you bring for lunch.”

<sup>79</sup> Danielle (AA): “This year at the end of the year, my friend who has a peanut allergy and our other friend from first year of university, were going out for dinner, and like they arranged it, and were like 'well, if you want to come you can, but we didn't know if you'd want to because of your allergies', and I was like 'when you arrange something and then invite me and then say well you didn't think I'd come anyways then I'm not going to come'.”

<sup>80</sup> Roger (AA): “...I'll be at a Thai restaurant with a friend and he or she will order Pad Thai with peanuts and maybe we're sharing spring rolls or something else and I find it sort of irritating that um, they couldn't just leave the peanuts off and then I could be more relaxed about sharing something else with them...”

<sup>81</sup> Amanda (AA): “My friends especially, especially if they've been around me with the allergy, they're very careful”

<sup>82</sup> Samara (AA): "I like eating at like certain friend's homes, who also like, I know use a different sponge when I go there, like my friends are pretty good at it."

<sup>83</sup> Kim (PA): "I've had friends go out of their way to make their home safe for us to come over."

<sup>84</sup> Beth (AA): "I've lived with roommates quite a bit and...I told them all when we moved in together as well that I can't, um, like if you're going to eat peanut butter, it's fine, but I need you to like wash the dishes right away and wash them really well. Because I had an experience before I lived here, when I was younger and I had a roommate and she loved peanut butter in the morning, she loved peanut butter on toast, but she would, and granted we're all kind of, like in the morning half awake, but she would make it and leave the stuff everywhere and I would be just like 'I can't be in the kitchen until someone cleans it', so I had to get on her a bit about it, and you know I'm pretty easy going to live with, but I was like 'for this one thing, I really need you to do this'..."

<sup>85</sup> Regina (PA): "Kids are very well-versed nowadays I find anyway with respect to allergies."

<sup>86</sup> Christine 2 (PA): "I think they were interested [in her having a peanut allergy], um, but similar to when she got her braces on right? like I, I don't think they are, our kids are growing up in this society where if you have two moms or two dads, it's really not a big deal to them."

<sup>87</sup> Kristi (PC): "I would say that his friends all, they all just sort of take it [having a peanut allergy] as yup, that's the same as saying he's got, you know, brown eyes or whatever."

<sup>88</sup> Megan (PC): "Obviously at school they're more aware, even other students are aware, we have an, we were playing out front a couple years ago when Noel was younger and one of the younger kids came up and offered him a snack and the older brother came along and said 'does he have any food allergies?' <laughter> so I mean, this kid was probably ten at the time, I was so impressed, clearly kids are aware, so it helps."

<sup>89</sup> Sarah (PC): "Even the grandparents, I don't let them watch him [her allergic child] because they don't, my husband's mother is a daycare worker so you'd think that she'd get it and she doesn't."

<sup>90</sup> Sarah (PC): "We avoid his grandparents' house, we don't go there, we don't go to my parents' house because they have other grandchildren that come there and I don't know if the toys are safe, I don't know when they've been washed last."

<sup>91</sup> Jennifer (PC): "Um, he, my husband [child's father] does not actually believe that it's real. [Alison 'Okay']. And I think it's part of the Brazilian culture, <clears throat> so I do most of the shopping and he knows that if he's buying anything for her that he has to look for a Peanut Free Symbol because he doesn't know enough to read labels. Um, yeah. He sometimes takes her life into risk when he takes her out places and doesn't ask questions."

<sup>92</sup> Kim (PA): "We'll have family members that think that we're being ridiculous and, but that's not the case and I just need somebody to say, 'no you're right'"

<sup>93</sup> Christine 1 (PA): "Even his own dad [her ex-husband] thinks we're overreacting"

<sup>94</sup> Danielle (AA): “My mom's been wonderful, I mean my dad is no longer in my life and the day that we left we opened one of his drawers because we were taking the cabinet and he had peanuts in it so that kind of tells you the mentality of some people, like why are there peanuts in the house, I'm going to die.”

