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STUDENT LEARNING, CHILDHOOD & VOICES | RESEARCH ARTICLE

Young children's knowledge of food allergy and transition to school

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Abstract: Children's knowledge of food allergies and their self-management is developmentally based, and is essential for their safe transition to school. Despite a growing number of children with food allergies starting school globally, to date, little is known about young children's knowledge of food allergy or their capacity to manage it, or their feelings and perspectives about starting school. Addressing this gap, this pilot study interviewed six children—aged four-to six-years in their family homes in Sydney, Australia about their food allergy and starting school. Data from Photo Elicitation Interviews utilising photos as prompts were analysed thematically. The results of this pilot study suggest that a child's knowledge of food allergy, their self-control to resist temptation and their ability to communicate the need for help may help them to stay safe at school, and therefore are vital in their transition to school. The implications of this pilot study for further research are discussed.

Subjects: Health & Development; School Psychology; Early Childhood; Chronic Diseases

Keywords: transition to school; food allergy; children's voices; photo elicitation interview; early childhood

1. Introduction

Currently, children's food allergy is a major health issue in Australia and globally. For example, 10% of Australian infants aged 12 months, are reported to have food allergy (Osborne et al., 2011) and one-in-thirty children starts school with a diagnosed nut allergy in Australia (Kljakovic et al., 2009).

ABOUT THE AUTHOR

Prathyusha Sanagavarapu is senior lecturer in the School of Education at Western Sydney University, Australia and specialises in the area of early childhood education. Her research interests and expertise include children's learning, transition to school, and blended and flipped learning in Higher Education. She has a special interest in understanding the psychosocial impacts of children's food allergy for affected children and their families and recently completed two funded projects on transition to school with food allergy and the management of children's food allergy in primary schools in Sydney, Australia. Through this research, she aims to provide the evidence that is needed to promote the holistic well-being of affected children with food allergy and their families.

PUBLIC INTEREST STATEMENT

Food allergy can complicate young children's starting school, due to the added issues of their safety and challenges in preventing or minimising the risks of food allergy in schools. Starting school, therefore, can be an anxious time, especially for parents and caregivers, who tend to question their young child's capacity to stay safe, resist food temptations from peers, and seek help from a teacher or friend when needed. There is little information available currently on what young children know about their food allergy and/or their feelings of starting school. This study offers valuable insights into children's knowledge of food allergy and transition to school. Further, it provides strategies to families and educators on how to support young children's developing knowledge of food allergy and skills to resist temptation as well as to communicate needs effectively during the transition to school.

Similarly, 5% of US children (aged 0–17 years) (Jackson, Howie, & Akinbami, 2013) and 10% of pre-school aged children globally are affected by food allergy (Prescott et al., 2013). The increasing prevalence of food allergies in young children, along with their ensuing attendance in prior-to-school, or primary school has important implications for children’s and their families’ transition to school.

Transitioning to the first year of school is reported to be challenging for children and their families (e.g. Dockett et al., 2011). A child’s food allergy can complicate it further due to the added issues of children’s safety and well-being in contexts outside the home, such as school.

1.1. Food allergy and the transition to school

Food allergy is defined as an adverse immune system response to proteins and can be triggered by ingesting certain foods such as cow’s milk, eggs, peanuts, tree nuts (e.g. walnuts and cashews), sesame seeds, fish, shellfish (e.g. prawns and lobsters), wheat and soy (Sampson, 1999; Sicherer & Sampson, 2009). For children allergic to a particular food, eating even a small amount can result in either mild, or moderate reactions—such as sneezing, watery eyes, welts and facial swellings—or a severe reaction known as *anaphylaxis*, which typically involves breathing difficulties and/or collapse, and can even be fatal (Teufel et al., 2007). In the absence of any known cure for food allergy to date, it is essential to restrict children’s exposure to foods with confirmed allergic reactions and to manage it effectively and holistically, using a three-pronged approach of understanding food allergy (Awareness), preventing risks (Avoidance), and responding appropriately to an allergic reaction and advocating for their safety (Action) (Allergy & Anaphylaxis Australia, n.d.).

