

EXPLORATION OF ATTITUDES AND BEHAVIORS OF CONSUMERS WITH FOOD ALLERGIES ABOUT DINING OUT: A FOCUS GROUP STUDY

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ABSTRACT

Aim: To investigate attitudes and behaviors of consumers with food allergies about dining out. Method: All sessions were audio-taped, transcribed verbatim, and analyzed using NVivo Version 8.0. Results: Seventeen participants participated in four focus group sessions. Participants perceived cross-contact, hidden ingredients, and miscommunication as potential causes of food allergic reactions. Perceived barriers to provide allergen-free food were lack of training and awareness among employees. Participants perceived buffet, ethnic and specialty restaurants as risky dining places but preferred national brand, chain restaurants. Participants expected the servers to follow the given instructions and have the major allergens and ingredients listed on the menus. They felt the needs of regulations to protect people with food allergies. People with food allergies should ask for clarifications and bring an Epi-pen while dining out. Conclusion: Consumers with food allergies experienced many difficulties in restaurants due to restaurant employees' lack of knowledge and training regarding food allergy.

Keywords: Food allergy, Attitudes, Behaviors, Restaurants, Consumers

INTRODUCTION

Food allergies affect 12 million adults and 3 million children under the age of 18 years in the US (Food Allergy and Anaphylaxis Network [FAAN], n.d.). Providing allergen-free food to clients with food allergies is challenging as the prevalence of food allergies continue to increase. Symptoms of food allergies varied from mild (i.e., skin rashes) to severe (i.e., anaphylaxis). Anaphylactic shock, the most severe response to allergens, is one of the leading causes of emergency room visits and responsible for 100-200 deaths yearly (National Institute of Allergy and Infectious Disease [NIAID], 2008). Oral ingestion, skin contact or inhalation of these allergens in small quantities could cause allergic reactions (Eigenmann & Zamora, 2002; Furlong, Maloney, & Sicherer, 2006), and strict avoidance of allergens is the only way to prevent such reactions.

Some restaurant operators felt that the customers should inform them about their allergies at the time the food was ordered (Abbot, Byrd-Bredbenner, & Grasso, 2007; Pratten & Towers, 2003). In contrast, diners assumed that food was safe if allergens were not listed on the menu (Anibarro, Byrd-Bredbenner, & Grasso, 2007). This mismatched expectation may be a reason for

numerous food allergic reactions at restaurants. However, despite the allergic reactions, the customers with food allergies would not reduce the frequency of dining out but would be more cautious and take preventive strategies. These preventive measures included asking for clarifications, ordering food specifically designed for allergic individuals, or notifying servers about their special needs (Furlong, Desimone, & Sicherer, 2001; Furlong et al., 2006).

Entry-level staff in foodservice often lack formal training prior to starting their jobs (Bureau of Labor Statistics, 2006). Make the matter worse, only 1/3 of restaurants provided food allergy training (Mandabach, Ellsworth, VabLeeuwen, Blanch, & Waters, 2005). Abbott et al. (2007) found that restaurant managers lacked knowledge and awareness about food allergies. Barriers to providing food allergy training included the high training cost, high staff turnover, time constraints, language barriers, lack of interest of management and employees (Abbott et al., 2007)

The legal environment for restaurants is also changing as many states such as NY, CT, MA, IL, RI, and PA have mandated that an employee with food allergy knowledge to be present on premise during production and service or that employees be trained about food allergies (FAAN, 2009). Food Labeling and Consumer Protection Act (FLCPA) 2004 mandates the manufacturers to indentify and clearly state if the major eight food allergies and their protein derivatives are present on the food labels (US Department of Agriculture [USDA], 2006). Meanwhile, the Food and Drug Administration (FDA) Food Code 2009 requires the person in charge to educate foodservice employees about food allergy as part of their food safety training, so that there will be an increased in food allergy awareness among them (Food Code, 2009).

Many studies had been conducted to investigate causes of food allergic reactions in the restaurants as well as knowledge and attitudes of restaurateurs towards food allergies. However, there is limited research about the attitudes and behaviors of consumers with food allergies related to dining out. Therefore, the purpose of this focus group study was to explore attitudes and behaviors of consumers with food allergies about dining out.

