

Sensory Food Aversions in Infants and Toddlers

IRENE CHATOOR

Children's National Medical Center

Different aspects of Sensory Food Aversions have been described by various names. Most commonly, children with Sensory Food Aversions are considered “picky eaters,” “selective eaters,” or “choosy eaters.” Some authors refer to the refusal to eat certain foods as “food aversion” and to the fear of trying new foods as “food neophobia.” I choose to describe this feeding disorder as Sensory Food Aversions because the children experience

specific foods as strongly aversive in taste, texture, temperature, or smell, and they frequently have other sensory difficulties as well. Their aversive reactions can range from grimacing or spitting out the food to gagging and vomiting. After an initial aversive reaction, the children usually refuse to continue eating that particular food and often refuse to try other foods that seem to remind them of foods triggering aversive reactions. In this article, I review some of the related literature in which symptoms of Sensory Food Aversions have been addressed.

What Is a “Picky Eater”?

THE TERM *picky eater* has not been well defined and is used by different authors to mean different things. Marchi and Cohen (1990) defined picky eating by the presence of three of the following child behaviors: does not eat enough, is often or very often choosy about food, usually eats slowly, or is usually not interested in food. The authors found that picky eating in early childhood predicted symptoms of Anorexia Nervosa during adolescence. However, “does not eat enough” and “is not interested in food,” according to the classification in this book, are symptoms of Infantile Anorexia, and “is often or very often choosy about food” would be considered a symptom of Sensory Food Aversions. Children can be comorbid for Infantile Anorexia and Sensory Food Aversions. Accordingly, the children in Marchi

and Cohen’s study may have presented with symptoms of Infantile Anorexia or Sensory Food Aversions, or they may have had symptoms of both feeding disorders. The potential for comorbidity makes it difficult to interpret from this study whether Infantile Anorexia, Sensory Food Aversions, or both are posing risk factors for Anorexia Nervosa.

In a more recent study on picky eating among more than 3,000 infants and toddlers, Carruth, Ziegler, Gordon, and Barr (2004) used telephone interviews to ask parents whether they considered their child a very picky eater, a somewhat picky eater, or not a picky eater. The meaning of picky eating was not defined by the interviewer. The data of the toddlers described by their parents as “very picky eaters” and “somewhat picky eaters” were combined to form one “picky eater” data set. The authors found that the prevalence of picky eaters consistently increased for both sexes between 4 and 24 months old, ranging from 17% to 47% for males and 23% to 54% for females. They reported that the age groups of 7–8 months and 9–11 months had 17 statistically significant differences in energy and nutrient intake associated with picky eater status, whereas intakes for all of the other age groupings had only 6 statistically significant differences. However, for all nutrients, mean intakes were well above the recommended dietary allowances or adequate intakes for picky and nonpicky eater groups. These data give some interesting information on the high prevalence of what parents experience as picky eating of their young children, most notably for children between the ages of 4 and 24 months.

However, because the authors combined “somewhat picky” and “very picky eaters,” the nutritional data are not very helpful because they cover the whole range of picky eaters and do not identify children for whom the picky eating may be associated with serious dietary deficiencies.

A review article by Dovey, Staples, Gibson, and Halford (2007) stated that “picky/fussy” eaters are usually defined as children who consume an inadequate variety of foods through rejection of a substantial amount of foods that are familiar (as well as unfamiliar) to them, whereas “food neophobia” is generally regarded as the reluctance to eat new foods or the avoidance of new foods. The authors saw food neophobia and picky/fussy eating as related constructs that are theoretically and behaviorally different. They saw neophobia as a part of picky/fussy eating, but not accounting for the entire behavioral profile of the picky/fussy eater.

