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Toxic Stress and Child Hunger Over the Life Course: Three Case Studies

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Introduction

In this paper, we focus on narratives of 3 caregivers who have reported low or very low food security *at the child level*. Very low food security at the child level is considered the most severe form of food insecurity and is indicated when respondents to the Household Food Security Survey Module (HFSSM) report reduced intake and disrupted eating patterns among their children.¹ In this paper, we avoid the term “hunger,” as there is still significant debate about the usage of the term among food security researchers and advocates.² For a full explanation of terms, please refer to Table 1.

The prevalence of low and very low food security *among children* is reported by a small percentage of households. In 2010, very low food security *among children* was reported by 1.0% of all households with children and 1.8% of female-headed households with children.¹ As with all households, the recession caused increases in household and child food insecurity. The increase has been most startling among families with children under age 6, among whom the prevalence of very low food security at the child level increased 250% from 2006 (147,000 children, 0.4%) to 2010 (533,000, 1.4%).^{1,3-5} Clearly, the recession has hit families with very young children quite hard. The younger the child, the more devastating the consequences of food insecurity, as the first 3 years of life are the most significant for cognitive, social, and emotional development.⁶ Therefore, investigations to improve understanding of very low food security for families with the *youngest* children should be undertaken as an urgent, national priority.

Many studies report that parents generally protect their children from food insecurity.⁷⁻¹⁰ Parents have reported that they will reduce the size of their own meals, or may not eat at all, in order to feed their children. Yet recent qualitative research with school-aged children has begun to counter the idea that parents can *truly* protect their children from experiencing food insecurity. According to Fram et al¹¹ children know the experience of food insecurity and will often develop coping mechanisms to deal with low food security regardless of whether the parent seeks to protect the child. Still, not much is known about the families with younger children. A recent study on the experience of food insecurity among children shows there is a lower percentage of households that report young children as “low food secure” compared to households that had older children. This is likely due to greater food needs of adolescent children.¹² While very young children under the age of 6 cannot articulate their exposures to food insecurity, we know through a wealth of quantitative research that, although parents may say they protect their

young children from food insecurity, young children are not buffered from the harmful effects of household food insecurity. Household food insecurity among families with young children is associated with poor child development, increased child hospitalizations, and fair/poor child health.^{13,14}

Table 1. Categorizations of Food Security Status as Measured by the USDA

Derived from: <http://www.ers.usda.gov/briefing/foodsecurity/labels.htm>

Level	Category	Sub-category	Description
Household	Food security		Zero to two reported indications of food access problems or limitations among adults or children in household. Little or no indication of changes in diets or food intake.
	Food insecurity	Low food security	Reports of reduced quality, variety, or desirability of diet among adults and/or children in the household. Little or no indication of reduced food intake.
		Very low food security	Reports of multiple indications of disrupted eating patterns and reduced food intake among adults and/or children in the household.
Child	Food security		No reported indications of food-access problems or limitations among children (household may be food insecure).
	Food insecurity	Low food security	Reports of reduced quality, variety, or desirability of diet of children. Little or no indication of reduced food intake of children.
		Very low food security	Reports of multiple indications of disrupted eating patterns and reduced food intake of children.

While school-aged children may accurately report food security status that their caregivers may misreport,¹¹ it is also likely that parents underreport low food security status of their younger children. In our experience with qualitative research, caregivers are often reluctant to admit that their children may not be getting enough food due to shame or due to the fear that their children might be removed from the home by authorities. We have also learned from our research participants that parents may be so stressed and anxious about their dire circumstances that they cannot truly gauge, nor admit to others, just how much their own children are suffering.

Results from our ongoing qualitative, participatory action research with 44 mothers of young children suggest that child food insecurity is

related to adverse childhood experiences of children's caregivers. Such childhood experiences translate into poor physical and mental health in adolescence and adulthood. In turn, this can lead to lack of ability to find and maintain meaningful employment that pays a living wage. Results reported here are preliminary results from a series of interviews with 29 of the original 44 women of the Witnesses to Hunger study. For more information on the methods and procedures of Witnesses to Hunger, please refer to our previous publications.^{15,16} In this deliberate sampling of 29 participants, we sought to understand how caregivers identify ways in which their childhood experiences shape their currently reported food insecurity circumstances. These preliminary findings suggest that our current frameworks for understanding food insecurity at the child level are inadequate to characterize, and thus address, the generational cycle of food insecurity and deep poverty.

