

# Children Are Aware of Food Insecurity and Take Responsibility for Managing Food Resources<sup>1,2</sup>

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## Abstract

Child food insecurity is measured using parental reports of children's experiences based on an adult-generated conceptualization. Research on other child experiences (e.g. pain, exposure to domestic violence) cautions that children generally best report their own experiences, and parents' reports of children's experiences may lack adequate validity and impede effective intervention. Because this may be true of child food insecurity, we conducted semistructured interviews with mothers, children (age 9–16 y), and other household adults in 26 South Carolina families at risk for food insecurity. Interview transcripts were analyzed using a constant comparative process combining a priori with inductive coding. Child interviews revealed experiences of food insecurity distinct from parent experiences and from parent reports of children's experiences. Children experienced cognitive, emotional, and physical awareness of food insecurity. Children took responsibility for managing food resources through participation in parental strategies, initiation of their own strategies, and generation of resources to provide food for the family. Adults were not always aware of children's experiences. Where adult experiences of food insecurity are conditioned on inadequate money for food, child experiences were grounded in the immediate household social and food environment: quality of child/parent interactions, parent affect and behavior, and types and quantities of foods made available for children to eat. The new, child-derived understanding of what children experience that results from this study provides a critical basis from which to build effective approaches to identify, assess, and respond to children suffering from food insecurity. *J. Nutr.* 141: 1114–1119, 2011.

## Introduction

Childhood food insecurity and hunger is a persistent problem in the food-rich United States. Household food insecurity in the US is at its highest level since national measurement began in 1995 (1) and over one-fifth of all U.S. children live in food-insecure households (2). The problem is serious enough that President Obama has pledged to end child hunger by 2015 (3). Meeting this goal depends on developing and resourcing effective prevention and intervention strategies but even more foundationally on an accurate understanding of the nature, extent, and severity of the problem of childhood hunger itself.

Existing research on food insecurity in the US has relied on parental (and particularly maternal) reports of the household food environment, including parental reports of children's experiences. This approach has been accepted as a valid basis for establishing national prevalence estimates of childhood food insecurity, even though research on other topics such as childhood exposure to domestic violence and children's experiences of pain

cautions that children are generally the best reporters of their own experiences and parental reports of children's experiences may lack adequate validity and impede effective intervention.

The use of parental reports rather than child reports in food insecurity research is undergirded by 2 assumptions that emerged in early interviews with mothers in food-insecure households. The first assumption is that mothers manage the household food environment and the ways that food insecurity is experienced by other family members. According to mothers' narratives, when food becomes scarce, the mother employs a sequence of strategies to manage increasingly severe situations with an overall function of protecting children from hunger except in the most extreme situations (4–6). The second assumption is that all household members experience food hardships in terms of the components that mothers have identified: quality of food, quantity of food, social acceptability of methods of acquiring food, uncertainty, and limiting of choices. Taken together, these 2 assumptions support a research perspective that minimizes potential problems with parent reporting of child hunger.

This research perspective has become a powerful filter for understanding, measuring, and ultimately responding to child hunger in the US. National estimates based on parental reports of children's experiences indicate that, although many children

<sup>1</sup> Supported in part by a grant from the Southern Rural Development Center and the Economic Research Service through the USDA's RIDGE program.

<sup>2</sup> Author disclosures: M. S. Fram, E. A. Frongillo, S. J. Jones, R. C. Williams, M. P. Burke, K. P. DeLoach, and C. E. Blake, no conflicts of interest.

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live in food-insecure households, few children actually experience reduced food intake or disrupted eating patterns. For instance, in 2008, parents reported that children cut back how much or how often they ate because there was not enough money for food in only 1.3% of U.S. households with children. In contrast, 6.6% of those same households reported adult food cutbacks and 21% of households were categorized as food insecure (7).

There is a disjuncture between the perspective that most U.S. children are protected from food insecurity and substantial research showing that children experience negative developmental outcomes when they live in food-insecure households (8,9). School-age children in food-insecure households demonstrate diminished academic, behavioral, and social functioning (10–13). Infants and toddlers in food-insecure households are at increased developmental risk (14–18). Household food insecurity is associated with poor developmental trajectories from kindergarten through 3rd grade (19). If mothers protect children from food insecurity in all but the rarest of circumstances, why do children in food-insecure households generally fare so poorly?

