Parent and Child Reports of Food Insecurity and Mental Health: Divergent Perspectives

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Background: Food insecurity—the inability to provide adequate food for at least one household member sometime during the year—is linked to negative physical and mental health outcomes. Child reports of experiences in other domains of life are only moderately related to parental proxy reports of the same experiences. The goal of our study was to assess the convergence of parent and child reports of food insecurity and several specific mental health symptoms.

Methods: Dyads of parents and children attending medical appointments were surveyed. Inclusion criteria consisted of English-speaking adults and their children between the ages of 8 and 17 years.

Results: Sixty-two percent of adults and 50% of children self-reported meeting screening criteria for food insecurity, and adult-child dyad reports were significantly correlated. However, when asked about the child worrying about food running out or having eaten less than desired in order to conserve food, adult and child reports diverged significantly, with adults more frequently underestimating worry and conservation behaviors compared to child self-reports. Similar discrepancies were found for items probing specific symptoms of depression, general anxiety, and obsessive-compulsive disorder.

Conclusion: Our data show that adults may not accurately perceive the subjective effects of food insecurity on children in their household, particularly in households receiving food assistance, perhaps because of objectively greater need. Because food insecurity may have profound effects on child development, pediatricians should be aware of the mental health risks for children in food-insecure homes.

Keywords: Behavioral symptoms, food supply, nutritional status, pediatrics

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INTRODUCTION

The United States Department of Agriculture defines food insecurity as the inability to provide food for at least one household member because of lack of resources at some time in the past year.[1] In 2016, 16.5% of American households with children experienced food insecurity at some point during the year, meaning that food insecurity affected at least 6.5 million American children.[1] A number of demographic factors increase a household's likelihood of experiencing food insecurity, including living in a southern state; low household income; a head of household without a high school education or who is single; and the presence of children in the home, especially those under 6 years.[1-3]

Studies have demonstrated a link between food insecurity and negative health outcomes in both children and adults. Children in households with food insecurity have poorer general health, as well as more frequent headaches and stomachaches than children in food-secure households.[2] They are also at greater risk of developing chronic conditions such as asthma, obesity, and stunted growth.[4-7] Adults from households with food insecurity report a higher prevalence of hypertension and hyperlipidemia than adults in food-secure homes.[8]

In addition to being associated with poor physical health outcomes,[9] food insecurity has important implications for emotional and psychological well-being.[10,11] For example, food-insecure adults are more prone to suicidal ideation compared to those who are food secure.[11] Also, children from households with food insecurity exhibit persistent hyperactivity/inattention after adjustments for a number of covariates including family structure, family income, maternal age at child's birth, maternal and paternal depression, and negative parenting.[12] Finally, food-insecure children experience more emotional, peer, and conduct problems, as reported by parents after controlling for a variety of confounders and covariates.[13]

A typical assessment of food insecurity is based only on data provided by parents or other adults in the household,

despite some evidence that children are capable of reliably and accurately reporting their own experiences on a variety of health issues[14,15] and that children 6 years of age or older may be better at reporting their own food-insecurity experiences than other persons.[16] While information obtained from adults is likely quite accurate in objectively identifying food insecurity in a household, qualitative data suggest that adult reports may poorly reflect children's subjective experiences of food insecurity.[17] Child self-reports are only moderately related to adult proxy reports of the same experiences and behaviors in several domains, including depression, fearfulness/anxiety, vomiting, and child victimization.[18,19] In general, such studies show that adults underreport these experiences and behaviors compared to children's self-reports.

Few studies of food insecurity have assessed its relationship to child self-reports of specific mental health symptoms or compared those reports with adult proxy reports. The aim of this study was to compare reports of food insecurity experiences and a number of specific mental health symptoms within adult-child dyads.

METHODS

This study was approved by the Institutional Review Board of Our Lady of the Lake College, now known as Franciscan Missionaries of Our Lady University, in Baton Rouge, LA.

Participants

Participants in this study were 58 adult-child dyads attending appointments at several pediatric clinics co-located in the same building. All participants were fluent English speakers. Children were 8-17 years of age, and the adult accompanying them was either a parent or guardian.