In this paper, we focus on 3 particular cases in our qualitative investigation in order to exemplify ways in which childhood exposure to violence and deprivation can lead to very low household food security and very low food security at the child level. These 3 case studies illuminate a variety of exposures to toxic stress and how such experiences have an impact on a woman's earning potential, mental health, and attitudes toward raising children. Lacey, Irene, and Sylvia have in common very difficult and deprived childhoods. All 3 women, whose names have been changed to conceal their identities, reported that they were raped at an early age and had unsupportive or negligent caregivers. They explain how the deprivation and violence have had a profound effect on the choices they can make as adults, as well as on their ability to care for their own children.

The 3 case studies begin with a seemingly worst-case scenario by Lacey, a mother of 5 who turned to prostitution at age 15. We then introduce Irene, a college student on Social Security Income (SSI) who is raising 2 boys ages 4 and 10, and Silvia, a woman who works full time and who is the mother of a daughter age 5 and son age 4. These cases are then placed within a life course framework. We then describe ways in which we can shift the nature of research investigations on food insecurity and provide recommendations for policy-oriented solutions related to income support programs, early intervention programs, child and adult mental health services, and violence prevention programs.

Background

Mental Health and Food Insecurity

While the physical health and socioeconomic circumstances of families who experience household food security are well documented, less well understood are the circumstances that might explain an association between mental health and food insecurity. Quantitative research, including our work from Children's HealthWatch, demonstrates that maternal depressive symptoms are associated with food insecurity and with poor child development and behavior.¹⁷⁻¹⁹ Other work among families with children points to related psychosocial stress such as maternal anxiety,¹⁷ clinical depression,^{20,21} social isolation,²² and potentially harmful parenting practices.²³ However, these studies leave many questions unanswered about the origins and nature of poor mental health reported by food insecure caregivers. Research on the effects of food insecurity on adolescents and children give some indication that caregivers may also have struggled earlier in life. Household food insecurity is associated with suicidal ideation among adolescents²⁴ and poor physical, mental, and psychosocial health among children.²⁵⁻³²

Mixed-methods research demonstrates that the odds of reporting household food insecurity *with hunger* (now called very low food security) for women experiencing social isolation were 5.81 (95% CI 2.71, 12.47) times the odds of social isolation among women who were in food secure households. Social isolation is intertwined with depression, stress, and anxiety and is related to exposure to violence, abuse, and neglect.³³⁻³⁵ Qualitative research on food insecurity and depression bears similar results. Hamelin and Habicht³⁶ reported the presence of stress and anxiety among food insecure families, and our previous qualitative research found consistently reported descriptions of anxiety, depression, and exposure to violence among food insecure women in Philadelphia.³⁷

Few studies have retrospectively investigated the *causes and characteristics* of caregivers' mental health status as they relate to food security. Wehler et al³⁸ reported that homeless and low-income mothers who experienced sexual assault in childhood were over 4 times more likely to have household level food insecurity than women who had not been abused. In this same population, Weinreb et al²⁹ reported that child hunger (as measured by the Childhood Hunger Identification Project measure) was more prevalent in households in which mothers experienced higher odds of posttraumatic stress disorder and substance abuse. A longitudinal study by Melchior et al³⁹ found that mothers in persistently food insecure homes had significantly higher rates of

depression and/or a psychotic spectrum disorder or had experienced domestic violence.

In food security research, little is reported, however, about the context of violence nor the recurrent nature of violent experiences spanning from childhood to adulthood, although evidence from other investigations indicates there may be an association. Melchior et al⁴⁰ have also reported in a different longitudinal study that childhood experiences with abuse and neglect are associated with low adult educational attainment and earnings and with poor adult health status. Moreover, results from the Adverse Childhood Experiences (ACE) Study have repeatedly demonstrated that, controlling for all other factors, adverse experiences such as neglect and abuse are associated with major adult diseases such as diabetes, cardiovascular disease, depression, anxiety, and early mortality.⁴¹

In addition, newer research has begun to identify how adversity and traumatic events that occur in childhood have a decisive impact on behaviors, choices, and social relationships that extend into adulthood. In such contexts, adults may seek out violent relationships, may constantly be in a state of heightened aggressive arousal, may withdraw and experience social isolation, or may struggle to keep boundaries associated with normal social and professional behavior related to intimacy, safety and security, and job stability.^{42,43} Exposure to adverse experiences in childhood has also been linked to higher rates of worker absenteeism and stress surrounding work and finances in adulthood, indicating an association between adverse childhood experiences and later financial stability.⁴⁴