Additional research is needed to clarify the nature, prevalence, and severity of child hunger and the pathways through which household food insecurity affects children's development. This research can and should be grounded in children's own perspectives. Some foundation already exists for child reports of food insecurity. Hadley et al. (20) surveyed Ethiopian adolescents about their experiences of food insecurity; they found that adolescents were able to report on their own experiences and that their self-reports were significantly associated with their health outcomes. Connell et al. (21) developed a child-report food insecurity module for the US, adapting items from the Adult Food Security Module to more child-appropriate wording. While supporting child self-report, this approach assumes that the adult-generated conceptualization of food insecurity is valid for children. In other work, Connell et al. (22) took a more grounded approach, beginning with children's general understandings of and feelings about food insecurity. Thirty-two children, aged 11–16 y, were asked to talk about "kids they know" whose families have "almost run out of food." Children identified aspects of food insecurity that would not be captured in an adaptation of the adult measure: eating fast, feeling shame, and contextualizing food insecurity in terms of almost running out of food rather than not having enough money. A limitation of the Connell et al. (22) study is that children were asked to report on other people's experiences rather than their own. Consequently, although the study's findings provide new insights into children's general awareness of food insecurity, they do not give a complete picture of what children experience in their own lives and in the context of their own family situations.

These prior studies provide a strong practical and conceptual rationale for the current study, which aimed to investigate childhood food insecurity and hunger from the child's own perspective. Because parents were also interviewed (separately), child reports can be considered in the context of household food resources and stressors, parental efforts to manage food insecurity, and other salient aspects of family functioning.

## Method

Twenty-six families were interviewed, including children, mothers, fathers, and other household adults. Family members were interviewed separately and interviews took place primarily in families' homes in rural and nonrural South Carolina. Adult interviews lasted 45–90 min and child interviews lasted 15–60 min. All interviews were audio-taped and

de-identified transcripts and field notes became the data for analysis. The study protocol was approved by the University of South Carolina Institutional Review Board.

Families were recruited from food pantries, soup kitchens, social-service agencies, and through fliers posted at groceries, laundromats, and churches. Potential participants were given informational fliers and/or a brief oral presentation explaining that the purpose of the study was to learn about how different families meet their food needs during difficult economic times. Interested parents contacted a member of the research team, either in person or by phone, and were asked about: 1) the presence of a child in the household; 2) parental race/ethnicity; and 3) place of residence (city, town, suburb, rural area). Families were eligible to participate if at least 1 child aged 9–16 y was living in the home. Race/ethnicity and residence information was used only to direct subsequent recruitment efforts to ensure a diverse sample. Sampling continued until a theoretical saturation was reached, as indicated by the repeated stability of the core coding framework when applied to new interview data (23).

The final sample included families who, based on mother's report, were rural ( $n = 14$ ) and nonrural ( $n = 12$ ) and in which mothers were white ( $n = 8$ ) and African-American ( $n = 18$ ). Thirteen boys and 13 girls were interviewed. Fourteen children were in elementary school, 10 in middle school, and 2 in high school. In addition to interviews with children and mothers, 7 fathers, 1 grandmother, 2 aunts, and 1 family friend were interviewed.

Semistructured interview guides were developed by the research team. Some interview questions were based on the work of Connell et al. (22); additional questions were developed to address food decision-making and eating norms. Most questions were asked of both children and adults, but only adults were asked about household finances and completed the USDA 6-question Household Food Security Module (24). This paper reports primarily on child-interview results, with parent interviews providing context as necessary.

Data analysis involved a constant comparative process (25), combining a priori coding based on key concepts from the interview guide with an inductive process of identifying new codes and refining existing codes based on the data. Codes were clustered into themes, which were confirmed through team discussion and in light of existing research. NVivo software (26) was used for coding.

## Results

Based on mothers' responses to the Household Food Security Module, 16 families experienced low or very low food security in the previous 12 mo. In the interview process, 8 of the 10 food-insecure families described experiences that were suggestive of some level of food insecurity, including worry about running out of food, reliance on cheap foods such as rice and pasta, skipping meals, and making problematic compromises (e.g. canceling health insurance, not paying the power bill) to pay for food. In one family where the mother's response to the Household Food Security Module indicated that the household was food secure, the father's response classified the family as "very low food security." Ten families were receiving food stamps, 6 were struggling with barriers in the application or recertification process, and 1 reported being eligible but too embarrassed to apply. The relatively low use of food stamps may be related to our sampling process, which relied heavily on soup kitchens and food pantries to find families experiencing food hardships; households tend to use either food stamps or food pantries, but not both (27,28). Twenty-two of the children received free or reduced-cost school meals.