Timimi, Douglas, and Tsiftisopoulou (1997) described case studies of “selective eaters” ranging in age from 4 to 14 years. They defined selective eating as a specific and persistent pattern of behavior consisting of refusal to eat any foods outside of a limited range of preferred foods, and they described

Abstract

Sensory Food Aversion is one of the most common feeding disorders during the first 3 years of life, when young children are transitioned to self-feeding, and when issues of autonomy and dependency have to be negotiated between parents and child. In this article, the author discusses “picky eaters” and the importance of distinguishing between children who experience minor food aversions and those for whom their reluctance to eat becomes a serious feeding problem.

accompanying behaviors that included resisting attempts at self-feeding, gagging, spitting out food, mealtime disruptive behaviors, playing with food at mealtimes, excessively slow eating, and difficulties swallowing or chewing food. These authors observed heightened anxiety, obsessive-compulsive symptoms (both food and non-food related), and frequent social and school difficulties in these children. Their description of selective eaters fits the picture of children with Sensory Food Aversions.

Rydell, Dahl, and Sundelin (1995) described “choosy eaters” as children who show choosiness, manifested in refusal of foods, eating little, and disinterest in food. Similar to Marchi and Cohen (1990), they combined selective eating with eating little and disinterest in food, symptoms of Infantile Anorexia.

This brief review of some of the literature demonstrates how poorly defined picky eating and the other terms are and how difficult it is to compare studies because there are no clear definitions for specific feeding disorders. The diagnostic criteria for Sensory Food Aversions, listed in the next section, indicate the typical behaviors that characterize this feeding disorder, and are followed by criteria for impairment and exclusionary criteria. The impairment criteria are either in the nutritional area (specific dietary insufficiencies of micronutrients) or involve delay of oral motor and speech development, or are in the child’s social-emotional development—and sometimes there is a combination of all three areas. Because the studies on picky eating report very high prevalence rates, it can be assumed that Sensory Food Aversions are common in the general population and occur on a continuum, with some children refusing only a few foods and others refusing whole food groups. Therefore, it is important to identify children who have serious feeding problems and differentiate them, through the use of impairment criteria, from those who might be little affected by the few foods they cannot tolerate.

Diagnostic Criteria for Sensory Food Aversion

THE DIAGNOSTIC CRITERIA listed below were included in *Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood: Revised Edition—DC:0-3R (ZERO TO THREE, 2005)* and were described in Chatoor and Ammaniti (2007) in *Age and Gender Considerations in Psychiatric Diagnosis: A Research Agenda for DSM-V* (Narrow, First, Sirovatka, & Regier, 2007).

A. [Sensory Food Aversions] is characterized by the infant’s or child’s consistent refusal to eat certain foods with specific

tastes, textures, temperatures, or smells for at least 1 month.

- B.** The onset of the food refusal occurs during the introduction of a new or different type of food that is aversive to the child (e.g., the child may drink one type of milk, but refuse another milk with a different taste; he may eat pureed food, but refuse lumpy baby food or solid food that needs to be chewed; or he may eat crunchy types of food, but refuse purees).
- C.** The child’s reactions to aversive foods range from grimacing or spitting out the food to gagging and vomiting. After an aversive reaction, the child refuses to continue eating the food and frequently generalizes and refuses other foods with a similar color, appearance, or smell. Consequently, the child may refuse whole food groups.
- D.** The child is reluctant to try unfamiliar new foods, but eats without difficulty when offered preferred foods.
- E.** Without supplementation, the child demonstrates specific dietary deficiencies (i.e., vitamins, iron, zinc, or protein), but usually does not show any growth deficiency and may even be overweight,
 - Displays oral motor and expressive speech delay, and/or
 - Becomes anxious during the preschool years at mealtime and avoids social situations that involve eating.
- F.** Food refusal does not follow a traumatic event to the oropharynx.
- G.** Refusal to eat specific foods is not related to food allergies or any other medical illness.