Toxic Stress

Recent advancements in neuroscience research shed light on the importance of a child's earliest years for later adult health and well being, as well as later economic activity.^{45,46} Given the variety of experiences with violence and hardship that are associated with adult health, the term "toxic stress" has gained importance in both public health and health policy fields.⁴⁷ Toxic stress describes a disrupted brain architecture as a result of stressful experiences, which affects other organ systems, and leads to a "prolonged activation of the body's stress-response systems." These stresses are primarily related to exposure to extreme poverty, abuse, neglect, exposure to maternal depression, and substance abuse by the caregiver.⁴⁵ Clearly, exposure to violence and poverty as a child could reduce the chances of these same individuals escaping poverty in adulthood.^{45,48}

Judging from our initial results, experiences with toxic stress may be the key to what fuels child food insecurity across generations. We suggest that food security researchers may benefit from reframing their approaches to focus on the childhood experiences of the adults in food insecure families. A life course perspective takes into account the intergenerational aspects of poverty that affect child health and well being and contributes to an understanding of child food insecurity not as a static event experienced over a month or a year but rather as a series of experiences that reverberate through adulthood. With a life course perspective, childhood experiences are shown to influence and shape adult health, ability to work, and earning potential.⁴⁹⁻⁵¹ In turn, this affects caregivers' ability to care for and nourish their children.

This emerging body of research can help to frame our understanding of child food insecurity and inform how policy and programmatic changes can help to treat and prevent child food insecurity. Explorations of the experiences of stress and trauma may assist in the redesign of nutrition assistance and income support programs such as the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), Temporary Assistance for Needy Families (TANF), Medicaid, housing assistance, child care assistance, and domestic violence prevention programs. Such new approaches test the current boundaries of what we know about child food insecurity, and we expect to encourage the USDA's Food and Nutrition Service (FNS) to collaborate with other agencies in order to help break the potentially interrelated and intergenerational cycle of violence and food insecurity.

Three Case Studies:

Mothers Who Experienced Toxic Stress as Children

The 3 women described here are a part of a participatory action, qualitative research project called Witnesses to Hunger. All 3 became involved during our initial round of recruitment in Philadelphia between 2008 and 2010, at which time 44 caregivers joined this project. This research used photovoice methodology and sought to increase the participation of mothers who have personal experiences with food insecurity and poverty in the national dialogue on ending child hunger.¹⁵ While the photographs taken by the participants formed the basis for in-depth qualitative research, at the same time caregivers have been involved in advocacy on a state and national level, using their photographs to educate policymakers about their experiences with food insecurity. Methods and participatory activities are described in another publication.¹⁵

Qualitative data collected in 2008 in the Witnesses to Hunger study demonstrate that exposure to violence in childhood and adolescence and exposure to community violence were primary concerns related to household food insecurity. Participants' exposures to violence were often severe and life-changing, and the most severe reports were reported by households that were very low food secure.⁵² Analysis of the same sample demonstrated that among households reporting very low food security, caregivers primarily reported exposure to severe violence when they were children. Such violence included rape, abuse, and neglect that had life-changing impact affecting their mental health, their ability to successfully complete school, and their ability to find and maintain employment.

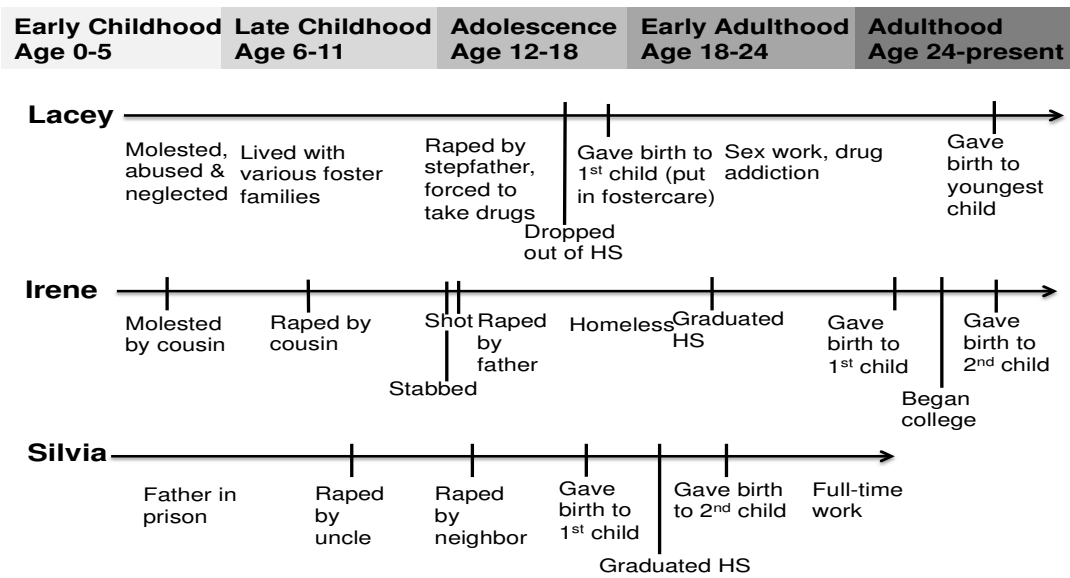
The alarming prevalence of qualitatively reported severe and life-changing violence in the Witnesses to Hunger sample led us to investigate exposure to violence over the life course with a more in-depth interview protocol among a subset of the same sample of women (29 of the original 44 participants). The Drexel University Institutional Review board granted approval for this "Toxic Stress Study" in 2011. Though we are still analyzing these semi-structured in-home interviews, we focus on 3 case studies that help exemplify how household and child food insecurity reported by a caregiver can have origins early in a caregiver's life.