In Australia, parents and caregivers manage a child’s food allergic reactions or anaphylaxis, medically, by following the doctor’s instructions outlined in the Australasian Society for Clinical Immunology and Allergy’s (ASCIA, n.d.) Action Plan for Anaphylaxis for administering lifesaving adrenaline via an auto-injector (e.g. *EpiPen*[®]) and/or other medications (www.allergy.org.au). Similarly, educators in out-of-home care settings such as schools, pre-schools and childcare centres also endeavour to manage children’s food allergies adopting the ASCIA guidelines for Prevention of Anaphylaxis in Schools, Pre-schools and Childcare (Vale, Smith, Said, Mullins, & Loh, 2015), which were updated recently using the guidelines developed in the previous years (Prevention of Food Anaphylactic Reactions in Schools, Preschools and Childcare—2004 & ASCIA Prevention of Anaphylaxis in Schools, Preschools and Childcare—2012, cited in Vale et al., 2015).

However, to date, there is no mandated legislation or national guidelines for the management of food allergy in schools in Australia. Consequently, individual states and territories have developed their own guidelines, adopting the ASCIA guidelines and suiting their state or territory jurisdiction (Lawlis, Bakonyi, & Williams, 2017). For example, New South Wales (NSW) state has developed its own Anaphylaxis Procedures for schools 2012 (New South Wales Department of Education & Communities, 2012) to assist educators in preventing, recognising and responding to food allergy-related incidences in all government schools. Independent and Catholic schools in NSW tend to implement those government school procedures, however, with some changes. Similarly, other states have developed their own guidelines or legislation (e.g. Management of Anaphylaxis in Schools in Victoria).

Further, NSW schools also ensure to keep at least one adrenaline auto-injector on their sites in addition to those provided by parents, although this is not mandatory in other Australian states (Vale et al., 2015). Additionally, teachers in NSW are also mandated to complete the ASCIA anaphylaxis e-training for childcare services, approved by the Australian Children’s Education and Care Quality Authority (cited in Vale et al., 2015).

Parents and caregivers also try to manage a child’s food allergy by being highly vigilant at all times and by scrutinising food labels and/or avoiding cross-contamination of foods in cooking and so on. Some parents even take the extreme measures of avoiding eating out in restaurants and/or travelling to prevent children’s accidental exposure to unknown risks in community settings (e.g. Avery, King, Knight, & Hourihane, 2003). Overall, to prevent the potential risks of food allergy, or to take

control over potentially risky situations outside the home, such as in schools is highly challenging for parents (Pitchforth et al., 2011). The complexities of food allergy, along with the prospect of a fatality, thus make children and their families highly emotionally vulnerable and anxious about starting school and they can complicate a family's, or a young child's preparations and transition to school (Sanagavarapu, 2012).

Moreover, some of the burdens of food allergy management also shift from parents to children and school staff when children are beginning school. Yet, not all school-aged children may be ready to manage their food allergy; away from their parents, who tend to assume a primary responsibility in managing a child's food allergy and/or in keeping him/her safe. When children are beginning school, it is imperative that they assume some responsibility for their safety, for instance by avoiding food temptations at school. Additionally, school-aged children are often required to operate relatively independently with minimal adult supervision, while at school. But, the question is—are children who are eligible to start school in Australia, New South Wales, at four and half years, also old enough to understand their food allergy or what an “allergic reaction” is? Similarly, there are also other questions around a young child's ability to self-regulate, or to resist the temptation to accept the concerned food/s when offered by a peer, to stay safe, to promptly alert a teacher (or peer) to an allergic reaction, and to advocate for their own safety at school.

Some estimates exist as to when children are developmentally ready for the self-management of their health or medical condition. For example, the age estimates at which children with asthma, diabetes and Attention Deficit Hyperactivity Disorder (ADHD) are expected to be able to self-manage their conditions were 12, 13 and 14 years of age, respectively (Cull et al., 2010). However, no such estimates have been calculated for food allergies. While adolescents are cognitively and emotionally mature enough to grasp the implications of their food allergy and manage it independently (Fenton et al., 2011; Sawyer & Aroni, 2005), little is known about young children's ability to take responsibility for their safety and the safe management of food allergy, especially in a school setting, away from their protective and vigilant parents.