<sup>95</sup> Tanya (PA): “My husband's brother will bring, oh he would always give her chocolates that ‘May Contain’ nuts, or Halloween candy that ‘May Contain’ nuts, so it was hard, she wasn't allowed to eat it, we would take it away from her... it frustrates me sometimes, because it makes me the bad guy to take away chocolate from my kid, but at the same time, he's not doing it on purpose, so I mean he just doesn't realise and it is how it is, and I have to understand that he, it's not his kid, so how does he remember that she's got an allergy, so I see both sides.”

<sup>96</sup> Kim (PA): ...his own grandparents, on my husband's side, you know we're now into where he's sixteen years old so we've been dealing with this allergy for like sixteen years and they still mess up, we'll come for dinner and there's cashews on the counter where they've prepared a meal.”

<sup>97</sup> Robin (AA): “My ex-husband, when we were dating, his mother, made some rice thing, it had almonds or something in it, and she was just like 'pick it out', and I was like 'are you kidding me?', people are clueless about allergies, you know, it's like just pick things out, you'll be fine, and yeah it doesn't work that way, it's awful what some people....We got upset, and we got up and left, and it's like 'are you kidding me?'.”

<sup>98</sup> Jennifer: “...my sister was over, just watching them [her two young daughters], and she knows of the allergy and she usually reads things before she gives them to her, but for some reason she didn't this time and gave her a cracker that I normally wouldn't give her and so then, when she told me, we watched her like a hawk and she had a couple hives appear.”

<sup>99</sup> Jennifer (PC): “I would just say that there's some extended family members. And it's not, we don't have family gatherings very often, just more at holidays, so the first few times, like after we found out about her allergy, we never, we forgot to remind people, so now when we have family gatherings I always just send out a quick email or phone call, 'just remember she does have an allergy, so if you are making something that has come into contact with her allergen, if you could just let me know what it is', I'm not asking them to not make it, but just so that I know what to keep her away from. . . . At the beginning it was frustrating, um, that I had to remind people, but then I just had to remind myself that they don't live with her, they don't see her on a daily basis and now I just, it's just life, you know, you just gotta remind people, like 'hey, I've got a kid with an allergy', 'just remember that please'.”

<sup>100</sup> Trisha (PC): “Even my in-laws, it's hard, because I feel like there's not the same sense of risk...not a fan when we went for Christmas and there was a bowl of peanuts on the table, like that's kind of, it's a little bit frustrating, um, we try not to be in people's faces about it, but a little bit of like, I feel like when it's close family, I feel like they should be a little bit accommodating.”

<sup>101</sup> Kristi (PC): “<lowers voice> It's been a hard struggle with my in-laws [child's grandparents], but I think they've come around, now, and uh, I would say um, sometimes culturally there's some, it's most of the time it's been generational or cultural I find that older generations have a bit of a harder time understanding what is and what isn't and what he can actually have or not, um, not in a bad way, but just not understanding fully.”

<sup>102</sup> Christine 2 (PA): “I mean I think our generation [participant and I are similar in age] is, we're kind of used to it, my parents, I mean they still have that bowl of peanuts right there for that chipmunk. And I go there and I'm thinking 'really?', 'don't you get it?', but it's, it's not on their radar as much.”

<sup>103</sup> Sarah (PC): “...his [child father's] parents are Italian so they have nuts out at Christmas and even though they say, oh we're safe, we're safe, you know I can't, at his level, he's touching everything and then they're not able to wash every inch of the house and they have other grandchildren too that probably eat food, so them touching stuff so I just said to them we feel safer, just come here until he's old enough to realise that I can't stick my hands in my mouth, I have to wash my hands, I have to check ingredients, so they're probably not the happiest with us but it is challenging.”

<sup>104</sup> Kristi (PC): “...most kids, when they're in school, like my older kids are, as soon as we said Xavier was diagnosed, um, right away they kind of were like 'oh yeah, that's like so and so' or whatever and it wasn't a big deal to them.”