The 3 women profiled below participated in the study in 2008 and 2011. Lacey, Irene, and Silvia are mothers of young children; each of the women has reported food insecurity at the child level. Their stories are similar to approximately 25 of the 29 women we have interviewed in the toxic stress study thus far. Each woman has described early exposure to childhood sexual abuse, homelessness, and risk of homelessness as children and had parents who experienced depression and/or substance abuse. For a description of their public assistance participation and basic health status, refer to Table 2. For an overview of significant events described by each woman, see Figure 1. Quotations below are excerpted from the second round of interviewing in 2011. We report from narratives taken directly from the interview transcripts. The ellipses [...] signify minor elimination of transition words, such as "like um," and repetitive phrases that do not alter the meaning nor proximity of words. Words inserted in brackets replace pronouns/indirect descriptions to clarify meaning outside of the context of the full interview.

Table 2. Characteristics of Participants in Case Studies

Characteristics	Participant		
	Lacey	Irene	Silvia
Mother's age (yrs)	32 yrs.	35 yrs.	24 yrs.
Index child age	5 yrs.	4 yrs.	4 yrs.
# children in household	3	2	2
Race/ethnicity	White	Black	Latina
Mother's birthplace	US born	US born	US born
Marital status	Cohabiting	Single	Single
Highest level of education	Grade School	Some College	Some College
Employment	Unemployed	Unemployed	Employed FT
TANF	TANF	No TANF	No TANF
SNAP	SNAP	SNAP	No SNAP
WIC	No WIC	No WIC	No WIC
Child health	Excellent/Good	Excellent/Good	Fair/Poor
Mother's health	Excellent/Good	Fair/Poor	Fair/Poor
Mother's depr. symptoms	Depressive Symptoms	Depressive Symptoms	Depressive Symptoms
Household food security	Very Low Food Security	Very Low Food Security	Very Low Food Security
Child food security	Very Low Food Security	Low Food Security	Very Low Food Security

Figure 1. Exposure to Toxic Stress over the Lifecourse



Gray bands indicate episodic or chronically occurring events experienced over several years. Hash marks indicate singular events or milestones.

Lacey: “The Mentality of the Hustle”

Lacey is a 32-year-old mother of 5 children. Her 2 oldest children, born while she was addicted to drugs and prostituting, were adopted by different families. When we first met her in 2008, she was caring for her 2 young children, and was pregnant with her fifth child. At the time, the young children’s father had been granted full custody of the children, and Lacey was only allowed to be with them under his supervision. She had been prevented from gaining custody over these children because in 2008 she was found to be taking care of them while using drugs. She receives Social Security Income (SSI) because of severe anxiety and depression that are too debilitating to allow her to work. When we met with her in 2011, she was living with the father of her 3 youngest children, although she was not legally allowed to be with the children on her own. Her children were receiving SNAP and TANF benefits but not WIC, and these benefits were managed by their father. The children stayed at home with Lacey during the day while their father, an undocumented immigrant, worked construction jobs, often for below minimum wage.