Symptoms in Infants and Toddlers

CHILDREN WITH SENSORY FOOD Aversions can become symptomatic as early as the first few weeks of life. Jacobi, Agras, Bryson, and Hammer (2003) reported from a prospective study on children who, by parental report and by laboratory measures were, picky eaters who ate less of a variety of foods and often avoided vegetables. The authors found that these children exhibited a different sucking pattern during the first month of life. They had more than 100 fewer sucks per feeding session than nonpicky children, and 17% of the picky eaters refused to suck at all. Some mothers of children who were later diagnosed with Sensory Food Aversions have reported that as babies their children did not want to latch onto the breast and that they had to switch them to bottle feedings. These were usually children who seemed to be very sensitive to the texture of food, gagged, and spit out stage 3 baby foods, which are a combination



PHOTO: MARLEEN NOEL

Children with Sensory Food Aversions typically become symptomatic around 6–12 months old.

of pureed food with lumps of other food in it. One explanation for the feeding behavior of these infants may be that the irregularity of the nipple of the breast causes more sensory input for the baby than the smooth nipple of the bottle, which is more easily tolerated. Other mothers of children with Sensory Food Aversions reported that even in the first few weeks or months of life, their children would not accept switching to a new formula, that they would cry and refuse to drink the new formula but readily accept switching back to the old formula.

More often, children with Sensory Food Aversions become symptomatic around 6–10 months old when they are introduced to a variety of baby foods, especially stage 3 food. Infants may react to the new taste or texture of baby food by grimacing, spitting out the food, or gagging and vomiting. If the aversive reaction is mild and the infant only grimaces, she may accept the food again and sometimes tolerate it on repeated exposures. However, some infants become very distressed if the parent offers the aversive food again, especially if the food triggered gagging or vomiting. These infants seem to learn by association, and they will watch the parent very closely to see what type of food the parent brings them. They seem to generalize their fear of one food to other foods that may have the same color or consistency, and thus begin to reject whole food groups, such as purees, lumpy baby foods, or green vegetables. The more the parents try to get these infants to eat, the more fearful the infants seem to get and the more foods they begin to reject.

Most children begin to show strong reactions to certain foods during the toddler years when they are introduced to a variety of table foods. During this intense developmental period, toddlers struggle with issues of autonomy and dependency. At each meal, parent and toddler must negotiate who is going to put the spoon into the toddler’s mouth. Once toddlers learn that the parents are very keen to get them to eat, they take



Some aversive children may be encouraged by watching peers enjoy food.

control and refuse the food the parents offer. Often, toddlers' acceptance or rejection of food depends on their mood and their need to please or their wish to control the parents. Consequently, many toddlers become picky about which food they want to eat and which food they decide to reject. Their choice of foods often changes from meal to meal or from day to day. Whereas toddlers with Sensory Food Aversions are more consistent in their food choices, although they are not beyond trying to control their parents by asking for certain foods and then rejecting them. Parents of toddlers with Sensory Food Aversions often do not take it seriously when the toddler initially spits out certain foods or gags on them. They offer the food again because they believed that the toddler will get used to it. The parents may have heard about the need for repeated exposures to a food until the young child gets used to it, continually trying to get their toddler to accept the healthy foods. However, the parents are then faced with a toddler who cries or becomes increasingly stubborn, thus realizing that the child will not accept these foods, no matter how much they coax, beg, or threaten. The parents are often told by other family members that they are not strict enough. They are advised to offer the child only food that the rest of the family eats, so that when their child is hungry enough, he or she will eat. The parents then find that their child goes for days without eating, concluding that they have to stop this strategy. As the tension builds during mealtime, the child becomes more anxious and increasingly reluctant to try new foods.

These children may refuse to eat whole food categories, most commonly vegetables, fruits, and meats. In extreme cases they even refuse to eat a preferred food if it touched another food on the plate, does not have the right temperature, or is not prepared by a specific restaurant or company. The diet of children who refuse to eat vegetables and fruits is often deficient in vitamins, and children who refuse to drink milk or eat meats may not get adequate amounts of protein, zinc, and iron. Many children with Sensory Food Aversions prefer a diet of sugary foods or salty crackers, and some of them become overweight and may develop high cholesterol. In addition, children who refuse to eat foods that require more chewing (e.g., meats, hard vegetables, or fruits) experience delay in oral motor development, which may be associated with articulation difficulties.