As outlined in Bronfenbrenner's (1979) and Rimm-Kaufman and Pianta's ecological models (2000), various contextual processes and factors, notably a child's health or medical condition influences a child or family's transition to school. Despite the emphasis placed on the role of health in children's transition to school (e.g. Currie, 2005) as well as the increasing prevalence of children's food allergy, the perspectives and issues surrounding the transition to school for affected children and families have not been investigated empirically, either in Australia or other countries (Sanagavarapu, 2012).

The “bio-psychological perspective” also highlights the need to understand the psychosocial impacts of a medical condition (Engel, 1977) on affected people, beyond the medical management of diseases. According to this perspective, the management of a disease or illness intertwines with and is impacted by both psychological (e.g. peoples' emotions) and social factors (e.g. life styles) (Engel, 1977). In line with this perspective, some studies indicated that adolescents experience anxiety about their food allergy, and have concerns about the negative perceptions that others may have about it (Akeson, Worth, & Sheikh, 2007; Lyons & Forde, 2004). Yet little is known about early childhood children's feelings or perceptions about food allergies or starting school.

Therefore, the aims of this pioneering pilot study are to investigate young children's

- knowledge of food allergy and their capacity to resist food temptations and seek help when needed at school and their
- feelings about starting school and their views on a safe start to school with food allergy.

This study on children's perspectives of food allergy and the transition to school is significant as “children are the experts on their own lives” (Fargas-Malet, McSherry, Larkin, & Robinson, 2010,

p. 175) and—are important stakeholders in their transition to school (Rhode Island KIDS Count, 2005). Moreover, the need to give voice to children in their transition process is also reinforced in the literature (e.g. Davis, Ravenscroft, & Bizas, 2014).

The study was conducted in Sydney, Australia and funded by A&AA, the only national support organisation for people with food allergies. It investigated both the children's and their parents' (mothers') perspectives and feelings of starting school. This paper presents results relating to the children's interviews only.

2. Methodology

This study utilised a qualitative approach (Johnston & Sabin, 2010) and Photo Elicitation Interview (PEI) or use of photos as stimuli and prompts for follow-up questions for data collection (Epstein, Stevens, McKeever, & Baruchel, 2006). The reasons for choosing the PEI interviewing were that it enables to collect first-hand information from children, build trust and rapport, and to avoid a “sociolinguistic repertoire of questions and answers” (Epstein et al., 2006, p. 2), or verbal methods, which can be limiting when conducting research with young children (Fleer, 2014). Moreover, the PEI method was found to be suitable in studies involving young children with disabilities (e.g. Phelan, & Kinsella, 2011), or a chronic illness, can empower them to share their unique narratives of their lives (Phelan, & Kinsella, 2011) and provide opportunities for a dialogue that text-based interviews cannot provide, otherwise (Miller, 2015).

2.1. Participants and recruitment

Children were recruited using purposive- and criterion-based approaches. (Johnston & Sabin, 2010). Both children and their parents were initially identified and recruited via 15 randomly selected child care centres, covering the various metropolitan areas and two major children's hospitals in Sydney, NSW. The information on the study along with consent forms with prepaid return envelopes was posted to those two agencies, after seeking their written permission to recruit families. Further, adopting a snowball approach, parents who received information about the study via childcare centres or children's hospitals were also encouraged to promote this study widely among other parents. Interested parents, who contacted the researcher directly, were later provided with detailed information on the study either by email or traditional post. The recruitment of all participants was based entirely on their voluntary, informed choice. Further, to avoid any potential conflict of interests, only children or parents who were non-members of (A&AA) were included. Moreover, a set of criteria, consistent with the study's objectives were used in recruiting both children and their families to prevent or minimise researcher bias if any, in the sample selection. Only children, who had a medically diagnosed food allergy or allergies, had been prescribed an adrenaline auto-injector, started school in the beginning of 2013, and spoke English, as a first language were recruited in the study. All children also attended, or were attending, a prior-to-school setting, as attendance in those settings was presumed to facilitate a smooth transition to primary school (Commonwealth Department of Education Science & Training, 2002; Ladd & Price, 1987; Magnuson & Shager, 2010).

Initially, 10 children were recruited to the study based on their parents' written consent; however, only six children participated on the actual day of interview.