RESEARCH DESIGN AND METHODOLOGY

Participants and Recruitment

The protocols used for this study were approved by a Kansas State University Institutional Review Board prior to data collection. To be eligible, our focus group participants had to be adult consumers (≥ 18 years old), who were allergic to at least one food item or parents/guardians of a dependent who was allergic to at least one food item. In addition, only those who dine out at least once a month at commercial restaurants were eligible for this study.

The recruitment flyers and group emails to university staff were used to recruit eligible persons in a mid-sized city in Kansas. Those who were eligible and interested were asked to contact the researchers to schedule a session. Each participant was informed of a participant payment of \$20 in advance. All of the focus group sessions were conducted in February 2010.

Conducting the focus groups

Four focus groups were conducted. Each group lasted for about one hour and was audio-taped and transcribed verbatim. An informed consent form was provided, and participants reviewed the objectives of the study and guaranteed confidentiality before signing the consent

form. Before each session, the participants were asked to complete a short survey of demographic information, types of food they are allergic to, and frequency of dining out.

The focus group questions were developed and modified based on food allergy focus group study by Gupta, Kim, Barnathan, Amsden, Tummala, and Holl (2008). An identical set of questions were asked during each focus group and the participants continued discussing each topic until no new idea was generated. Probing technique was used to stimulate ideas generating, elaborate upon comments, and clarify points.

Analysis

The transcribed data were organized using NVivo Version 8.0. Two reviewers coded each of the transcription independently. The codes were compared repeatedly and reconciled. Open coding technique was used to develop categories and subcategories under each question. A new category emerged if “a repeated pattern is observed in response to the problems and situations” (Strauss & Corbin, 1998, p. 130). Codes with the similar meanings were grouped together under the same categories. The coding was reviewed by two other researchers who were not involved with this study to further increase reliability and ensure objectivity.

RESULTS

Participant Background and Symptoms of Food Allergic Reactions

A total of 17 participants attended one of four focus group sessions: 16 consumers with food allergies and a mother of a child with a food allergy. The participants reported to be allergic to major allergens and other less prevalent allergens such as fruits (water melon, honey dew, cantaloupe, kiwi, strawberries, banana, and citrus fruits), corn, and others such as mushroom, caffeine, basil, lamb, beef, and sulfite preservatives (Table 1). A majority of participants (n=10) were allergic to more than one food allergen. Age when food allergy was diagnosed ranged from 10 months to 40 years old. The symptoms of allergic reactions included cutaneous (itchiness of skin, throat, and tongue and rashes), cardiovascular (tingling hands, difficulty in breathing, and increased heart rate), and gastrointestinal (vomiting and diarrhea) reactions. In two severe cases, the participants experienced anaphylactic shocks leading to coma.

Personal Dining Out Experience and Perceived Quality of Life

Although a few participants claimed that their experiences dining out were pleasant with accommodating restaurant employees reported that the food allergy has significantly impacted their daily lives. They were frustrated dealing with restaurants staff who did not understand their situations especially if the allergens were uncommon and restaurants were at their busy hours.

Table 1: Characteristics of the focus group participants (N= 17)

Variable	Frequency (no.)	Percentage (%)
Gender		
Male	2	11.8
Female	15	88.2
Food Allergens ^a		
Peanuts	3	17.6
Tree nuts	3	17.6
Shellfish	4	23.5
Soy	1	5.9
Wheat	1	5.9
Fruits	6	35.3
Others	8	47.1

^a The total number of responses exceeds total N because the participants were allergic to more than one type of food allergen.

Potential Cause of Food Allergies Reactions in the Foodservice Establishments

Our participants recognized many causes of food allergic reactions in restaurants. Cross-contact, as for one, could happen easily (a) when food was placed at close proximity to one another (e.g., in ice-cream shops, buffet lines, and salad bars), (b) when cooking equipment and utensils are contacted with allergens (e.g., same pot to boil different food items or stacking plates on top of each other multiple dishes were brought out), or (c) through food handlers' hands.

Participants also recognized that hidden ingredients could potentially cause food allergic reactions when restaurants use pre-made sauces or dishes. Participants also identified practices such as blending shrimps in the dumplings or wonton served in the Chinese restaurants to enhance flavors without listing hidden ingredients as an example.