Additional Hypersensitivities

IN ADDITION TO their Sensory Food Aversions, many of these children experience hypersensitivities in other sensory areas as well (Smith, Roux, Naidoo, & Venter, 2005). Parents frequently report that these children do not like to get their hands "messy"; do not like to have their teeth brushed or hair washed; or become distressed when asked to walk on grass or sand or to wear socks or shoes, certain fabrics, or labels on clothing. Many of these children are also hypersensitive to smells, and some may have difficulty with loud sounds and bright lights.

The following case describes a young child who, in addition to his Sensory Food Aversions, showed symptoms of hypersensitivity to the touch of certain textures and to sounds.

Joshua was 3 years old when he was referred for an evaluation because of his limited diet and his refusal to eat most nutritious foods. He ate the same foods every day for breakfast, lunch, and dinner. The foods he ate included dry Cheerios, yogurt, pudding, an occasional waffle or pancake, and a wide variety of snack items, including chips, crackers, cookies, fruit snacks, candies, and ice cream. He did not eat any meat, poultry, fish, vegetables, fruit, pasta, cheese, eggs, bread, potatoes, or pizza. He drank a formula enriched with calories, vitamins, and minerals, and he liked fruit juice.

Joshua's birth history was unremarkable. He was breast-fed for 4 weeks, but he was a very slow feeder. His mother decided to switch him to bottle feedings. When switched to bottle feedings, he initially had some difficulty with the nipple but did well with an orthodontic nipple. At 4 months old, he was introduced to baby food. He did well with cereal, fruits, and orange vegetables, but refused all meats and other vegetables. He would gag or vomit when his parents tried to advance him to stage 3 combination foods, or if he got an undesired food into his mouth. He was started on table foods around 10–12 months and initially did well with pureed items. When offered solid foods, he would touch them to his tongue and then refuse them. However, he had no difficulty eating a variety of snack items, and quickly learned to differentiate what foods he liked from those he did not want. Joshua refused to open his mouth if he did not want to eat the food.

In regard to Joshua's sensory profile, he became extremely upset if his hands, face, or clothing got messy. He wanted his hands or face washed immediately and wanted the item of clothing off his body. Joshua did not start feeding himself with utensils until he was almost 3 years old, at which point he became very fearful that there might be spilling of food and he might get messy. He could not tolerate it if foods would mix on his plate, and he would use a different spoon for each food item. Joshua did not like walking or sitting on grass, but did not have any difficulty walking or playing in sand at the beach. He was very sensitive to certain noises, especially if they were loud. He would awaken at night in response to the garbage truck or a snow plow coming down his street, in turn being frightened by these sounds.

Course and Natural History

THE PREVALENCE STUDY by Carruth and colleagues (2004) demonstrated that there is a steady increase in children who are picky eaters between 4 and 24 months of age. Some of the children with Sensory Food Aversions have already become symptomatic in the first few weeks of life, or

they may have difficulties with the introduction of baby foods. Most children, though, do not limit their food choices or refuse to try new foods until the toddler years. A longitudinal study of children's food preferences by Skinner, Carruth, Bounds, and Ziegler (2002), who followed children from 2–3 years to 8 years old, found that the number of foods liked at 8 years was predicted by the number liked at 4 years. Children were more likely to accept newly tasted foods between 2 and 4 years than during school age. These studies and my clinical observation indicate that the toddler years are critical in the development of food preferences.

If children have aversive reactions to food during this developmental period, the way the parents handle their child's distress and manage their child's food refusal seems to play an important role in whether the children can overcome the fear of trying other foods that remind them of the disliked food. Children who remain fearful will avoid any food that appears to evoke feeling memories of aversive experiences they had in the past. Most older children with Sensory Food Aversions cannot explain why they refuse to eat foods that they have never tried. They will say, "I know that the food will taste badly or feel badly in my mouth," and are puzzled by their own inability to explain themselves any better. Given that most children have these experiences as infants or toddlers, when they are cognitively not mature enough to verbally link cause and effect, they seem to be left only with feeling memories triggered by looking at a new food that they associate with a food that caused aversive reactions when they were younger.