2.2. Ethical considerations

It is important to address the ethical issues relating to conducting research with children, more specifically, using PEIs (Phelan, & Kinsella, 2011). One of the potential ethical issues relating to the use of photos is that young children can inadvertently include other children or people in the photos (Epstein et al., 2006). To address this, the researchers chose the photos. As Photos “represent visual images and messages” (Epstein et al., 2006, p. 5), attention was also paid to their content, size, and the number. In total, nine photos from the A& AA's library, with copyright clearance were chosen. They included: potentially allergy-causing foods (two photos); mild symptoms of food allergy (two photos); school facilities/teachers (one photo); and children in a playground/ lunch and recess breaks (two photos), Adrenaline auto injector (one photo) and Anaphylaxis Action plan (one photo), aligning

with the study's aims. Further, to ensure children's safety, only photos with non-confronting images were included. All photos used in the study were chosen in consultation with A&AA. They were pilot tested with two A&AA families and their children, and the piloting enabled the researchers to finalise the photos, follow-up questions and prompts to be used in the interview.

Children's assent was also sought prior to each interview. This involved explaining, in simple and easy-to-understand language, what their participation would entail and then clarifying and confirming their intention to speak with the researcher. Children were also shown the audio recorder in order to familiarise them with the device and to minimise any potential distractions it may cause.

Also, before commencing the interview, both mothers and children were shown the selected photos and/or the questions to be used as prompts and were given an opportunity to discuss the child's participation and the potential risks of their participation. Further, they were reassured that children could withdraw from the interview at any time without any hesitation or consequences. Along with this, mothers were also given the telephone numbers for A&AA and Kids Helpline (a free private, confidential phone counselling service for Australian children aged between 5 and 25 years), in case there was a need for debriefing or emotional support after the interview.

Interviews were conducted in children's homes because children would be more relaxed to participate in their home than in a school setting (Epstein et al., 2006). In addition, considering the child protection issues, mothers were encouraged to stay with their child during the interview. Both the study and the interviews were conducted ethically, aligning with the guidelines set for research with young children, as stipulated in the National Statement on Ethical Conduct in Human Research (2007). Both the study and the interviews commenced after obtaining approval from the author's academic institution's Ethics Review Committee (H9368).

Below is a list of questions that were used as prompts in the PEI interviews, when needed

- Could you tell us the foods you can eat and cannot eat without any problems?
- What happens when you eat the foods that are not safe for you?
- How do you avoid eating those foods?
- Were you ever tempted to accept foods at school?
- What do you do when your friends or classmates offer foods that are unsafe for you to eat?
- Do you know who to ask for help if you feel unwell after eating some foods?
- How do you feel about going to big school?
- What do you tell other kids going to school about how they can stay safe at school with food allergy?

Overall, the children were attuned to the interview—despite a few occasions when some were distracted and asked questions such as “Why aren't they (children) wearing the school uniform?” which suggest their developmental egocentrism (Piaget, 1963). None of the children appeared distressed by the photos of other children displaying symptoms of food allergy. All interviews were audio-recorded for subsequent analysis.

2.3. Data analysis

The transcribed data were analysed thematically (Guest, MacQueen, & Namey, 2012). The A&AA's constructs of *knowledge of food allergy (Awareness)*, *strategies for risk prevention (Avoidance)* and *help seeking from an adult or peer (Action)* (A&AA) were considered. These priori codes or themes were finalised after randomly coding a selected transcript and checking for coding consistency and accuracy in the data coded by the research team. The results are presented below and are accompanied by children's quotes.

3. Results and discussion

3.1. Awareness

The selected children were allergic to a range of foods: tree nuts (4), eggs (2), fish (2), soy (1) and cow's milk (1). Half of the children were allergic to more than one of the above-mentioned foods. Most children had their first allergic reaction between the ages of six–18 months.

Despite the questions surrounding young children's ability to articulate on health matters (Fleer, 2014), all children named foods that they could or could not safely eat and five children identified all the photos of foods they are allergic to (except one child with a nut allergy who could not recognise the tree nuts from the photos). However, it was not certain whether the children could identify those risky foods by sight, smell or reading food labels, in order to avoid them at school—especially, if they had not seen, nor have any previous knowledge or exposure to those particular foods.