<sup>105</sup> Danielle (AA): “And my brother, I don't know if it's just because he's been raised with it or because he witnessed that one [anaphylactic reaction] ...a little kid had M&M's and was trying to get my brother to eat the M&M's and ... then he's like 'no, they have peanuts' and she's just like it's just 'May Contain' and he's like 'I'd rather not kill my sister, thanks', like he's so good with allergies.”

<sup>106</sup> Helen (AA): “...my children, who are young adults, who've always known me to be, having this allergy, are always very conscientious, so if it's something that they haven't seen me eat before or for some where they're like 'Mom, can you eat that?' and so they check in with me as well, so yeah, so their very conscientious about it as well, not in terms of any sort of anxiety around it but just it's become part of who they are as well because I'm always checking and so now they do that in return.”

<sup>107</sup> Trisha (PC): “I think there's still a huge lack of understanding from other parents who maybe don't have food allergies.”

<sup>108</sup> Tanya (PA): “People would complain, especially at the beginning of school, because a letter would be sent home saying that a kid in class had an allergy and I couldn't bring peanuts and every so often I would be out and I would hear parents complaining that some kid had an allergy and they couldn't send their kid with a peanut butter sandwich, and they didn't know it was my kid.”

<sup>109</sup> Kristi (PC): “I'm always very appreciative when parents are trying to be very inclusive and when they are concerned, there's been one or two examples of parents sort of, I had one mom say to her son, within my hearing, 'oh Xavier's allergic to peanuts, so he can't come to our house'.”

<sup>110</sup> Courtney (PA): "It's hard, especially around birthday parties, when he goes to birthday parties you have to, 'okay, here's his EpiPen, do you know how to use an EpiPen?' and a lot of parents are very nervous about it, 'cause their kids, they've got peanuts in the house and they're nervous."

<sup>111</sup> Sarah (PC): "Like everywhere we go, I meet somebody that has some sort of allergy like even at the playgroups...so it's kind of nice to meet other moms, it's like ohh, you get it."

<sup>112</sup> Helen (AA): "And everyone who knows me and who I work with and who I live with always knows where they [her EpiPens] are. And anybody new to my team, I'm always making sure that they know where I keep it, if not, and I typically make it, you know, sort of kind of my initial conversations with people and it's awkward, because it's not typically people start telling you their medical issues, but I work in a large office so people need to know."

<sup>113</sup> Angela (AA): [Angela works as a nurse in a major Toronto hospital] "Everyone just brings everything [food to eat]...I had a good [serious allergic] reaction at work. . . It's so hard, because there's so many nurses"

<sup>114</sup> Angela (AA): "You're trusting people that don't get it or don't care."

<sup>115</sup> Vilma (PA): "...restaurants make mistakes, we've had that where they've sprinkled nuts, not peanuts, um, so yeah, but I think they're not informed."

<sup>116</sup> Kristi (PC): "If we go to a restaurant, if we have a server that's a bit younger, they seem to be like right on it, and they're like 'yup, no problem, he can't have it', if we, it tends to be older that we notice the difference a little bit more."

<sup>117</sup> Megan (PC): "I find most places [restaurants] at least try, some places I find kind of do the 'cover your butt' statements and they don't want to risk anything and they don't want to, like Tim Horton's doesn't even try, they're just like 'don't eat here'. And I think Dairy Queen kind of says similarly."

<sup>118</sup> Roger (AA): "...I certainly think there's more that uh, a lot of establishments could do, um, and you know, to take it more seriously, uh, you know, I know they're worried about litigation and that sort of thing, but um, any, I mean this is a decent segment of the population and you know, I think restaurants really need to be smart about, about this sort of thing, and you know there's still a couple of airlines that are serving peanuts on planes and it's just, boggles the mind, 'why are you doing that?'"