One precocious 7-year-old explained to me why he did not want to eat yellow foods. He explained that when he was little (which was at 18 months of age), his mother gave him yellow squash, which made him vomit, and now he was afraid that other yellow foods would do the same thing. An 11-year-old told me that he was afraid to eat any meat because when he was 5 years old, his mother gave him chicken, which made him vomit, and "it messed up his brain."

Most preschool children with Sensory Food Aversion are very fixed on what foods they will eat, and they usually react very strongly and become distressed if the adults try to make them eat a food they do not want. One of my little patients came home crying from preschool and refused to go back the next day. With much patience, his parents were finally able to get him to open up and tell them that the teacher had said he had to eat the snack food that all of the other children were eating. He told his parents he was scared, and that he could not eat the food, which is why he started crying. This same boy



PHOTO: ©ISTOCKPHOTO.COM/NTAPHO

Toddlers are more willing to try new foods if it is in their control.

did not want to sit at the table with the rest of the family during dinner because he did not like the smell of their food, and he did not want to look at it.

There are some preschoolers who may refuse to try any new foods at home. However, when watching their peers enjoying their food, they become encouraged to try the food themselves (Birch, Zimmerman, & Hind, 1980). In general, as indicated by the study by Skinner and colleagues (2002), children between the ages of 4 and 7 or 8 years are set in their food preferences. When children are around 7 to 8 years old, they seem to become more socially aware of their peers. Some children become so self-conscious that they are afraid to eat the foods their peers enjoy. They may become embarrassed when they are at a friend's house and are afraid to eat any of the foods offered. These children may avoid social functions that include meals (e.g., sleepovers and birthday parties), and when they get older, they may even be afraid to go away to summer camp. As they grow older, some of these children continue to engage in struggles over food with their parents because of their limited diet, which often consists of sweet and salty snack foods and no vegetables, fruits, or meats. Mealtimes can cause immense anxiety not only for the child but also for other family members, which can then lead to frequent mealtime battles. Some parents resign themselves to the limited diet of their children, giving them vitamin supplements or enriched breakfast drinks. These parents will try to find restaurants where they can order something the child eats, and they pack special foods for the child when they travel.

For some children, the fear of trying new foods and the social limitations may lead to general anxiety, obsessive-compulsive symptoms, and school difficulties (Timimi et al., 1997). On the other hand, some parents of children with Sensory Food Aversions report that they themselves were unable to eat a variety of foods as young children. However, they learned to eat new foods primarily during their adolescent or young adult years, when they wanted to fit in with their peers.

Treatment

BECAUSE NO EMPIRICAL studies have systematically examined how to best treat infants and young children with Sensory Food Aversions, I have learned through clinical experience that parents are better able to follow suggestions for how to deal with their child when they have an increased understanding of their child's problems. Therefore, I usually start the intervention by exploring the parents' own feeding and eating histories in order to relate the child's difficulty with the texture, taste, temperature, or smell of certain foods to difficulties one or the other parent may have had as a child. I then outline the gene-environment model, to help the parents understand that their child has probably more taste buds and more sensory receptors for taste, texture, and smell, which give the child a more intense experience of some qualities of certain foods, and that this heightened sensitivity makes these foods aversive. After this groundwork has been done, I give specific recommendations on how the parents may best help their child.



Children with Sensory Food Aversions need help learning to sit at the table and relax.

If infants or toddlers show strong aversive reactions to a new food, such as spitting the food out, gagging, or vomiting, the parents are best advised to give up on having the child eat this food. Repeated exposure to aversive foods tends to increase the infant's or young child's fearfulness and food refusal. On the other hand, if the infant just grimaces, the parents may expose the infant to the new food at another time and pair a small amount of the aversive food with a preferred food. A gradual increase of the aversive food over several meals may allow the infant to get used to the new food.