Miscommunication between front and back of the house employees could be another common reason for food allergic reactions in restaurants. Our respondents were not confident if the servers or hosts have conveyed their special orders accurately to the food preparers in the kitchen then back to another person who may bring out the prepared food items.

The consistency and completeness of information of a food label was also identified as another potential cause for food allergic reactions. The food labels do not include ingredients that are presented in minute amounts and the restaurateurs might not know the products they used well. Additionally, the product variation occurs occasionally and each batch of production might be different from the others.

Perceived Barriers to Provide Allergen-free Food for Customers with Food Allergies

Our participants suggested some barriers to providing allergen-free food in restaurants for customers with food allergies:

i) Lack of training, knowledge and awareness

Participants identified the lack of training (of employees) being one of the challenges why foodservice may fail to provide allergen-free food. Participants felt that employees in the restaurants were not aware of the seriousness and adverse effects of food allergies. When participant who was severely allergic to beef asked to make sure no beef accidentally touches his food, the server replied, *“Oh, you must be a vegan”*. Another participant who requested mashed potatoes without chives noticed chives were “picked out” from the dish before serving to her. When a participant indicated that she is allergic to mushroom, the server replied, *“I never heard of anyone who is allergic to mushroom. Are you sure?”* Such responses from restaurant staff clearly show the lack of training and knowledge.

A few participants attributed the lack of awareness of foodservice employees about food allergies to no personal experiences dealing with family members or friends with food allergies. Participants indicated that restaurant employees would be more empathetic and understanding if people around them were having food allergies. One participant also raised the issues of mass quantity production being common in foodservice resulting in employees less aware of risks.

A participant with working experiences in the restaurants commented that her chef could have cared less about food allergy issues because they were rushing to get their work done. Also, some of them were “ego chefs” and were not willing to modify their special recipes or reveal the ingredients. In addition, to preserve the authenticity of the food, some restaurant owners might not want to remove or substitute key ingredients such as peanuts in certain ethnic restaurants.

ii) Location and product variations

Two participants suggested location variation might affect the vigilance or capability of the restaurants in providing allergen free food. If the restaurants were located in the smaller town and run in slow paced area, the foodservice employees would have more time to accommodate the needs of the customers with food allergies by asking for more information, compared to more busy locations. Also, variation might also happen between and among franchised restaurants, which influenced the consistency of the quality of meals served.

iii) Other considerations of foodservice establishment

Several characteristics and management consideration of commercial restaurants were mentioned by our participants as possible barriers to food allergy training. They perceived that the restaurant owners may succumb to the financial constraints since they perceived providing special meals would increase their operating cost. *“They rather lose a small number of customers than investing more money to buy additional sets of equipment”*, one participant stated.

Fast paced working environment for commercial restaurants was also mentioned as a potential barrier. When the restaurants are at their peak business hours, the servers might be more likely to forget informing the kitchen staff about the special diets. Sometimes, when the servers spend more time serving or accommodating the customers with food allergies, other customers may become impatient and irritated.

The high turnover has also been identified as a barrier to providing allergen-free food. A participant expressed her concern that the servers or chef who she is familiar with and understand her needs might have left the company by the next time she visits the restaurant.

Identification of High/Low Risks Restaurants

When asked about types of restaurants they would avoid due to their food allergies, the participants addressed concerns with ethnic restaurants, particularly Chinese, Italian, Mexican, and Thai because of the special sauces used in their delicacies. Sauces used for these ethnic cuisines usually include multiple ingredients which some are not intuitively identified. Milk, egg, and soy proteins and derivatives are commonly used as manufactured food ingredients. The participants would also avoid dining at the buffet restaurants or buying foods processed in small facilities such as ice-cream or snack shops due to the risk of cross-contact with allergens. The specialty restaurants serving peanuts and seafood were among the risky places for those who are allergic to those food items.

Some participants expressed their preference dining at the national brand chain restaurants because employees in such restaurants were believed to be better trained and have better knowledge and skills. However, one participant argued that chain restaurants usually acquired pre-packaged food products from the suppliers and they did not know the ingredients of these products. Some participants mentioned fast food restaurants being less risky places to dine out as they were likely to use fewer ingredients and less likely to use peanut oil in cooking. Food quality in the fast food restaurant might also be more consistent. On the other hand, some participants preferred food establishments where everything was made from scratch. They were able to see the ingredients that went into their food and how employees handle food, and therefore, they felt that they had more control over the food they ordered. Several participants mentioned that they were less likely to visit upscale restaurants as peanut oil was commonly used for food preparation. Restaurants owned by small proprietors were also preferred by some as they might be more accommodating and more attentive to their customers' specific needs.