<sup>119</sup> Beth (AA): "So I have one friend who also has a peanut allergy and we have this, um, talk recently about how, there's a restaurant that we went to, a Mexican restaurant and she also has a peanut allergy and we were explaining to the guy, 'we can't have peanuts', and he was like 'well there's a sauce in one of the dishes that's a peanut mole' and we were like 'okay, good to know, we'll make sure we avoid that at all costs', and then he came back and he was like, we can't guarantee that it's a nut free kitchen, and I was like 'okay, well I'm okay with that, I'm not going to order anything that has sauce on it, but he was actually like 'I'm not comfortable serving you because it's not a nut free kitchen', and I was like 'okay, well you don't know how severe my allergy is or what my experience is', and they, yeah they basically wouldn't, wouldn't serve us."

<sup>120</sup> Roger (AA): "I think on the whole, society is very sympathetic, but you do run into these individuals who are, act as though you're making it up, you know, it's just a figment of your imagination or something."

<sup>121</sup> Jennifer (PC): "It doesn't matter where you are, there's always going to be someone who, just thinks your kid is a freak or that you're lying and making it up, or it can't be as bad as you're saying it is."

<sup>122</sup> Cathy (PA): "I feel like they [people] used to be friendlier, I think people are getting more fed up now, because there's so many food restrictions that I feel that there's a backlash now, and peanuts being bundled into the whole gluten free, dairy free, sugar free, and people look at it all as just being high maintenance"

<sup>123</sup> Christine 1 (PA): "I see the comments, you know, when they post something, it's just, I end up on Facebook, I block the people even though I don't know 'em 'cause I don't want to read anything else. I don't read any of that stuff anymore 'cause I get so angry, because of people's ignorance."

<sup>124</sup> Kim (PA): "When you read Facebook comments when there are articles about food allergies and um, somebody that's had a bad experience in a restaurant, people will write on there, 'well you shouldn't go out'"

<sup>125</sup> Sarah (PC): "...You meet a lot of ignorant people, especially online I have to stay off online, of reading comments <laugh> because it makes me want to punch people out, because it's just a kid, like how can you say nasty things, that just drives me crazy."

<sup>126</sup> Megan (PC): "...When you read comments on posts around, I don't know if you heard about that incident at the park? [Alison 'Yup.'] Smearred with peanut butter, and the comments on there, where I was, you know there are stupid people out there, so my personal experience has been quite good but no, I guess not all of the world is understanding, or sympathetic."

<sup>127</sup> Tanya (PA): "The daytime talk show hosts...make jokes about allergies and how it's inconvenient and that's how most people make it seem, like an allergy is an inconvenience, but it's more than an inconvenience to the person that has it."

<sup>128</sup> Samara (AA): "TV makes lots of jokes about it [food allergies].... It's often used as like a copout joke or like ah, in sitcoms, it's used like allergy jokes, and like they do minimise it, I think, and they have such a large scale that it's not really like appropriate."

<sup>129</sup> Sarah (PC): "I used to call all the companies, like if we're doing say peanut free it was like this long tedious battle of calling them."

<sup>130</sup> Samara (AA): "Nestle is pretty good, although I sometimes get, I got like mixed messages once."

<sup>131</sup> Allison (PC): "If it's unclear or if you're not sure but it's something that he's really, really wanting, I'll send an email, we've mostly gotten emails back, some of them have been great, some of them have been, 'we can't guarantee, blah, blah, blah', and then I'm like 'forget that!'"

<sup>132</sup> Cathy (PA): “A lot of other companies just say, the old, well we recommend consumers with allergies avoid our products, period. And I don't find that very useful, oh thanks. . . . They were just like 'well, we recommend our consumers with allergies don't', well thanks for nothing, can you at least, like I was so mad, and I, I just, there's no, like I get frustrated now, sixteen years later, there's nothing, I just don't bother, I'm like fine, they don't care if I never buy the product again, they really don't care, and they, I just ahh I get so mad about it, but this 'we recommend you don't eat it', okay, thanks for that great advice . . . It is, honestly the party line, thank you for that and we recommend you don't use our products.”