Lacey’s experiences with food insecurity reach back as far as she can remember. As early as age 3, she described trying to find food with her siblings any way they could. When asked if there were points in early childhood when she didn’t have enough to eat, she responded, “All the time. We were going to the store stealing stuff every day. We were bad kids. We’d sneak out of the house and go to the store and steal. We were just bad.” Her experiences with food insecurity are tied to extensive abuse and neglect that she and her siblings suffered at the hands of a substance-abusing mother and a string of babysitters and men involved with her mother who would stay in the house and abuse Lacey and her siblings physically and sexually.

Between the ages of 5 and 10, Lacey was placed in the foster care system, where she moved around to several different homes because she was seen as a “difficult” child. At age 10, she was returned to her mother’s custody. Her mother’s new husband then raped Lacey, repeatedly, from the ages of 13 to 15 and forced her to take drugs with him. At 15, she ran away from home and turned to sex work to provide for her basic needs. In this exchange with the authors during the interview, Lacey describes how hunger and sexual abuse led her to sex work:

Interviewer: Did you go and ask for food for your siblings? The little ones?

Uh-hum, yeah. I’ve always had that mentality of hustle. I mean if I didn’t have it, I would find a way to get it.

Interviewer: What kind of hustle?

[...] There is various hustling ways. We asked for donations for whatever cause. Or we'd make things and we'd try to sell them. Physically [through sex work]. Just different hustles.

Interviewer: Physically? Is that the biggest return? Is that the biggest dollar amount?

I would say so, yeah. It wasn't the biggest dollar amount return, but it was the most honest way to do it. I mean, like, we didn't have to go steal it. We didn't have to do anything. We used ourselves and we felt like we earned it. [...]

Interviewer: How did you learn how to do that?

I didn't have to learn it, from [my virginity] being taken from me [by rape...]. It wasn't hard to give, you know, I felt that I had it, I could use it. It wasn't hard to do it. [...]

Interviewer: How old were you when you started doing that?

Um, 15. Well, yeah 15 consensually. Before then it was my stepfather. So at 15, you know, I knew what I was doing.

Interviewer: What kind of things would you use the money for?

Whatever I needed: food, shelter, clothing, personal items, drugs, whatever.

Drugs became a part of the fabric of Lacey's life after she ran away from home. The drugs were readily available and helped her to cope with severe anxiety, depression, and sleep disorders, which continue to plague her today. While a teenager and on drugs, she gave birth to her oldest 2 children, who were adopted and have no contact with her.

Lacey met her 3 youngest children's father while doing sex work, which she calls "tricking." She says, "I tricked him. He paid. And that's the time I was dealin' with the crack house, and I was really out there. And he took me out of there." While she credits him with helping her to get out of the toxic environment in which she had been living, she also acknowledges that the 2 had been in a mutually abusive and unstable relationship for the past several years. She attributes the violence in their relationship in part to a frustration about not being able to meet their basic needs. When asked by the authors about how she came to have bruises on her arms, she responded:

[This is from] me and him fighting. It is kind of hard for him because there is no work for him because he is [not a legal resident], and there hasn't been too much work. So he ends up taking his frustrations out on us. I guess because he feels like he is not a

provider as much as he would want to be. He gets aggravated and we get into arguments and fights.

Lacey also sees a solution to this violence and frustration: “If we didn’t feel like we had to struggle or worry about how we’re going to come up with the next bill or food or whatever, then we wouldn’t be as angry at each other. We’d be a lot happier.”

Due to her history of drug abuse, Lacey does not have legal custody of the 3 children they have together. However, she maintains a relationship with their father in order to continue to see and take care of her children. Lacey tells us that she has been clean for the past 2 years and has devoted her life to caring for her children.

The family experiences the deepest level of food insecurity as measured by the HFSSM: very low food security among children. Lacey explains that she and her partner have never been able to meet their children’s needs and that hunger has been a constant feature of their children’s young lives. As she describes it, their struggles with food are linked to the fact that neither she nor her partner is eligible for federal assistance, due to his immigration status and her having been sanctioned because of her drug history. Lacey traces her mental illness and inability to hold down a job to the abuse she suffered as a child:

[...] I am not able to maintain a job now. I have a lot of issues that, had I not gone through the stuff that I went through, I feel I would have been a better person. I would have gotten a lot further. But because of the things that I went through, it held me back from becoming a lot better. I know if I was able to hold concentration or thoughts or my emotions or anything, I would be able to work and concentrate and do the things like other people can do. But because I have problems focusing and maintaining myself, I can’t hold a job.

She also describes that, developmentally, she sometimes feels that she is more able to relate to her young children than to other adults: “... Me and my kids have a ball. Like, I’m in their mentality. [...] I’m a grown up, but I love living their life.”