The children understood and articulated the consequences of their food allergy, and their descriptions of symptoms were similar to those in the literature (Teufel et al., 2007). To quote: “I keep coughing and coughing”; “my mouth gets funny, sometimes I scratch my mouth when it's itchy and it takes a while to get un-itchy,” and “[I] start to vomit and get spots”. One child even mentioned the prospect of fatality from an allergic reaction (“you would die”), while another child labelled her symptoms as anaphylaxis (“I also have anaphylaxis”), even though she could not explain what it meant. This is not surprising given that even teenagers have difficulty understanding the meaning of “anaphylaxis” (Akeson et al., 2007).

3.2. Avoidance

The children also had many strategies for avoiding potential food allergy risks at school. While hand washing is a simple and effective means of preventing accidental ingestion of food or cross-contamination through surfaces or people (Young, Munoz-Furlong, & Sicherer, 2009), surprisingly only one child mentioned it as a risk prevention strategy. Most children (4/6) said they would refuse allergy causing foods from others, by saying “No,” and would resist the temptation to accept such foods from friends. To quote: “I try my best to not eat [it]”; “I say Stop,” and “Even if they told [me] It is yummy”, I say ‘I can't eat them.’”

Half of the children also said that they would walk away from those allergic foods. One child also mentioned peer education as a strategy to prevent food sharing, which suggests this child's ability to advocate for her own safety. To quote:

I just tell them that I am allergic to peanuts and please don't share food! Because they just think that everything's all right: they can give it and share it. I don't think it's alright, so I just tell them not to share food.

Another child also mentioned not sharing food, and eating their own lunch: “at big school you don't share food” and “I only eat my own food.”

Interestingly, three children said that they would check with their mothers before accepting food from other people, and they did not seem to realise that their mothers would not be present at school. Children's reliance on their mothers illustrates the dominant role that mothers have in the management of young children's food allergies (LeBovidge et al., 2008), and the children's confidence in their mother's ability to do so (DunnGalvin, Gaffney, & Hourihane, 2009). The risk prevention and minimisation strategies used by the young children in this study were similar to those used by older children (i.e. aged 8–16 years) in other studies, such as avoiding unsafe foods and unsafe places and educating others about food allergies (Fenton et al., 2011).

While four children appeared to possess the self-control to resist food temptations, when the researcher probed children further with a hypothetical scenario in which one might accept food from

a trusted friend, two of the children seemed to be unable to resist the food temptation. To quote: “if my friend says it does not have eggs or nuts, I will have it” and “I would ask if it had nuts and if it did not I would eat it.” Furthermore, one of these two children also assumed that her friends would know about her food allergy: “they will know because their mum will say.” This reflects the high degree of trust that children often place in their friends—which can be risky in the context of food sharing.

Children were also asked if their peers ever tempted them to accept unsafe food or shared food with them, with only one child saying a friend had shared food with him. Specifically, his friend had given him a packet of chips and he had accepted it because “it’s Jay Jay’s” (brand name) and he had “eaten it before.” While it is impressive that this child accepted the food only after assessing the risks, it is obvious that relying on a food’s brand name alone can still prove risky.

3.3. Action

Children knew that in the case of an allergic reaction they would need adult and/or medical help. Two children also knew what an adrenaline auto-injector looked like and recognised it from the photos shown. One of these children also identified it as a “needle”; however, none of these young children was aware of, or able to name, the ASCIA Action Plan for Anaphylaxis.

In terms of seeking help for an allergic reaction, all children said that they would first approach their class teacher for medical help, or their school friends. To quote: “if the teacher’s around, tell the teacher on duty and then I go to the sick bay” (a resting or caring room for children who become sick or unwell while at school) and “I would say I feel sick and then they would know I was allergic.” However, the children’s requests for help were somewhat vague, for example, “tell the teacher that we need to go to sick bay because we are sick and we get one of our friends to take us.” Additionally, not all children found it easy to articulate a request for help related to food allergy as can be seen in the following quote:

I would say I feel sick and then they would know I was allergic ... No, I can’t actually talk ... I can only talk in my head, so my head will explain it ... Yeah, and it’s a little bit complicated!

For a young child suffering from an allergic reaction, failure to alert a teacher or peer of a food allergic reaction and any subsequent delays in its identification and treatment could have severe, negative ramifications for his or her well-being.