Procedure

Forty-five dyads were approached in the lobby of the medical building that houses the pediatric clinics as the children were consuming a free lunch provided by a federally funded summer feeding program. The remaining 13 dyads were approached in the waiting room of a specific clinic, the Pediatric Academic Clinic. After ascertaining that the adult was the parent or legal guardian of the child and that the child was at least 8 years old, the researcher reviewed an informed consent narrative with the adult. The narrative explained that completing the anonymous survey implied consent to participate in a research study. Adults were then asked to verbally consent to their child's participation. Researchers reviewed a simplified version of the consent narrative with the child. Written assent for participation, in the form of marking an X, was obtained from the child before the child was allowed to complete the survey. Surveys were thus completely anonymous, although adult and child surveys were linked with a preassigned participant number written on both. Each member of the dyad completed the survey independently of the other, and both members were provided with an envelope in which to seal their completed surveys.

Adult Survey

The adult survey was written at a Flesch-Kincaid grade level of 3.8. Items included on the survey are shown in Table 1. The first page of the survey included demographic questions, a validated 2-item depression screener (the Patient Health Questionnaire-2; PHQ-2),[20] and a validated 2-item food insecurity screener.[21] The food insecurity screener asked how often during the past 12 months (1) the participant worried about food running out and (2) food ran out before money was available to buy more. An affirmative response to either item is considered indicative of food insecurity.[21]

The second page of the adult survey asked for information regarding the child. This page included child-specific demographic items (eg, child's age and sex) and asked adults to rate the frequency of their child's experiences of food insecurity and food-related concerns, as well as symptoms of generalized anxiety, obsessive-compulsive disorder (OCD), and depression. Child depression (items 12 and 13) and the first food insecurity item (item 1) were adapted from the adult screeners for these issues.[20,21] The second food insecurity item (item 2) was adapted from Fram et al.[16] Items probing symptoms of generalized anxiety (items 6 and 7) and OCD (items 8 and 9) were adapted from the Spence Children's Anxiety Scale (SCAS).[22] Additional items related to concerns about food (items 3-5) were also based upon items from the SCAS.

Our primary purpose in adapting items was to develop adult and child surveys that were as similar to each other as possible. Adaptations designed to have adults report on children's experiences merely involved changing items from the first- to third-person perspective. For food-related concerns, we took more liberty and adapted items about anxiety in general to be anxiety about food resources specifically. The psychiatrist on the team believed these items were important to differentiate between children worrying mostly about food and children showing symptoms of generalized anxiety and OCD.

Child Survey

The child survey was written at a Flesch-Kincaid grade level of 2.1. The child survey was a 1-page document that asked the child to answer items mirroring those asked of adults. These items are also listed in Table 1. The adult depression (adult items 10 and 11)[20] and food insecurity (adult items a and b)[21] screener items were rephrased for children (child items 11 and 12 for depression, child items 1 and 2 for food insecurity) while items probing symptoms of generalized anxiety and OCD were taken directly from the SCAS.[22] One item (child item 3) asking about eating less than desired was adapted from the adult survey (adult item 2), and we also included items probing food-related concerns that we wrote based upon SCAS items.

Dyad Difference Scores

For each variable, a difference score was calculated by subtracting child scores from adult scores. A score of zero indicates adult-child agreement, positive scores indicate the adult score was higher than the child's (overestimated), and negative scores indicate the adult score was lower than the child's (underestimated).

RESULTS

Participant demographic variables did not vary by collection location (ie, lobby vs waiting room); therefore, data from all 58 dyads were analyzed together. The mean age of participating children was 10.56 years ±2.48 years. Thirty-three

Table 1. Comparison of Adults' Perception of Children's Behavior and Corresponding Child Self-Reported Survey Items

Item Type		Adult Survey Item		Child Survey Item
Food insecurity: adult self-report		Within the past 12 months:		N/A
	(a)	**I** worried whether our food would run out before we got money to buy more.		
	(b)	the food we bought just didn't last, and we didn't have money to get more.		
Food insecurity: adult report for child vs child self-report		Within the past 12 months, how often do you think **the child**:		Think about the past year. How many times did **you**:
	1	worried whether food would run out before the family got money to buy more?	1	get scared that your family would run out of food?
		N/A	2	run out of food at your house because of money?
	2	ate less food than they wanted in order to help make the food supply last?	3	eat a smaller meal than you wanted to help save food?
		Think about how **the child** is every day. How often do you think **the child** feels the following things?		Think about how **you** feel most days. How often do **you** feel each of these things?
Food-related concerns	3	Worry that he/she won't get to eat a meal.	4	I worry that I won't get to eat a meal.
	4	Can't stop thinking about when he/she will eat.	5	I can't stop thinking about when I will eat.
	5	Hides food so that he/she can eat it later.	6	I hide food so that I can eat it later.
Generalized anxiety symptoms	6	Worry that something bad will happen to him/her.	7	I worry that something bad will happen to me.
	7	Has stomach pains when he/she is upset.	8	When I am upset, my stomach hurts.
Obsessions and compulsions	8	Can't get bad or silly thoughts out of his/her head.	9	I can't get bad or silly thoughts out of my head.
	9	Has to do some things over and over again.	10	I have to do some things over and over again.
		Over the last 2 weeks, how often have **you** been bothered by the following problems?		N/A
Adult depression	10	**I** had little interest or pleasure in doing things.		
	11	**I** felt down, depressed, or hopeless.		
		Over the last two weeks, how often do you think **the child** has been bothered by the following problems?		Think about the past two weeks.
Child depression	12	**The child** had little interest or pleasure in doing things.	11	How often did **you** feel like nothing is fun?
	13	**The child** felt down, depressed, or hopeless.	12	How often did **you** feel sad or down?