Study children experienced household food insecurity in 2 components: awareness of food insecurity and taking responsibility for managing food resources (Table 1). These components, and the family contexts associated with them, are discussed below.

**TABLE 1** Components of household food insecurity experienced by children

Components	Description
Awareness of food insecurity	
Cognitive awareness	Children's knowledge that food is scarce, and their knowledge of ways that their family manages food problems
Emotional awareness	Feelings such as worry, sadness, or anger that are related to household food insecurity
Physical awareness	Physical feelings such as hunger, pain, tiredness, and weakness that are related to lack of sufficient food
Taking responsibility for managing food resources	
Participation with adult strategies	Going along with adult strategies for managing scarce food resources
Initiation of strategies	Initiating strategies to make existing food resources stretch
Generation of resources	Taking action to attain additional food or money for buying food

### Awareness of food insecurity

Awareness means that the child had an experience of or an encounter with the household's food insecurity and understood that experience as being related to not having enough food to meet everyone's needs. Awareness was further differentiated into 3 subcategories: cognitive, emotional, and physical awareness.

Cognitive awareness refers to children's knowledge that food is scarce and their knowledge of ways that their family manages food problems. This included awareness of the resources and strategies used to meet household food needs. As a teenage boy reported, ". . . we get (food stamps). . . between the 1st and the 3rd, maybe the 4th . . . when we do get it then, I'm telling you the food is coming in the house . . . you come home after school and you got food." Cognitive awareness also included awareness of inadequate quality of food. When asked if her family had ever almost run out of food before the end of the month, a middle-school girl replied, "Yeah, but like we always have hot dogs or French fries or something." Children were aware of the use of cheap foods and also of being limited to eating the same foods repeatedly. One boy described, "I guess chicken is like the easiest affordable thing to (my mother) . . . all she buys is chicken." Awareness of inadequate quantity was also evidenced and could extend to knowing that there is no food at all. A middle-schooler explained that there was no food in his house twice in the last month; the interviewer asked, "What do your brothers say (to your mother)?" The student replied, "If we're gonna eat and how we're gonna eat." "And then what is your mom's response?" "Sometimes, 'no'."

Emotional awareness refers to feelings such as worry, sadness, or anger that are related to household food insecurity. For instance, an elementary-school girl talked about times when food was running low: "I felt kind of sad too because I was really starving and then there was nothing else to eat. Except for maybe some chips or a soda . . ." "How did that make you feel?" "Kind of sad, kind of happy . . . because we had a little bit of food left, but we didn't have like as much as anyone else." In addition to worries about getting enough food, some children expressed unhappiness about the strategies used to make it through a food shortage. One child said, "I just hated it eating like hot dogs or the French fries or the Oodles of Noodles." Another commented, ". . . we had to keep going over to my friend's house back and forth asking if she had butter and milk and eggs . . . I really didn't feel good about it because I'm not comfortable asking people that."

There were also children who reported a lack of worry; despite food resources sometimes being low, they were confident that food problems would be handled. As one girl commented: "I

know that I'm not gonna like starve 'cause my mom won't let that happen." Another child offered a religious explanation: ". . . if we're at the last resort and we still don't have (food) and then, I don't know, somebody just comes and it's exactly what we needed . . . so I guess it's God."

Physical awareness refers to physical feelings such as hunger, pain, tiredness, and weakness that are related to lack of sufficient food. Eight children reported physical awareness of hunger; some experienced hunger only occasionally, whereas others experienced it quite frequently. A high-school boy ate no more than 1 meal at home each day. He was often hungry and described that he felt: "angry, mad, go to sleep basically, that's the only thing you can probably do and after you wake up, you feel like you've got a bunch of cramps in your stomach and you'll be light-headed." An elementary-school girl explained, "Sometimes on Sundays before we figured out there was a soup kitchen, we would skip breakfast because there's no cereal and then we would have an early lunch and I would get really hungry because we get a late dinner." Child hunger was also related to poor quality of available food. A boy said he was hungry during the interview, because he had not eaten all the food served at school that day: ". . . cause the beef jerky looks like beef – the fruit jerky looks like beef jerky and it tastes nasty. And the orange chips normally don't taste like oranges to me."