3.4. Children’s feelings about starting school

Most children (4/6) seem to have had positive feelings about starting school and did not report any concerns about their safety, well-being or inclusion—with the exception of two children who covertly mentioned having difficulties in communicating their need for help during an allergic reaction or inclusion in school activities. The positive nature of the children in this study contrasts with the anxiety and fear of exclusion attributed to adolescents (Fenton et al., 2011; Lyons & Forde, 2004). However, this may not be surprising, given that the parents of young children with food allergy typically assume many of their children’s physical and emotional burdens (Fenton et al., 2011), which could help to mitigate the children’s emotional issues.

Children’s feelings about starting school ranged from the somewhat cautious (“it’s good but it’s a little scary. It’s a little big but I still like it; at first I felt shy but now I feel safe”) to the cheeky (“I am looking forward to two girlfriends”). These results on children’s general feelings about starting school are similar to other studies (Dockett & Perry, 1999) of young children without a food allergy.

Overall, the children did not report feeling singled out or excluded from school activities because of their food allergy, and most did not mind wearing a different coloured hat (i.e. as a marker for their allergy) or a medical alert bracelet. In fact, one child said that she had not minded when her teacher gave her a sticker (for singing “the Birthday Song” well) while, instead, all her peers were able to enjoy eating a birthday cake. On the other hand, only one child covertly mentioned feeling isolated due to wearing a different coloured school hat. While she acknowledged that, her yellow hat

was to inform others that she was “allergic to stuff”; she was worried that her friends might not like it because it was different from their hats.

These findings do not imply that young children do not mind being singled out; however, they suggest that perhaps, many of the children may not have been developmentally mature enough to comprehend the inclusion issues or could not articulate those to the researcher.

3.5. Advice to other children with food allergy on starting school

The children also provided advice on a safe start to school to other affected children, which emphasised the importance of risk prevention. Their main suggestions were: (1) don't eat foods you are allergic to; (2) don't share food with others and (3) tell others you have a food allergy and move away from them if they offer you food. The advice given by the children of this study is markedly different from the advice provided by children without food allergies, that focused on celebrating the first day of school, and learning about the school, its routines, play and so on (Perry & Dockett, 2011).

The advice on starting school from children in this study would be invaluable in preventing food allergy risks and may deserve inclusion in “school readiness” and “orientation” or, “transition to school” programs.

4. Implications

4.1. For parents, educators and children

Overall, this study suggests the importance of children knowing about their food allergy and being able to self-manage it at school in developmentally appropriate ways. This corresponds with other studies that emphasise children's self-management of their health or medical condition (Tieffenberg, Wood, Alonso, Tossutti, & Vicente, 2000).

Further, in this study, almost all children (excepting one child) did not mention hand-washing as a risk prevention strategy, despite it being hailed as a simple and effective means of preventing accidental ingestion of food or cross-contamination through surfaces, or people and that it is also a potent, pro-active strategy in the effective management of food allergy in schools (Young et al., 2009). This finding thus highlights the need for parents and educators to promote hand-washing widely among young children to promote their safety at school.

In addition, the results also revealed the high degree of trust that children often place in their friends, and, more notably, the importance of raising other children's awareness about food allergies and educating them about associated risks and the dangers of peer pressure to accept unsafe foods.

Furthermore, the results also indicate the need for developing age-appropriate strategies for self-control, risk analysis and risk prevention in young children before they start school, as these are necessary for their safety and safe participation in all school activities involving foods.

Additionally, the findings imply the need for parents and educators to develop simple scripts with children in order to help them clearly communicate any allergic symptoms they may experience as well as any need for help as part of preparing children for school. Being able to express an allergic reaction in clear terms is important as common allergic symptoms, such as gastric discomfort and vomiting, can easily be confounded with other childhood illnesses. Furthermore, young children who may be new to the school environment or lack assertiveness, due to feeling less powerful or perceiving adults'/teachers' dominance, would benefit from practising how to communicate their symptoms and needs clearly.