N/A, not applicable

children were male; 3 surveys were missing sex information. The majority of the children (88%) were insured through the Louisiana Child Health Insurance Program/Medicaid, 10% had private insurance, and 2% were uninsured. Table 2 shows the demographic characteristics of the adult sample. Economic need is indicated by the fact that the majority (55%) of respondents reported using the Women, Infants, and Children (WIC) nutrition program, the Supplemental Nutrition Assistance Program (SNAP), or both types of assistance, and 41% reported annual household income of <$20,000.

Both adults and children completed the food insecurity screener. As stated previously, an affirmative response to

at least one food insecurity screener item is considered indicative of food insecurity.[21] According to this criterion, 62% (n = 36) of the adults in our sample screened positive for food insecurity. Of these individuals, 27 (75% of the subset or 47% of the total sample) responded affirmatively to both food insecurity screener items. In contrast, only 50% (n = 29) of children in our sample met the screener criterion for food insecurity. Of these, 14 (48% of the subset or 24% of the total sample) responded affirmatively to both questions. Despite this discrepancy in frequency, we found a small but significant correlation between adult and child food insecurity screener status (r = 0.28, P = 0.03). The first comparison in Table 3 shows the rates of agreement concerning food

Table 2. Demographic Characteristics of the Adult Sample

Variable	Value
Age, years, mean $\pm$ SD	37.4 $\pm$ 10.36
Number of adults in household, mean $\pm$ SD	1.24 $\pm$ 1.03
Number of children in household, mean $\pm$ SD	2.79 $\pm$ 1.30
Relationship to child	
Mother	51 (88)
Grandmother	5 (9)
Father	1 (2)
Missing	1 (2)
Race	
African American	44 (76)
Caucasian	8 (14)
Other	5 (9)
Missing	1 (2)
Education level	
Master's/doctoral degree	2 (3)
Bachelor's degree	8 (14)
Some college	28 (48)
Other postsecondary training	3 (5)
High school diploma	17 (29)
Food assistance program	
None	24 (41)
WIC, SNAP, or both	32 (55)
Food bank only	2 (3)
Annual household income	
<$20,000	24 (41)
$20,000-$40,000	23 (40)
$40,001-$60,000	7 (12)
>$60,001	2 (3)
Missing	2 (3)

Data are presented as n (%) unless otherwise indicated.
Total percentages are subject to rounding error.
SNAP, Supplemental Nutrition Assistance Program; WIC, Women, Infants, and Children nutrition program.

insecurity between adults and children overall and separated between households that used food assistance programs (WIC, SNAP, or both) and those that did not. Across all 3 categories, in disagreeing dyads, adults more commonly reported food insecurity when children did not. However, 7 children reported meeting the screener criterion for food insecurity when their corresponding adults did not. Of these children, 3 came from homes that used food assistance programs and 4 came from homes not using any food assistance programs. Only 2 of the 7 disagreeing children reported food actually running out in the home, one in the food assistance group and one in the non–food assistance group, although the child in the latter group did not report worrying about food running out.

Adults and children were asked to estimate how often the child worried about food running out in the household (see Table 1 item 1 for both adults and children). Only 24% (n = 14) of adults reported that their child ever worried about food running out in the household, whereas 36% (n = 21) of the children self-reported this worry. Adult-child dyad responses to this question were not significantly correlated ($r = 0.16$, $P = 0.22$). The second set of data in Table 3 shows the rates of agreement about the child worrying about food between dyad members overall and divided by food assistance use. The majority of dyads did agree about the child's worry about food. Some adults reported child worry when the child did not self-report this concern; however, a larger number of adults did not report child worry when the child did report this worry. Furthermore, more adults in homes using food assistance programs underestimated their child's worry than did adults in non–food assistance homes, although this difference did not reach statistical significance [$\chi^2(1) = 2.91$, $P = 0.09$].