She has sometimes turned to prostitution to provide diapers and food for her children, and she lives in constant fear that she will never be able to get custody of them and will be kept out of their lives if she ends the relationship with their father. When we last spoke with Lacey, she had recently found out that she was pregnant and had been kicked out of the house by her children’s father. She was homeless and distraught over not being able to see and take care of her children.

Irene: “It’s All About Survival”

Irene is 35 and the mother of 2 boys, ages 4 and 10. She receives Social Security Income (SSI) for a disability she received as a result of being shot in the stomach when she was a teenager. The family receives SNAP but stopped receiving WIC because of a missed appointment. She claims she intends to reinstate her WIC benefits. After 10 years on a waiting list, Irene recently received a Section 8 Housing Choice Voucher. She now pays rent on a sliding scale based on her income. Her older son attends a charter school where he receives free school lunch, and the younger boy is cared for at home.

Irene was born to a teen mother and believes that her mother was not ready, emotionally or financially, to take care of her. She remembers not having enough food growing up and also recalls the family relying on government-provided cheese, powdered milk, and canned meat. One of her first memories is of being molested by an older cousin at the age of 4. She was raped by a different cousin at the age of 8. With both of these incidences she felt as if her mother never fully addressed the situation, and there was major friction among extended family. She described herself in adolescence as always angry and ready for a fight after the sexual abuse she suffered as a child:

I didn’t start fightin’ [my mother] until I was about 12. That’s when I just started fightin’ everybody. I was not gonna let anybody else touch me. I didn’t care if it was my mom, dad. [I’d] just started fightin’ everybody. So from 12 to about 18, I fought [a lot]. If you touched me, you looked at me, you rolled your eyes, you stepped on me, did anything to me, I was punchin’ on your face. Got locked up a couple times, stabbed a couple people. [I was] just angry, very angry.

She often fought in school and with neighborhood girls. In a fight at age 13, she was stabbed in the abdomen and required hospitalization. Soon after this incident, she was caught in the crossfire of a daytime heist at a neighborhood corner store while buying a pastry, and she was shot in the stomach. As a result of this injury, she was unable to walk for several months, and her appetite and ability to digest food changed dramatically. This made it even more difficult for her to get enough to eat. She still suffers from the effects of that injury.

Following the shooting and while Irene was still wheelchair bound, Irene’s mother became incapable of handling Irene’s aggressive behavior and sent Irene to live with her biological father, who repeatedly beat and raped her—even in her debilitated state. She attempted multiple times to return to her mother, but her mother would refuse and force her to go back

to her father. She describes the final time she came back to her mother's house after running away:

The last time I ran away, she held me down while he beat me, and then [...] he said, "Go in there and take a bath," because I was so [dirty]. I was on the streets for a couple days. I took a bath. He came in and made me have oral [sex] with him in the bathroom while my mom stood outside the door [...] So when I came out I just remember spittin' in her face. And she is like, "What is wrong with you?" I just remember (makes spitting noise), and I spit on her and I said "I hope you die." And then I didn't see her for a long time after that because the next time I ran away, I just stayed homeless.

Irene finally decided she had no safe place to stay and slept in an abandoned car while she worked at a fast food restaurant. She describes herself during these times as being homeless and very hungry:

I ate out of trashcans; I ate scraps from people. You know, a lot of girlfriends. I would go over to their house and act like I'm okay and stay for dinner. I have washed up in people's backyards with their little faucets. I have did every means of survival that I could think of, whether it be help out in the kitchen, cleanin', and they'll feed me. I did a lot of different things. I would go in the supermarket and eat grapes and leave. You know, eat a pear down an aisle, then leave. You know, it was all about survival. I didn't care about gettin' locked up for a pear. I would've told the judge, "Guess what, I'm hungry. Can you feed me? I promise I will never steal again if you could feed me, or give me a job to whereas I don't have to [steal], I promise I will never do it again." But I was hungry. I mean sometimes you have to do things to survive. It's a shame that it's, in your case, in your eyes, abusin' the system. But right now, in our eyes, it's about survivin'. And until you're in our shoes, you will never understand. Never.

Irene continued scraping by until she was finally able to save up enough money to get an apartment and some semblance of stability. Months later, she sought legal help to emancipate herself from her mother's custody and was placed in a job training program that helped her gain work skills and assisted her in getting a high school diploma.