<sup>133</sup> Christine 2 (PA): “I shouldn't have to call all these companies.”

<sup>134</sup> Amanda (AA): “I never have, no.”

<sup>135</sup> Angela (AA): “Uh, no.”

<sup>136</sup> Angela (AA): “Bakery things, that's 'cause cross-contamination.”

<sup>137</sup> Helen (AA): “I usually try not to do bulk, only because I worry about their cross-contamination.”

<sup>138</sup> Kristi (PC): “The biggest risks I think are anything that's sort of like open, like if there, like the bulk section at the food, at like any of the stores.”

<sup>139</sup> Sasha (PA): “It's difficult with any restaurant, not restaurant, grocery store that has sort of a bulk bin area, because it's purely off-limits for him, just to completely avoid with him.”

<sup>140</sup> Kim (PA): “The only thing that I think they should do is just be very careful with where they are putting open nuts, and um, like I was just at a Chinese grocery store, because it's right beside his school, and I don't normally shop there, it's like the third time I've been in there <bird squawks> and um, I needed to pick up mushrooms, and right by the mushrooms were bags of peanuts, whole peanuts in mesh, right there in the, in the, um, all the produce, so like that did not make me feel very comfortable.”

<sup>141</sup> Amanda (AA): “It's hard when my daughter wants certain things, just reading the ingredients and the extra time doing that is probably the only thing, yeah.”

<sup>142</sup> Christine 2 (PA): “Because if I have three kids with me, to stand there and you know keep, reading, reading, reading.”

<sup>143</sup> Sasha (PA): “We read the ingredient list, um, yeah, without doing that it doesn't come home.”

<sup>144</sup> Megan (PC): “Sometimes there's, you know, a huge long list of ingredients and it's hard to not, I'm not the most patient of people, so it's hard to sit there and read, line by line, through all of the big long words, I worry sometimes that I've missed something that has, you know a peanut derivative in it that's using some scientific name rather than the basic name, or Latin.”

<sup>145</sup> Cathy (PA): “I do a quick scan, and my eyes are starting to go too, actually, so I've been meaning to pack a little, get one of those magnifying glass shields, because they're really hard to see sometimes, and on airplanes, I can't read the writing, so we, if we can't read it, you know, we can't eat it. . . . I find it's too small, the writing is really, really small, and my eyes are good, like I don't wear glasses, but I don't know how my father (with a peanut allergy) honestly didn't die, because he can't see at all, and he would, the ingredients are tiny, they're really hard to read, ~~310~~ that bugs me.”

<sup>146</sup> Megan (PC): [How would you improve the ingredients list?] “Just sort of easy to read, my eyes are getting bad so bigger print, not super tiny stuff.”

<sup>147</sup> Danielle (AA): “I think we need more honest labelling. Like, and more mandatory laws, like I've always been under the impression may contain is like federally, whatever legal, they need to do it and they don't apparently as I've been mentioned and told. So now it's like 'am I too trustworthy with companies, do I, am I too optimistic in their ability to label', so I think if there were like solid guidelines that people had to follow and labellers had to follow, it would be easier.”

<sup>148</sup> Christine 2 (PA): “For the packaged foods I definitely look at the labels, if it says, um, it contains, then I don't buy it, obviously, um, it says it may contain, I take into consideration what is the product, if it's a granola bar, I probably won't buy it, but if it's a freezie, I'm like okay. 'Cause I think a lot of times, depending on the product, it's a legal thing, right that it's put on there, like this is a gummy worm or whatever, like, why might it contain, but I think maybe in the plant it, okay that makes sense that it might have some cross-contamination then I won't buy it. And as far as when she's eating things, I'm say, if it says may contain nuts and I'm here, you can eat it, if you're at someone else's house, you can't eat that. Just as a precaution.”

<sup>149</sup> Allison (PC): “Seriously, we don't do it.”

<sup>150</sup> Sarah (PC): “We don't, anything that may contain, we do not buy, it's just as long as it doesn't say peanuts in the ingredients or may contain peanuts then we're good.”