### Responsibility for managing food resources

The children reported a range of behaviors that reflected taking responsibility for managing household food insecurity. Sometimes this involved participation with adult strategies for stretching resources. One boy commented that: "We would try and save most of our food so we won't have to buy anymore, 'cause usually we wouldn't have as much food as anyone else." An elementary-school girl described that her parents ". . . say, 'We're running low on food. You guys can't have an apple or something because we need those for snacks for later when we need them.'"

Some children went beyond participation to initiate strategies without being asked. For instance, the girl quoted above not only complied with her parents' request to not eat a snack when resources were low, she also initiated similar requests in her interactions with her younger sister: "(My sister) would sometimes ask me to ask for a fruit snack or a banana and I would say, no, we're running low, we could use those for tomorrow for lunch." Other types of initiation included not asking for foods at the grocery store, eating less at meals, and asking only for healthy foods rather than treats.

Occasionally, children reported that they took responsibility for managing food insecurity by generating more resources

themselves. These strategies included asking neighbors and family members to borrow food, bringing food home from a relative's house, and working part-time and giving the money to parents for food. In one particularly poignant example, a high-school boy hesitantly described how he and other youth in his community helped their families when food was running out: ". . . we'll like get together and we'll find a way to get money up, not, we ain't got to sell no drugs though, not like that, but we'll find a way to get money up. We might all get together and cut the grass or something. We'll find some way . . . people will be putting money up on fights and stuff, too. And they might do dog fights every now and to get money like that."

### Family context of children's experiences

Children's awareness and responsibility occurred in the context of family life more generally. Although the study data are rich with respect to family interactions and food decision-making in general, we focus here on the 2 themes most directly linked to child experiences of food insecurity: communication and complex family problems.

**Communication.** Families differed in their communication about food insecurity. Some parents spoke with children openly. As one elementary-school boy said, ". . . my grandma tells me we can't be buying a lot of food with the EBT 'cause we ain't got much on it." In other situations of open communication, parents asked children to stretch snack foods, choose fewer foods or only healthy foods in the store, and to wait on food shopping needs. One girl explained: ". . . we didn't have as much money to buy enough food for everyone in the house to eat . . . (my parents) would say that we would just have to wait . . . cause usually the only way (my dad) go to the grocery store is if his check in the mail and then we can . . . buy some more food."

Other parents did not discuss food problems with children. Sometimes children were not aware of issues at all, protected from awareness and thus from taking responsibility for resolving problems. This does not mean children were not affected; children may have received inadequate food quality or quantity or experienced strained and suboptimal parenting without becoming cognizant that food resources were low. Other children became aware of food insecurity despite parental efforts to keep them from knowing. Thinking about whether her family had ever come close to running out of food, one girl explained: ". . . there's been times I guess when (my mom) couldn't find (money for food), but I just never probably knew about it because she's always trying to hide it." Another girl described how she could tell when food was low without her family telling her: "They don't really say anything, but you can read it in their face . . . when they're out of money and then you ask why don't you go to the store and they don't answer or something or, and they just try to find other ways, like they just forget . . . I can tell by people's expressions . . . (they) wouldn't be frowning, but like it wouldn't be a happy face, it wouldn't be sad, it wouldn't be any face at all, it would be just like—an empty face."

Children sometimes kept secrets from parents as well. For example, a single mother who reported very low food security based on the USDA Module described how she nonetheless protected her young son from food hardships: "I always let (my son) eat first. If I think I don't have enough I will give him as much as he wants and I can always drink water and tea is cheap. But I don't talk to him about it because it's none of his business." Her son, when interviewed separately, described his own role in making food last: Interviewer: "Have you ever done anything to help your family have enough food or to make food last a long

time?" Child: "Yes." "What do you do?" "I normally don't eat it that much."

In another parent-child interview dyad, a mother explained that she sometimes ate less than she should because there was not enough money for food, but clarified: "I didn't make (my son) eat less." Despite her efforts, her son experienced worry about having enough food: "It's like certain times I go, when I can't find anything to really eat then I worry about (food running out) . . . we'll be low on food for about a while, for about, I'll say about four days, and then like after that she gets some money or her paycheck come in . . ."