Children's understanding of their health or medical condition and their ability to take responsibility for its management is developmentally based. Currently, there is no suggested age at which children are expected to take a primary responsibility for managing their food allergy. Nevertheless, it is

essential that caregivers and educators scaffold a young child's developing capacities for the self-management of their food allergy, and prepare him/her adequately for starting school. Simple play and guidance techniques, such as reading stories, holding mock sessions and role-playing, would be invaluable in this respect. As indicated by Marotz (2013, cited in Ebbeck, Yim, & Lee, 2015) educators have unique opportunities to promote children's health and well-being. They can draw upon their professional knowledge on related topics of child development, health, safety and nutrition in educational settings to optimise children's safety during the transition to school. The topics that would be useful to include in discussions with children are: safe and unsafe foods; reading food labels; preventing food allergy risks; self-management and help-seeking; peer education and, perhaps most importantly, resisting the temptation to accept or share food with peers. Parents could also use every day learning opportunities, such as grocery shopping or cooking at home, to scaffold young children's knowledge of food allergies.

Additionally, educators could use other learning opportunities to promote children's self-control in regards to resisting food temptations and to promote their safety. Similarly, they can utilise a range of school community events and activities to raise awareness about food allergies, for all students to avoid potential peer pressure.

Meanwhile, children can also help themselves at school by: (1) letting others know about their food allergy; (2) not sharing foods with others; (3) assertively and politely saying "No" to food that is offered by others—even if they are a friend and (4) recognising symptoms and letting an adult or peer know when they feel unwell.

5. Limitations and directions for future research

In this study, children knew about their food allergies and had strategies to avoid potential risks at school. While children were empowered with knowledge of food allergy, however, it was difficult to determine the extent to which their mother's presence, or prior experience of transition to an early childhood setting, had influenced the children's responses, knowledge and capacity for the self-management of food allergy. These methodological issues need to be considered in the design of future studies on this topic. Further, it would also be useful to explore parental management of food allergy at homes, or parental scaffolding of young children's knowledge of food allergy via everyday activities to get insights into children's preparations and their readiness for school.

The PEI method of interviewing or using photos as prompts was valuable to collect data relevant to the study and its aims. Nonetheless, it appears this method may not have been an effective means for capturing the children's emotional issues and concerns. Instead, encouraging children to express their feelings through emojis or pictographically through drawings and illustrations prior to the interview (Driessnack, 2006; Edwards, Gandini, & Forman, 2012), may have been more effective at capturing their emotions.

All the children in this study were proficient at English conversational skills. However, it is important to include children with limited English proficiency and those from diverse linguistic or cultural backgrounds to understand their feelings and perspectives about starting school. Additionally, future studies would also benefit from considering the relationship between the children's knowledge or feelings of food allergy and starting school, with their particular food allergy as children's or parents' anxieties tend to increase when children have multiple allergies or allergies to nuts (Bannon, Astwood, Goodman, Hefle, & Taylor, 2004).

Similarly, it is important to pay attention to the selection of strategies used to obtain children's assent and to promote their enthusiasm for participation in the research. For instance, in this pilot, four out of the 10 children recruited, were not keen to participate on the day of interview. Instead of obtaining children's assent verbally, it would have been helpful to utilise images and texts (e.g. Dockett, Perry, & Kearney, 2012) as they can promote children's enthusiasm to participate and may help to break down the potential barriers of power and trust between the children and the researcher.

Further, the study's sample is also very small and the findings cannot be applied to a broad spectrum of children in Sydney or beyond. Hence, there is a need to replicate this study involving a larger sample size.

6. Conclusions

This study aimed to explore perceptions of young children with food allergy regarding their transition to school and their capacity to manage food allergy. The results suggest that a child's knowledge of food allergy, self-control to resist temptation and ability to communicate the need for help may assist them to stay safe at school. Therefore, they are important domains or components of preparations for school for a child with food allergy. The implications of these findings are that parents and educators need to support a child's developing understanding of food allergy and their capacity for safety, appropriate to their ages and stages of development. Children need practice, especially with skills of self-control and communication to resist temptation, albeit at varying levels, perhaps through reading stories, mock sessions and role-plays before they start school.

Starting school is an important area of research in the field of early childhood and has consequences for young children's socio-emotional well-being and holistic health. The findings of this study have only begun to shed light on young children's knowledge and management of food allergy and their feelings and perspectives about starting school, but there is still much more to understand about the situatedness of children's school transitions in the context of their food allergy. Given the limitations of the pilot nature and sample size of this study, there is an urgent need to undertake further research on this topic, taking into consideration the methodological issues raised in this paper and involving a larger and more diverse sample of children.

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