Preventive Measures Taken When Dining Out

The participants took several proactive steps to prevent allergic reactions. Some would call the restaurants in advance and ask for descriptions of the menus. Our participants would also read the menus and ingredient lists carefully to determine if the foods were safe for them. Reading labels was one of the best preventive strategies mentioned by the participants in all focus group sessions, but some indicated restaurants and/or manufacturing companies did not respond to customer request for information. When the choices of allergen free food were scarce, the participants would opt to simple and plain food, which did not involve a lot of handling.

Building good relationship and maintaining good communication with the restaurant were mentioned by several participants. They would frequently visit the restaurants where the cooks would modify their food to meet their special needs. Some employees, our respondents reported, would recognize them and their needs the moment they stepped into the restaurants.

Participants also informed people around them about their food allergies. Therefore, if they had allergic reactions in restaurants, their friends would know how to react. One participant would also ask friends not to order food items with allergens to prevent possible cross-contact.

Expected Accommodations from Restaurant Staff

Generally the participants had low expectation towards food service establishments in providing allergen free food. At least, they expected the servers to strictly follow the instructions that have been given, but due to previously mentioned barriers our participants did not seem to fully trust restaurant staff. Because some of the food allergies are life threatening, they expected

more accommodations to be provided by the restaurants. Even so, one participant commented that ultimately it is consumer's responsibility to make sure they were served allergen-free food.

Suggestions for Dining Out with Food Allergies

Participants suggested a number of future accommodations granted by restaurants, government or other institutions for people with food allergies. Our participants expected the eight major allergens to be marked clearly on the menus with descriptors beside the food items or detailed listings of ingredients. Participants expected food allergy information to be readily available without being asked for it. Disclaimers could be put on the menus or the entrance of the restaurants, so that the customers with food allergies would know that the restaurants are ready to serve them. Participants mentioned there may be a need for increased government regulations to protect people with food allergies.

Participants suggested people with food allergies to ask for clarifications and information from the servers when dining out. One participant urged others to empower themselves and be able to look up information by themselves. Participants emphasized that people with food allergies should have good knowledge about their condition. They need to be knowledgeable about common food items that might contain certain allergens, the terminology, and the alternate names of the allergens. Some participants also advised others to bring an Epi-pen with them whenever they dine out, or pack their own snacks if allergen free food might not be provided.

DISCUSSIONS

The focus group results provided in-depth information about attitudes and dining behaviors of consumers with food allergies. Our participants would dine out at least once a month despite their food allergies, unlike 20-25% of consumers with food allergies who have never dined out certain restaurants (Wanich, Weiss, Furlong, and Sicherer, 2008).

Multiple food allergies were common among our participants. This finding was similar to the results of a telephone survey in MD which found that almost half of the respondents were allergic to four or more food items, and 29% to three. Only 14% were allergic to a single item (Nowak-Wegrzyn, Isenberg, & Wood, 2000; Park, Ahn, & Sicherer, 2010). Besides the eight major allergens, our participants were allergic to other allergens such as basil, citrus fruits, beef, lamb and food additives. A study carried out among members of anaphylaxis campaign in UK concluded that 40% of the anaphylactic cases happened among adults were caused by uncommon allergens such as citrus fruits, banana, kiwi, peas and sesames (Uguz et al., 2005).

Food allergy is an emerging trend that could impose detrimental effects on physical health and quality of life of people with food allergies. Individuals with food allergies perceived themselves having poorer health than people without allergies. Young adults with food allergies indicated higher anxiety level than non-allergic adults (Lyson, 2004). Moreover, food allergy is also a known cause of stress to the immediate family of the allergic children (Gowland, 2001; Mandell, Curtis, Gold, & Hardie, 2002). While some of our participants felt comfortable with the accommodations they received from the restaurants, a few of them viewed themselves as burdens or annoying customers that the servers hate serving in the restaurants or other establishments. For example, a mother of a child with peanut allergy was devastated when a flight attendance made a big deal out of not serving peanuts due to her child's food allergic condition.