Adult-child reports of the child eating less to save food also differed; only 28% (n = 16) of adults said children had done so, but 52% (n = 30) of children reported this behavior. These reports were not significantly correlated within dyads ($r = 0.24$, $P = 0.07$). The final comparison in Table 3 shows the rates of agreement concerning the child's conservation of food between dyad members overall and divided by food assistance use. Consistent with the worry item, more dyad disagreements were attributable to adults reporting their child had not conserved food when the child reported having done so vs the adult reporting the child conserving when the child did not report this. In non–food assistance homes, adults only underestimated the child's food conservation, while adults in food assistance homes both underestimated and overestimated the child's food conservation, although underestimation was more frequent.

Responses to the remaining 3 food-related concern items (ie, concerns about getting a meal, inability to stop thinking about eating, and hiding food for later consumption) were summed for adult and child participants and analyzed in terms of group mean scores. The mean adult rating of children's food-related concerns was 3.77 $\pm$ 1.35, significantly lower than the children's self-rating mean of 4.43 $\pm$ 1.46 in a paired sample t test [$t(56) = -2.41$, $P = 0.02$].

Items probing symptoms of depression, generalized anxiety, and OCD were also summed for adult and child participants, and the means were compared using paired sample t tests. The adults' mean rating of children's depression symptoms (2.43 $\pm$ 0.88) was significantly lower than the children's mean self-rating (3.30 $\pm$ 1.61) [$t(57) = -3.69$, $P < 0.001$]. The same was true for the adults' mean rating of children's generalized anxiety symptoms (2.41 $\pm$ 0.68) compared with the children's mean self-rating (3.23 $\pm$ 1.08) [$t(55) = -5.60$, $P < 0.001$], and the adults' mean rating of children's OCD symptoms (2.81 $\pm$ 1.28) vs the children's mean self-rating (4.16 $\pm$ 1.62) [$t(55) = -5.45$, $P < 0.001$].

We also examined the direction of agreement between adults and children on food concerns and the other psychological symptom variables. Table 4 shows the rates of agreement and their direction in the overall sample and by food assistance status. Overall, adults underestimated children's experiences of food-related concerns and psychological symptoms 45% to 64% of the time. In homes using food assistance, this range was 47% to 66%, while in non–food assistance homes, the range was 42% to 62%. Furthermore,

Table 3. Comparison of Adult and Child Self-Reports of Food Insecurity, Worry, and Conservation Variables

Survey Variable	Concordance/ Nonconcordance	Overall, n (%)	WIC/SNAP Users, n (%)	WIC/SNAP Nonusers, n (%)
Adult self-reported food insecurity status vs child self-reported food insecurity status	Adult-child agreement	37 (64)	20 (63)	17 (65)
	Adult overestimate	14 (24)	9 (28)	5 (19)
	Adult underestimate	7 (12)	3 (9)	4 (15)
Adult report of child food worry vs child self-reported food worry[a]	Adult-child agreement	34 (60)	18 (56)	16 (64)
	Adult overestimate	8 (14)	3 (9)	5 (20)
	Adult underestimate	15 (26)	11 (34)	4 (16)
Adult report of child food conservation vs child self-reported food conservation[a]	Adult-child agreement	34 (60)	16 (50)	18 (72)
	Adult overestimate	5 (9)	5 (16)	0 (0)
	Adult underestimate	18 (32)	11 (34)	7 (28)

[a]One data point is missing in the WIC/SNAP Nonusers group.
Total percentages are subject to rounding error.
SNAP, Supplemental Nutrition Assistance Program; WIC, Women, Infants, and Children nutrition program.

adults in food assistance homes more often overestimated children's concerns and psychological symptoms compared to non–food assistance homes. In both types of home, adult ratings were in agreement with their child's ratings less than half the time for all variables.

We also examined the relationships between food-related concerns and symptoms of generalized anxiety and OCD using correlational analyses. Children's self-ratings of food-related concerns correlated significantly with their self-rated symptoms of both generalized anxiety ($r = 0.40$, $P = 0.01$) and OCD ($r = 0.36$, $P = 0.01$). Adults' ratings of children's food-related concerns were also significantly correlated with adult reports of children's symptoms of generalized anxiety ($r = 0.30$, $P = 0.03$) and OCD ($r = 0.70$, $P < 0.001$).