<sup>151</sup> Kim (PA): [How do you feel when a product has may contain on the label?] “It's a no go.”

<sup>152</sup> Sheri (PA): [How would you feel when a product you want to buy has may contain peanuts on the label?] “We won't, we won't go anywhere near it.”

<sup>153</sup> Cathy (PA): “I always, well I look for the symbol first of all, the no nut, but them also will flip it over and look at the bold, you know, where it says um what's in it, um sorry, what ‘May Contain’, and then I scan through as well.”

<sup>154</sup> Allison (PC): “Ingredients, I try and buy the most simple ingredients, always, now that I read labels, I'm like 'that's disgusting' if they have fifteen or more and also like if they have the allergy warning on them, but we try and buy things with very few ingredients.”

<sup>155</sup> Beth (AA): “I'm just looking through the ingredients, I kind of, I used to be more well-versed in all the different ingredients, but I think now as just sort of like an ease of use, what I try and look for is things that are like ingredients I can recognise that seem to be whole foods, you know like not a lot of preservatives or weird yeah, like eighteen million, dihexacloramethalene, and you're like 'does my granola bar need that, I don't know'.”

<sup>156</sup> Allison (PC): “It's just easier to buy fruits and vegetables, single ingredient items, the same things over and over, because then it's less stressful.”

<sup>157</sup> Beth (AA): “I do eat products like that and it's maybe walking a bit on the wild side but, yeah, it's hard to say, yeah, I've never, I've never personally had any issue with eating something that had a may contain label.”

<sup>158</sup> Roger (AA): "I have, I will confess, that I, again as I think I mentioned earlier, I've bought some things that were, that had peanut, had may contain warnings, certainly never bought anything that had peanuts in it obviously, but sometimes they may contain, I do risk it on occasion."

<sup>159</sup> Catherine (PC): "I don't always look for that Peanut Free Symbol but I try and make sure it doesn't, you know how it says may contain, so I try and make sure it does not have that, but there are times that I know I did buy it still even it says may contain, yeah like I haven't been 100% strict with that."

<sup>160</sup> Carmela (PC): "I just, I read through and if, ah, if I'm comfortable if it says may contain, but, if it says peanuts then we don't buy it." [And how do you feel when a product you want to buy has may contain peanuts on the label?] "I still buy it."

<sup>161</sup> Fiona (PC): "I'm not that fussed of may contain, like it was made in a facility that had peanuts, we still give it to him, he hasn't reacted, that we know of, so I kind of am of the mind that it's better to expose him to small, to trace amounts if he can stand it. And, so far, so good."

<sup>162</sup> Sasha (PA): "I very rarely try something new."

<sup>163</sup> Teresa (AA): "Yeah, no, I pretty much stick to exactly the same thing on every trip, because it's too much work to read all the ingredients, all the time."

<sup>164</sup> Angela (AA): "If it's the first time I'm buying a food then I would have to pay attention."

<sup>165</sup> Beth (AA): "I saw that there was a new brand there and kind of took a look at what was in it, um, took a look at where it was made, uh, stuff like that and that it's whole grain. And it's interesting, I'm not Jewish but usually when I see Kosher on something, it's usually a pretty good indicator, uh that's what my Jewish friends from Forest Hill, that uh, because Kosher eating tends to be quite, um, they're conscious of the ingredients they put in and how they are handled, so Kosher food tends to be fairly well made and it's like considered, it's not exactly organic but it has that kind of, usually like raised well food."

<sup>166</sup> Regina (PA): "I think ice cream and prepackaged baked goods, like the granola bars sometimes can have peanuts in them, that type of thing, so more the snacky stuff."

<sup>167</sup> Robin (AA): "Stay away from it all, unfortunately, it makes me really nervous, especially like Indian foods, Chinese, like I won't go to any Mandarins [Chinese buffet restaurants] or anything like that, I'm too afraid."