When parents model how to eat new foods and wait until the toddler asks to try the food, generally this is more effective than putting new foods on the toddler's plate and asking him or her to try them. There is nothing more challenging for a toddler than not to be offered a food that the parents seem to enjoy. The more difficult the parents make it for the toddler to get hold of their food, the more the toddler wants it. I advise parents that if the toddler wants their food, they should say, "This is Mommy's or Daddy's food, but I will give you a little piece." Usually, the toddler is so keen to get the food that he or she is less focused on the taste or texture of the food. If the parents stay neutral as to whether the toddler likes the requested food, the toddler will remain neutral as well and decide whether he or she likes the food. If a food of the parents is aversive to the toddler, the toddler will spit it out and not want to eat it again, but he or she will not be scared to ask for another food from their plate. On the other hand, if parents put food on the toddler's plate and ask the toddler to try it, the

toddler may be tempted to refuse it. Children in general and toddlers in particular are more willing to try new foods if it is in their control.

Once children fear trying new foods, their diet becomes increasingly more limited. By 3–4 years old, many children are no longer swayed by what their parents eat. Occasionally, young children may be willing to try new foods in a preschool setting, but more often they become anxious in social situations and try to avoid eating with others. Preschool children who have limited their diet and have become fearful of trying new foods are a particular treatment challenge. The best some parents can do to help these children is to continue eating a variety of foods without offering them to the child and to accommodate the child by always preparing foods that the child can eat without fear. They should avoid any conflict by making the child's limited diet a nonissue. Because some of these children may eat only a handful of foods and tend to get tired of a food after awhile if they eat it every day, it is advisable to rotate the foods from one meal to another or from day to day.

These recommendations can be very difficult on parents, particularly if the child's diet is limited and deficient in essential micronutrients. Consequently, it is important to analyze the child's food intake and to supplement the missing nutrients. There are formulas for infants that contain all of the important nutrients, and there are pediatric formulas for toddlers and children that provide the essential nutrients for growth. Sometimes it is difficult to find a formula that the child will accept, and the parents may

have to offer different flavors or different types of formula until the child is able to drink it. For children who are primarily avoiding vegetables and fruits but are drinking milk, supplementation with vitamins may be adequate. In any case, a thorough nutritional assessment of the child's diet is necessary to determine which nutrients may have to be supplemented. The supplements provide a safety net for the child's growth and allow the parents to neutralize the conflict over eating within the family.

Once this groundwork has been laid, the parents need help with how to manage mealtime within the family and how to help their child develop internal regulation of eating in spite of his difficulties with certain foods. Because children with Sensory Food Aversions often get anxious and restless during mealtime, they need to learn to sit at the table and relax. This often requires taking a time-out for self-calming. Many children with Sensory Food Aversions also show a strong preference for sweet snack foods and candy, and the parents are advised to neutralize the "sweetness" of these foods by making small amounts of these foods part of the meal, but not to offer them with every meal, and to allow the child to eat the candy first if the child wants it that way. However, there should be no candy or sweet snack food outside of scheduled meal and snack times. Interestingly, parents are often surprised that their young children lose interest in the sweet foods once they are not "special" anymore and are not associated with being a "treat."

One mother who had two young girls, one with serious feeding difficulties, was worried because they asked for M&Ms all day long. I advised her to put a few M&Ms on the girls' plate along with the rest of the food. To the mother's surprise, after only 3 days, the girls forgot about their M&Ms and left them on the plate.

Because some of the toddlers with Sensory Food Aversions avoid any foods that require significant chewing, such as hard vegetables or meats, they may become delayed in oral motor and expressive speech development. These children can benefit from oral motor and speech therapy.