Throughout the traumatic events of Irene's adolescence, unlike Lacey, she claims she never turned to drugs or alcohol in order to cope. She understands that many other people in her situation may not have had the same response:

When you go through a traumatic experience as your childhood, it devastates your adult life. Some people are able to come out of it. I'm still comin' out of it. But some people take the turn for the worse and they become prostitutes on drugs 'cause that's all they see. That's all they know how to function, or cope with whatever madness or traumatic experience they're goin' through. So I think it all intertwines with your adult life in every means. I don't see you ever bein' able to separate how you was raised as a child as your outcome as an adult. Sometimes it's a good thing, you get good things out of it. Some people take bein' poor and they say, "Oh, I will never be poor!" and they go and they, you

know, excel. But then sometimes, the majority of times, what happens is they keep it goin' 'cause that's all they know.

Here, Irene outlines 3 general responses of those who have survived difficult and traumatic experiences. According to Irene, in rare cases a person might be able to “excel” to get out of poverty, but more frequently they are only be able to maintain the status quo or fall deeper into despair. In any of those cases, the impact of those early experiences lasts into adulthood.

As Irene works to get herself out of poverty, she has been attending college part-time over the past several years and plans to get a bachelor's degree in behavioral health. Until she received the Section 8 Housing Choice Voucher a year ago, she lived in substandard, unsafe housing, surrounded by gun violence, violent and threatening neighbors, and mice infestations; sometimes she lived without heat or hot water. When we met her in 2008, the rent for her family's apartment was more than her total monthly income from SSI. Though her situation has improved in the past 2 years, she still struggles with feeding her children and herself. According to her responses to the HFSSM, Irene reported her household to be very low food secure and her children to be low food secure. After answering the questions used to measure household food insecurity asked by the interviewer, she explains that in the past she was not able to truly gauge the magnitude of her children's food insecurity because she was so stressed and overwhelmed by her poor housing and her financial situation. She describes how she underestimated the hunger her children were experiencing during her hard times:

I call it the dream world, the La-La Land, because you're dealin' with so much that you're overwhelmed that sometimes you even suppress what's really goin' on around you because it's too painful to deal with. A lot of times, I'll see something, and it could be right there in my face. But I'll act like it ain't there, it don't exist.

Irene communicates that since her situation has become more stable, she is noticing much more the things her children are experiencing, including how they are affected when there is not enough food in the house:

Sometimes it can be true [that my children were not eating enough], but a lot of times the only reason why I can say “no” right now is because I let myself starve to make sure they have.

Interviewer: Do you think they notice?

Yes, they do, 'cause my oldest son and me had a [fight] about hot dogs and Oodles of Noodles one time because I took from myself. [...] I can go longer [without eating]—a couple of days. My children don't know how to deal with the actual hunger. But I have been hungry for so long, I know how to deal with it if I gotta go 1 or 2 days, versus seein' them hungry and [in] pain and suffering. Plus, I need them to be able to focus. Like the oldest one in school, I need you to have attention span there. I don't need you to be worried about when is lunchtime because you're starving. And so that means I would make sure they have. [...] If I have to take from myself or send 'em to a friend's house just so they can have something to eat.

Interviewer: Do they notice that you're not eating?

Yes.

Interviewer: What happens?

[...] My youngest son, he'll just say make sure you eat, too. But my oldest son knows that I'm sacrificin' for him and it disturbs him and bothers him in a way that whereas though now I even try to fake it like I am gonna eat somethin', or I have every intentions on eatin' but I'm busy. So that way, in his eyes, "Okay, I'm gonna eat." So it won't affect him so much because he don't see his mom in pain or hungry or starvin' or anything.

Throughout, Irene has sought to protect her children from awareness of hunger and from community violence and other hardships she had to overcome. She has instilled in both children the strong ethic of education and hard work. Her older child receives good grades in school, and Irene is testing her younger child for a gifted educational program.

Silvia: "My Mother Never Showed Me"

Silvia is a 24-year-old mother of 2 children, ages 4 and 5. She works both a full-time job and a part-time job and describes herself as too busy to apply for most public benefits. When she spoke with us in 2011, she was re-applying for SNAP after having let her benefits lapse for several months and was not receiving WIC for her youngest child. She lives in a 3-bedroom house for which she pays market rent. An adult relative lives with her and provides childcare to the children while she is at work.