<sup>168</sup> Samara (AA): "I've bought things that were previously safe, and have had a change that I didn't know about and got them home and they were no longer safe."

<sup>169</sup> Allison (PC): "PC brand make a lot of safe things, PC Blue Menu for whatever reason, makes a ton of good things."

<sup>170</sup> Carmela (PC): "That I know it's peanut free and I know it's safe." [And what do you like about (child) eating that product?] "That I know it is safe for him."

<sup>171</sup> Samara (AA): "I like made in Canada, because of the labelling."

<sup>172</sup> Angela (AA): "I would feel safer about Canada, then North America, then other places, because I know that rules might be very different there."

173 Tanya (PA): "Canada is always my first choice, then it's the United States, just for proximity and hopefully for levels of inspection to be close to Canada's."

174 Danielle (AA): "Some people don't trust them but, I honestly thought there was more of a problem with over labelling 'May Contain'. You see stuff like frozen vegetables in the store that say, 'May Contain' peanuts, and it's like, 'do they really? or are they just trying to cover their butt if someone has a reaction?'"

175 Sarah (PC): "I'm really happy that we're in Canada because they label properly, I do trust that they wash, even if it's a facility that does a couple of other things on it, they wash, I'm good, I have to trust that."

176 Angela (AA): "I trust this product because I've had it a long time and I know it's okay and probably the whole childhood thing too. . . . My dad always ate it."

177 Danielle (AA): "I kind of just buy the same thing my mom would always buy."

178 Carly (AA): "It's usually stuff that I just know from my childhood, like my mother . . . Stuff that I'm comfortable with because my mom picked it out for me and I know from that it's going to be good"

179 Amanda (AA): "I trust this product because it's very plain and I'm never had any issues."

180 Robin (AA): "Yeah, I trust this product, because ah, I've had no issues whatsoever with my allergies, and it tastes good."

181 Vilma (PA): "I have to trust that they're telling me the truth, yeah. If there would be major recalls on some of these items, obviously that would cause, like you know Maple had that big issue with their meats, now if something like that happened with Quaker, yes, that would make me a little concerned, but I've not experienced it so far, so I'd have to say I'm okay."

182 Jennifer (PC): "I trust Dare because, for the most part, all of their products that I've bought say . . . baked in a nut free or peanut free facility."

183 Christine 1 (PA): "Dare, because they're labelled amazingly well, and most of them are peanut/tree nut free. I'd have to say they're my favourite."

184 Megan (PC): "Dare, I would say Dare is my favourite because you can always trust it."

185 Carly (AA): "Generally I feel pretty comforted, around this time of year, a lot of the school advertisements are coming out so [Dare] Bear Paws is one that I keep seeing everywhere, where it's like [Dare] Bear Paws are peanut free! and peanut safe! and I'm like 'ah, yes, okay'. But if they say it in the commercial, I guess it's more of a comfort, like 'ah yes, I can trust your product because now you've recorded it and put it on TV' and I can be like 'ah, you said it though'."

186 Cathy (PA): "If it's a President's Choice nut free, I'll buy that for sure."

187 Angela (AA): "It's handy to see the symbol, then you know that you're for sure." [Do you trust a product with a Peanut Free Symbol to be peanut free?] "I hope so, yeah I guess I do, whether or not I should."

188 Carly (AA): [And do you trust a product with a Peanut Free Symbol to be peanut free?] "Yes. . . . It makes me feel definitely more safe and that there's an option for me. . . . Seeing the peanut free label on that definitely makes me feel like ah, like this is okay for me to have and I can be a bit more normal, in lack of a better term."

<sup>189</sup> Carmela (PC): [And do you trust a product with a Peanut Free Symbol to be peanut free?] “Yes. . . . It helps a lot with like buying snacks for school and just peace of mind.”

<sup>190</sup> Roger (AA): [Do you trust a product with a Peanut Free Symbol to be peanut free?] “I do. . . . It’s such a relief to see it, because you, you know, at least you assume, that the company behind it is taking all the precautions and taking this seriously, and you know, smart business, you know too, I mean so, um, I’m much more likely to uh, um, be a consumer of a company that makes the effort to do this.”