Looking at whether demographic characteristics of the sample differed as a function of food insecurity status as reported by the adult, we found no statistically significant differences between food-insecure and food-secure households in the number of adults in the house, the number of children in the house, the number of children under 7 years, or the health status of their children. Adults in food-secure households were marginally older (mean age of 41 years ±12.85 years) than those in food-insecure households (mean age of 35 years ±7.72 years) [$t(31) = 1.95$, $P = 0.06$]. Income was significantly related to food insecurity status [$\chi^2(3) = 8.75$, $P = 0.03$]; food insecurity was more frequent in homes with a total income <$40,000 than in households with higher incomes.

We also looked at whether children's food concerns and psychological symptoms varied between food-insecure and food-secure homes. Using adult-reported food insecurity status, all independent sample t tests were nonsignificant.

Table 4. Comparison of Adult and Child Self-Reports of Food-Related Concerns and Symptoms of Depression, Anxiety, and Obsessive-Compulsive Disorder (OCD)

Survey Variable	Concordance/ Nonconcordance	Overall, n (%)	WIC/SNAP Users, n (%)	WIC/SNAP Nonusers, n (%)
Food-related concerns[a]	Adult-child agreement	14 (25)	5 (16)	9 (36)
	Adult overestimate	15 (27)	11 (36)	4 (16)
	Adult underestimate	27 (48)	15 (48)	12 (48)
Depression symptoms	Adult-child agreement	24 (41)	12 (38)	12 (46)
	Adult overestimate	8 (14)	5 (16)	3 (12)
	Adult underestimate	26 (45)	15 (47)	11 (42)
Generalized anxiety symptoms[a]	Adult-child agreement	19 (34)	9 (29)	10 (40)
	Adult overestimate	4 (7)	3 (10)	1 (4)
	Adult underestimate	33 (59)	19 (61)	14 (56)
OCD symptoms	Adult-child agreement	15 (26)	6 (19)	9 (35)
	Adult overestimate	6 (10)	5 (16)	1 (4)
	Adult underestimate	37 (64)	21 (66)	16 (62)

[a]Data points are missing; valid percentages are reported.
Total percentages are subject to rounding error.
SNAP, Supplemental Nutrition Assistance Program; WIC, Women, Infants, and Children nutrition program.

Table 5. Comparison of Concerns and Symptoms in Children from Food Insecure vs Non–Food Insecure Homes

Survey Variable, mean score ± SD	Child-Reported Food Insecurity	Child-Reported Non–Food Insecurity	Test Statistic		
			df	t	P Value
Food-related concerns	4.76 ± 1.57	4.11 ± 1.26	Not significant		
Depression symptoms	3.86 ± 1.89	2.72 ± 1.03	43.4	−2.85	<0.01
Generalized anxiety symptoms	3.62 ± 1.01	2.79 ± 0.99	55	−3.14	<0.01
Obsessive-compulsive disorder symptoms	4.90 ± 1.57	3.41 ± 1.32	56	−3.89	<0.001

However, based on child-reported food insecurity status, we found that children who reported being in food-insecure homes reported significantly more symptoms of depression, generalized anxiety, and OCD than those who reported being in food-secure homes (Table 5).

Finally, we assessed the rate of adult depression in our sample. Using the PHQ-2 cutoff score of 3 (which has 83% sensitivity, 90% specificity, and 2.9 positive likelihood ratio[20]), 7 adults in our sample screened positive for depression. Two were in food-secure homes, and 5 were in food-insecure homes. Of the 2 in food-secure homes, one was accurate in judging her child's food-related concerns and psychological symptoms, and the other was inaccurate about her child's food-related concerns only. All depressed food-insecure adults were accurate about their child's depression symptoms and inaccurate about their symptoms of OCD. Four of the 5 were also inaccurate about their child's food-related concerns, and 3 were inaccurate about their child's generalized anxiety symptoms.