Once mealtime conflict has been eliminated, some children begin to relax and may even ask to try a new food that they see their parents or siblings eating. However, others stay with their limited diet and take supplements to compensate for their dietary deficiencies. It is interesting that some of the children whom I had seen as preschoolers returned for treatment when they were 7–10 years old and wanted to work on overcoming their fear of trying new foods. These older children established a hierarchy of foods that they wanted to learn to eat. In this hierarchy, each food is

assigned a number indicating how scary it is to eat, with 10 being the *most scary* and 1 being the *least scary*. The children start with the least scary food and are given “a point for courage” for each bite of the new food they eat. They are rewarded for the first 10 points and the final 50 points for the new food they learn to eat. I have learned that once they have eaten 50 bites of a new food, they are usually able to incorporate the food into their diet, and they start with the next food. The parents serve as “coaches” by buying or preparing the food and assisting the child when he or she tries the food. However, the

child is determining how many bites at any trial he or she wants to eat. At the beginning, the children are often eating only one or two bites at any one time, and they often struggle with the taste and texture of the new food until they have had 15 to 25 bites. Occasionally, they are surprised that the new food tastes quite good, and at other times, they find that it takes more than 50 bites until they are really comfortable with it. In general, the desensitization to new foods is slow, but the children continue with encouragement, and gradually they conquer one food after the other. §

IRENE CHATOOR, MD, is professor of psychiatry and pediatrics at the George Washington University School of Medicine. She is vice chair of the department of psychiatry and co-directs the Infant and Toddler Mental Health Program and the Multidisciplinary Feeding Disorders Clinic at Children’s National Medical Center in Washington, DC. She has conducted several studies, funded by the National Institute of Mental Health, on the diagnosis of feeding disorders and the treatment of infantile anorexia and has developed a diagnostic classification of feeding disorders.

References

- BIRCH, L. L., ZIMMERMAN, S., & HIND, H. (1980). The influence of social-affective context on preschool children’s food preferences. *Child Development*, 51, 856–861.
- CARRUTH, B. R., ZIEGLER, P. J., GORDON, A., & BARR, S. I. (2004). Prevalence of picky eaters among infants and toddlers and their caregivers’ decisions about offering a new food. *Journal of the American Dietetic Association*, 104(Suppl. 1), S57–S64.
- CHATOOR, I., & AMMANITI, M. (2007). A classification of feeding disorders of infancy and early childhood. In W. E. Narrow, M. B. First, P. Sirovatka, & D. A. Regier (Eds.), *Age and gender considerations in psychiatric diagnosis: A research agenda for DSM–V* (pp. 227–242). Arlington, VA: American Psychiatric Press.
- DOVEY, T. M., STAPLES, P. A., GIBSON, E. L., & HALFORD, J. C. (2007). Food neophobia and “picky/fussy” eating: A review. *Appetite*, 50(2–3), 181–193.
- JACOBI, C., AGRAS, W. S., BRYSON, S., & HAMMER, L. D. (2003). Behavioral validation, precursors, and concomitants of picky eating in childhood. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42(1), 76–84.
- MARCHI, M., & COHEN, P. (1990). Early childhood eating behaviors and adolescent eating disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 29, 112–117.
- NARROW, W. E., FIRST, M. B., SIROVATKA, P., & REGIER, D. A. (Eds.). (2007). *Age and gender considerations in psychiatric diagnosis: A research agenda for DSM–V*. Arlington, VA: American Psychiatric Press.
- RYDELL, A. M., DAHL, M., & SUNDELIN, C. (1995). Characteristics of school children who are choosy eaters. *The Journal of Genetic Psychology*, 156(2), 217–229.
- SKINNER, J. D., CARRUTH, B. R., BOUNDS, W., & ZIEGLER, P. J. (2002). Children’s food preferences: A longitudinal analysis. *Journal of the American Dietetic Association* 102, 1638–1647.
- SMITH, A. M., ROUX, S., NAIDOO, N. T., & VENTER, D. J. (2005). Food choices of tactile defensive children. *Nutrition*, 21(1), 14–19.
- TIMIMI, S., DOUGLAS, J., & TSIFTSOPOULOU, K. (1997). Selective eaters: A retrospective case note study. *Child: Care, Health, and Development*, 23(3), 265–278.
- ZERO TO THREE. (2005). *Diagnostic classification of mental health and developmental disorders of infancy and early childhood: Revised edition—DC:0–3R*. Washington, DC: Author.