Allergic reactions occur at many places, but restaurants and non-commercial foodservice establishments are found responsible for most of the food allergic reactions (Furlong, McMorris, & Greenhawt, 2008). A majority of food allergic reactions were caused by cross-contact (Eigenmann et al., 2002), hidden allergens (Anibarro et al., 2007; Vierk, Koehler, Fein, & Street, 2007), miscommunication between wait staff and cooks (Furlong et al., 2001; Leitch & Walker 2005), ingredients not being declared at restaurants, and skin contact with food residuals (Furlong et al., 2008). Anibarro et al. (2007) defined hidden allergens as “substances that are unrecognized or not declared on the product labels”. Hidden ingredients of peanuts, tree nuts, legumes, and fish caused most of the allergic reactions in a retrospective study (Furlong et al., 2001). On the other hand, the front of the house employees did not consult the kitchen staff for more precise food allergen information led to the presence of allergens in the dishes, although the customers had requested a special meal (Leitch & Walker, 2005). Our participants were able to identify most of these common causes of food allergic reactions.

Our participants suspected that the lack of training is one of the greatest challenges for why restaurants failed to provide allergy-free meals. Food allergy training to the restaurant employees had shown to be inadequate. A study involved 100 individuals from restaurants revealed that 52% of them did not have previous food allergy training experience (Ahuja & Sicherer, 2006). UK Environment of Health Officers (EHOs)’s research indicated that one in five special orders still contained the food allergens (Leitch & Walker, 2005). These findings showed that there was an increased need of building up the employees’ food allergy knowledge.

In term of high or low risk restaurants and preferred types of restaurants, our participants perceived ethnic restaurants, buffet restaurants, bakeries, ice cream shops, specialty restaurants, and upscale restaurants as risky dining places for different reasons. Furlong et al. (2008) investigated the incidence of allergic reactions to peanut and tree nuts in food establishment concluded that many allergic reactions occurred at Asian restaurants (13%) and bakeries shops (14%). In the meantime, seafood allergies occurred most frequently at seafood restaurants and Asian restaurants (Furlong et al., 2006). Our participants seemed to be able to identify these high risk restaurants from their experience and/or prior knowledge.

As for preventive strategies, participants agreed that label reading was one of the best strategies that could prevent food allergic reactions. However, they also commented that labels often did not include the miscellaneous ingredients or simply provided a general term like “spices” instead of specific item that confuse the consumers. Other studies supported some shortcomings of the food labels, for instance only general names of the ingredients being mentioned without specifying the sources, lack of uniformity for the names of the allergens, “out-of-date” labels, and lengthy ingredient lists (Vierk et al., 2007). Some terms on the labels were too complex and ambiguous as well (Joshi, Mofidi, & Sicherer, 2002). Vierk, Falci, Wolyniak, and Klontz (2002) analyzed the record of 659 product recalls found that 236 of these products did not declare one or more food allergens and therefore were recalled. Some products were also cross-contacted by undeclared allergens. Similar to Weiss and Munoz-Furlong’s (2008) findings, some of our participants would call before visiting the restaurants to ask about the types of food and accommodations the restaurateurs could provide.

In general, participants in our focus groups put more responsibility on themselves, with low expectations towards the restaurant employees. They commented that they could not risk

their lives on the hands of others. It is still questionable if the restaurants are ready to meet the expectations of these customers. One study conducted in Philadelphia indicated that 55.3% out of 85 managers surveyed said that they had policies and procedures about how to serve customer with food allergies in place (Enriquez, Furlong, Ibrahim, & Twersky-Bumgardner, 2007). Most people identified that the following are included in their policies and procedures: Helping customers to select safe menu items (100%), answering a food allergy questions and use safe preparation method to prevent cross-contact (87.2%), and preparing a safe meal in the kitchen (75.6%). However, fewer numbers (53.2%) reported that they have policy or procedures on how to react to a food allergic reaction (Enriquez et al.). Since the laws regarding food allergies vary from state to state, discrepancy might be present in how to handle customer with food allergies.