**Complex problems.** Most of the children in this study were affected by household food insecurity to some degree. Sometimes children's experiences were difficult, but not dire. Food quality was less than desirable and children had to be aware of and responsive to food needs in ways that children from more affluent homes generally do not, but they had enough to eat and trusted their parents to manage food problems. Other children experienced more severe aspects of food insecurity. Consistent with findings in other research (29), these children lived in families with additional, complex problems including: parent mental and physical health challenges, domestic violence, recent relocation, job loss, and geographic and social isolation. One mother's untreated schizophrenia and the ensuing fear-inducing hallucinations kept her from driving or cooking on the stove; her ability to access and maximize food resources was thus constrained. In another family, parents were coping with recent economic crisis. One parent had recently lost a job, the other parent in the household had work hours cut back, and the informal income production strategies on which they had relied (collecting and selling scrap metal and items from yard sales) were failing in the recession. Lack of knowledge about available services exacerbated food shortages. A mother in a rural area had neither a car nor a refrigerator and spent hours each day walking to the nearest grocery and bringing home one day's worth of food to cook for dinner. An urban mother had left a violent marriage, and her stress, fear, and sudden poverty overwhelmed her; she did not notice her child's awareness of food problems or efforts to solve them.

## Discussion

This study demonstrates that children are able and willing to report on their own experiences of food insecurity and that child food insecurity differs from adult food insecurity in both its content and its context. Content differences are reflected in the distinct components of food insecurity that emerge when children are asked about their own experiences. For instance, prior research with parents led to a conceptualization of food insecurity that involves struggles to afford adequate food quality and quantity in socially desirable ways. Analysis of child interviews in this study leads to a different conceptualization, involving components of awareness and responsibility. These components are grounded in children's unique experiences, such as worries about parental stress and hardships, feelings of anger and helplessness when food is not available, and cognitive vigilance to monitor the household food situation when parents are trying to hide what is happening. Children also take on responsibilities to preserve and provide food resources for the household. These responsibilities may mean very different things when performed by a child as opposed to an adult. Skipping a meal has different developmental consequences at different developmental moments. A responsibility such as earning money

for household groceries is appropriate and healthy for an adult but may impede a child's development by taking time away from other more age-appropriate tasks (e.g. school work). Moreover, because children have more restricted options in the formal labor market, the need to earn grocery money can expose a child to risky choices, for instance, setting up dog fights.

The context of child compared with adult food insecurity differs in important ways as well. Prior research with adults has indicated that the money/economic context in which food experiences take place is key to distinguishing food insecurity from other phenomena that may manifest in similar ways (e.g. cutting back portions because of money constraints vs. a desire to lose weight). This is evident in the USDA measurement approach in which each question is conditioned on not having enough money to buy food (e.g. ". . . did you ever eat less than you felt you should because there wasn't enough money to buy food?"). Children, however, talk about food insecurity in terms of their direct experiences of the household food environment. Rather than worrying about not having money to buy food, children worry when they see less food (or less desirable food) in the home, when they are given or allowed different or less food to eat, and when they see parents behaving differently vis-à-vis mealtimes and food management. This makes sense. Because children generally do not earn the money for household food or do the family's grocery shopping, their experiences of food insecurity flow not from the economic context of family life but from the relational and resource contexts that they actually encounter day to day: what they get to eat and how they interact with their parents, relatives, neighbors, teachers, and friends.

In addition to differences in the content and context of parent compared with child food insecurity, this study suggests that there may be differences in parent compared with child perspective on what children experience. Specifically, there were instances when a parent said that their child was protected from hunger and worries about food, but the child reported substantial worry and/or cutting back on food. This is consistent with existing research showing that children are better reporters of their own experiences of internal state than are their parents (30,31). Because parents were not asked explicitly about their children's experiences, however, we cannot systematically compare and contrast parent/child reports using the current data and thus do not know the extent of discordance in child/parent perspectives on childhood food insecurity. More systematic comparison of child vs. parent reports is a critical next step for research on childhood hunger; if the discordance we observed anecdotally in this study is common, current estimates on the prevalence and distribution of childhood food insecurity and hunger may be inaccurate.

A successful effort to end child hunger must be grounded in a comprehensive understanding of children's experiences of food insecurity. By investigating childhood food insecurity from the child's perspective, we find that children's experiences are unique in terms of content and context. The resulting new, child-derived understanding of what children experience provides a critical basis from which to build effective approaches to identify, assess, and respond to children suffering from food insecurity.

#### Acknowledgments

M.S.F., E.A.F., and S.J.J. designed the study; M.S.F., R.C.W., M.P.B., and K.P.D. conducted the data collection; M.S.F., R.C.E., M.P.B., and K.P.D. analyzed the data; M.S.F., E.A.F., S.J.J., and C.E.B. wrote the paper; and M.S.F. and E.A.F. had primary responsibility for final content. All authors read and approved the final manuscript.

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