<sup>191</sup> Tanya (PA): “I trust this product because it’s a Canadian product and it’s got a symbol on it saying that it’s certified to be against peanuts and I, I choose to believe that if they’re going to say they’re certified against peanuts, that they’re actually no peanuts, because they don’t want to get sued, so I trust in that.”

<sup>192</sup> Kristi (PC): “I’d rather send the Peanut Free Symbol, especially for things like granola bars, or things like that. . . .It makes it much easier, ‘cause it’ll just be the one that I automatically go to first. . . . this was one brand in particular I picked up actually because of the Peanut Free Symbol being right on the front and prominently displayed.”

<sup>193</sup> Sasha (PA): “Huge, huge, because that’s where I go first, that’s where I would, um, as skeptical as I am about the peanut free markers and symbols on foods, they are the first ones I’ll go to, to check and you know, if they are, then, if they meet the rest of our criteria there, they’re the first one in our buggy.”

<sup>194</sup> Christine 2 (PA): “I think that it’s good, it’s very easy to, you know they put that right on the front, that makes it very handy, and I, I don’t know whether, like when I see that symbol, I don’t even look anywhere else, which I don’t know if that’s good or bad, but I just, I guess I’m just trusting that, that’s, that it’s okay.”

<sup>195</sup> Tanya (PA): “If the product doesn’t have anything to do with peanuts, I don’t think they should be slapping that symbol on there.”

<sup>196</sup> Megan (PC): “My comfort level sometimes varies, sometimes I’m more anxious about it and less willing to take those risks and sometimes, you know, I think they, they would say if it was a risk, they do their cleaning, they, you know, so I think it’s sort of a really, really low risk and sometimes I feel like it’s important to, this sounds, I don’t know how to say it without sounding <laughter> crazy, but it’s important to not let the anxiety go so far, ‘cause otherwise you won’t leave the house, so you have to accept some degree of risk. I mean, peanut free is best, but you know a company that doesn’t label a ‘May Contain’ or maybe they produce on the same lines but they do rigorous cleaning and testing, I’d probably trust that, most days, some days maybe not.”

<sup>197</sup> Tanya (PA): “I trust this product because they’ve, ah, put the Peanut Free Symbols all over it, so I trust it because they’ve taken the time to acknowledge it’s a peanut free facility, which is different for me, because they’re saying that they acknowledge cross-contamination is as big an issue as ingredient list and it shows that the manufacturer at least, the company at the top, is aware of the hazards and the risks and potentials and are taking further steps to not just keep the products without ingredients of products, but actually keep their facilities without peanuts.”

<sup>198</sup> Christine 1 (PA): “The ones that I trust. Like I said, I’ve already said about the Dare, the Wrigley’s you know. The ones I’m not so sure about are Kraft and Christie, I sometimes buy but then sometimes I’m thinking ‘am I taking a risk?’.”

<sup>199</sup> Trisha (PC): “If they label, um, processed in a facility then I won’t risk it. If they don’t say anything, I tend to trust it, I also belong to a really fantastic allergy group on Facebook that discusses a lot of what’s safe and what’s not, so brand wise, the bigger brands I tend to trust a little bit more, because I feel like they would have that, that they wouldn’t want that liability on their hands.”

<sup>200</sup> Carly (AA): [And do you trust a product with a Peanut Free Symbol to be peanut free?] “Yes. . . . It makes me feel definitely more safe and that there’s an option for me. . . . Seeing the peanut free label on that definitely makes me feel like ah, like this is okay for me to have and I can be a bit more normal, in lack of a better term.”

<sup>201</sup> Megan (PC): “It’s the Peanut Free Symbol, again if we go to the cottage especially, I’m not taking any risks with anything, so I try and stick with the Peanut Free Symbol for stuff we’re going to be eating up there.”