Study showed that teenagers and young adults were more likely to exhibit some risk eating behaviors (Sampson, Munoz Furlong, & Sicherer, 2006). For example 173 out of 287 college students with food allergies claimed that they would not avoid eating food items they were allergic to in the dining halls and only 138 of this group had any kind of emergency medication with them in their schools (Greenhawt, Singer, & Baptist, 2009). Having an Epi-pen could be life saving as many fatal cases of allergic reactions were due to delay in epinephrine injection (Weiss et al., 2008). Food Standards Agency's survey pointed out that 62% customers would not ask restaurant servers for more details even though they found the menus misleading or contained little information because the customers did not want to be labeled as "fussy" (Food Standards Agency, 2000). Our participants encouraged other individuals with food allergies to ask for more information about the menus and not to be intimidated by the restaurant employees.

Limitations of the study

The focus group methodology is not intended to gather generalizable data but in-depth data from probing participants to think deeper about the subjects. The total number of participants in our focus group study was 17 who regularly dining out. Therefore the results may not capture those who are not eating out regularly due to food allergies.

CONCLUSION

Food allergy is an increasing problem in the US. This study explored attitudes and behaviors of consumers with food allergies regarding dining out. The potential causes of allergic reactions in the restaurants, perceived challenges of providing allergen-free foods to the customers, perceived high or low risk restaurants, expectations of person with food allergies, and suggestions to restaurants to better serve customers with food allergies were investigated. Consumers with food allergy demonstrated low confidence with the ability of restaurateurs in guaranteeing allergen-free food. They tended to be more self-reliance to ensure their own safety. Every employee in the foodservice establishments should be aware of the danger of food allergies and how to prevent and/or handle allergic reactions (Mandabach et al., 2005). Future quantitative research is needed to validate these findings, through which needs for food allergy training for restaurant employees may be identified and disseminated to restaurateurs and hospitality management educators.

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APPENDIX

Selective quotes from focus groups participants with food allergies

Theme	Quotations
Perceived quality of live	<p><i>"I feel like I'm an annoying customer that everyone hates at their table or hates in their kitchen (because I make special requests)"</i></p> <p><i>"And because it (basil allergy) is so unusual, people look at you like nuts."</i></p>
Potential causes of food allergic reactions in the foodservice establishments	<p><i>"They stack up plates so close to each other for servers to take out. When (the allergens) fall over, the servers just wipe off the edge and take their plates out."</i></p> <p><i>"It's hard to because the person that giving you an instructions and taking your order, answering your questions are the person making the food. That was just totally a communication crossing."</i></p>
Perceived challenges in providing allergen-free food	<p><i>"I think knowledge is (one reason people get allergic reactions in the restaurants) and then they don't believe you. They don't take you seriously and they don't believe you."</i></p> <p><i>"They just don't care, they have this ego chef that they will do whatever."</i></p> <p><i>"Maybe they don't have the resource. They don't have enough pots and pans..."</i></p>
Identification of high/low risk restaurants and preferred types of restaurants	<p><i>"When I'm traveling, I prefer fast food place because of the consistency."</i></p> <p><i>"I would say, most national chain, big name chain, they are pretty good about it...A lot of mom and pop places don't care, they won't change anything."</i></p>
Preventive measures taken when dining out	<p><i>"I read the ingredients and I always ask."</i></p> <p><i>"If I'm going to a new restaurant, I make sure that I call before I am going, and I ask them what kind of oil they cook their food."</i></p> <p><i>"Find a place for they would modify something for me and they know me when I walk in."</i></p>
Expectations accommodation from restaurant staff	<p><i>"There will be a lot of personal responsibility, you can't expect the government, the local restaurants, or the school kitchen to be hundred percent."</i></p> <p><i>"I expect the restaurant to know what the ingredients are and to make adjustments. So I expect them to know what's in their foods. If they don't know, I would expect them to ask somebody or look it up."</i></p>
Suggestions to people with food allergies when dining out	<p><i>"Ask, ask, ask question. Read the menu and ask and ask. Another hint too, don't let them intimidate you because they'll try. Be persistent."</i></p> <p><i>"Now if they are internet proficient, go out and Google common dishes"</i></p> <p><i>"You should have the pills (and an Epi-pen) with you all the time in case something happened."</i></p>