DISCUSSION

Research has shown that household food insecurity has significant implications for the physical and emotional health of children.[23,24] In our clinically based urban sample, we found that nearly two-thirds of participants had experienced problems with food insecurity in the past year. While this estimate is grossly higher than estimates for the nation as a whole and the state of Louisiana in particular,[1] this finding is likely attributable to the demographic characteristics of the sample (ie, low education level, low income, and predominantly minority[2]) and thus suggests that assessment of food insecurity should be a topic of vital interest to primary care pediatricians working in facilities with similar populations. The American Academy of Pediatrics recognizes that precursors of problems identified in the medical office often lie beyond the confines of the medical setting and thus encourages healthcare providers to expand their scope of concern to the larger environment by implementing measures to identify family and societal risk factors that may impact children, as well as to work with community-based organizations to provide resources to address identified risks.[25] Thus, at a minimum, referrals to food resources should be made whenever food insecurity is identified.[26]

Beyond generating prevalence estimates of food insecurity in our clinic sample, our results speak to the subjective experiences of children in food-insecure homes. First, the significant relationship between adult and child self-reported food insecurity screener responses suggests that most children are generally aware of the objective reality of food inse-

curity in the household, although at least some children are unaware or mistaken about the presence of food insecurity in their homes. When a child's response indicated food insecurity but the adult's response did not, most often the case was that the child indicated worrying that food would run out but not that it actually had run out. These children possibly are worriers in general or perhaps their parents were less than truthful about food insecurity in their home. The fact that our data reflect self-report precludes comment on the likelihood of either possibility.

Although adult and child reports of objective food insecurity often agreed, reports of the subjective effects of food insecurity on the child did not. When asked if the child worried about food running out, three-quarters of adults said no, despite more than one-third of children self-reporting this worry. Furthermore, only slightly more than one-fourth of adults thought their child had eaten less than desired to conserve food, but more than half of children reported having done so. Interestingly, while most adults underestimated these thoughts and behaviors in their children, some adults overestimated them. Overestimation and underestimation of these items were more common if the adult reported using WIC, SNAP, or both, suggesting that adults in these resource-strapped homes have less accurate insight into their children's experiences.

Similar results were found in the analysis of other food-related concern items and items assessing symptoms of depression, generalized anxiety, and OCD. The means of adult reports about their children were consistently lower than the means of children's self-reports, although not all adults underestimated their child's symptoms. Furthermore, adults who reported using food assistance programs either overestimated or underestimated their child's symptoms more frequently than adults who did not report using food assistance programs. As with the food worry and conservation items, these discrepancies suggest that adults in food-insecure homes have lower insight into their children's experiences, perhaps because these adults have fewer emotional and cognitive resources available to attend to such matters.[27] Further support for this argument is the fact that among the food-insecure adults who also screened positive for depression, congruence with child reports of food-related concerns and psychological symptoms was low.

Finally, we found significant correlations between children's food-related concerns and symptoms of generalized anxiety and OCD. While our data cannot speak to the causality of these relationships, taken together with the fact that children who self-reported food insecurity also reported more psychological symptoms (whereas parent reports of

food insecurity were not related to perceptions of their child's psychological symptomology), these findings suggest that some children are overall more prone to worry about food and additional issues than other children. Future research should explore if the experience of food insecurity is the cause of these worries that manifest as symptoms of generalized anxiety.

This study has several limitations. First, slightly more than 75% of the sample was recruited while taking advantage of a federally sponsored feeding program at the clinic site. Consequently, our sample's prevalence estimate of food insecurity may be an overestimate of the rate of food insecurity among the population served by the clinic. Furthermore, our data are cross-sectional and thus do not provide insight into the causality of the relationships between food insecurity and mental health symptoms. Further, we cannot address the actual prevalence of psychiatric disorders in our population because we used self-report measures of mental health symptoms from validated scales rather than full psychiatric diagnostic criteria. Finally, we surveyed only English-speaking parents/guardians and children. Thus, our results may not be generalizable to non-English speakers.

In balance with the above limitations, our study has several strengths. First, we used brief, validated screeners for both food insecurity and depression. Second, our study focused on both adult and child perceptions of food insecurity and child mental health symptoms. Understanding how children's perceptions differ from those who are responsible for their care is important. Finally, we took care to present questionnaire items that could be read and understood at low literacy levels, an extremely important consideration when studying a population such as ours. Thus, we can reasonably argue that our data regarding the level of discordance between adult and child perceptions of the subjective experiences of children in food-insecure homes are sound.

CONCLUSION

Our results support the argument that identification of food insecurity is essential to pediatric health and thus should be a matter of considerable interest to pediatricians, particularly those serving patients who are demographically at higher risk for food insecurity. By identifying and assessing the effects of food insecurity on children, pediatricians and public health officials can not only provide better care for the individual child but also develop effective development, nutrition, and growth programs for children in the community at large.

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