Silvia's father went to prison when she was a baby, and served 10 years for selling drugs. Without his support, her mother struggled to provide financially for her and her brother. Her mother also suffered from a mental disorder for which she received SSI. While Silvia was growing up, the family relied on public assistance and ate mostly cheap food such as canned ravioli and Ramen noodles. Silvia remembers being hungry often and recalls that her mother often ignored Silvia and her brother. Silvia and her brother would argue with each other and fight violently from a very young age. Once, her brother injured her to the extent that she had to be

hospitalized. At age 9, she was raped by her maternal uncle. She was raped again at the age of 14 when visiting a neighbor's house. After these experiences, her mother never provided the support and encouragement that Silvia explained that she desperately needed.

My mom never went to anything, anything. She didn't even go to the parent-teacher conferences. The only thing she ever went to was my fourth grade graduation. That's it. She never had that bond. She never showed me what was right and what was wrong. She told me about her being raped and how I was going to get raped 'cause she got raped and stuff like that. My mom got raped by her brother, the one that raped me [...]. When I got raped [by her brother], I gave her details. But once I told my mom in depth what happened and she didn't react the way I thought a mother should, I said I would never speak about it again. And I've never told anybody the details of what happened and I never will. I will talk about it like any other time that it happened to me. I would say it, but because that was my blood and my uncle, I won't ever tell anybody.

Silvia became pregnant in the twelfth grade and was able to complete her GED before the birth of her second child. She stayed with her children's father for several years, enduring physical abuse and sexual violence. During this time, he also spent time in prison for assaulting Silvia's brother. When her children were young, Silvia primarily lived with her mother, but doing so meant that, because she was under age 22, she could only legally receive SNAP benefits for herself and her children through the participation of mother. Her mother would sometimes refuse to share the family SNAP benefits with Silvia and her children and at times forced the family to live without heat or running water to save money. She would sometimes beat Silvia, leaving bruises on her body, and was often verbally and emotionally abusive.

Silvia moved out on her own 2 years ago, around the same time she ended the abusive relationship with her children's father. She began working full time a year ago and has tried to maintain various part-time jobs to pick up extra money. She struggles with providing food for her 2 children and is often behind on rent and utility bills. When asked to compare her current situation to her previous experiences with deprivation, she explained: "Things are so much worse. I never thought I would be in this situation. And the worst part about it is the fact that I have a job. The fact that now I have 3 jobs, but life happens, things happen and you always got to bounce back. You always got to find a way. And that's what I'm trying to do."

Silvia explained that she thinks she should be past the time in her life when she should be suffering, but she has struggled despite external signs of success such as working full time. She has not been receiving assistance for which she was eligible because she described herself as

too busy to apply for benefits. In addition, she recently devoted a substantial amount of money to help her father, who had fallen sick. This threatened her ability to pay the rent and resulted in the shutoff of her electricity and heat. During this time of hardship, she had sent her 2 children to stay with her mother outside of Philadelphia and therefore delayed her daughter's enrollment in school and subsequent access to free school breakfast and lunch. These are programs to which the majority of Philadelphia public school students have universal access.

Several people with whom she works have recognized her talent and intellect. She would like to go to college but cannot imagine how she would be able to support herself and her children. Her struggles with affording food now are worse than they were when she was a child. Even with her jobs, Silvia reports her household as very low food secure and her children to be very low food secure, according to her responses on the HFSSM. In addition to financial hardships, she worries also that she is unable to give her children the love and attention that they deserve:

My mom was always so depressed [...]; I don't think she's ever loved herself. What I'm afraid of is that I'm becoming similar to her in that way. Cause, like, I love my kids and I show it cause I would do everything and anything for my kids. But I don't hug them as much as I should.

Interviewer: Why do you think that is?

I don't know. I mean I have this complex. I really think that anything I get attached to just abandons me. And I feel like if I love my kids too much, they'll be taken away.

Silvia can see patterns in her own parenting that mimic those of her mother, although she knows that her mother made many mistakes. She refuses to get involved with drugs, even at the most difficult times, because to her drugs kept her father out of her life when she most needed him. In her interviews, she describes herself as paralyzed by her own fears, but she explains she is also hopeful that she can change her children's future. She wants them to be able to appreciate the beauty of the world and not to be shaped only by the negative things they have experienced:

If I don't do anything right, I want [raising my children] to be the one thing that I've done right in my life. Those kids are my everything. I want to show them what life is. What a real life is, with the things that they're supposed to feel. Like I want my kids to go to a meadow and just realize the beauty of the flowers, just little things like that.

Discussion

Lacey, Irene, and Sylvia teach us about hunger and food insecurity experienced over the course of a lifetime and through generations in a way that is undocumented in the literature. Looking back to their childhoods, we are able to see food insecurity present as either a constant or cyclical threat. These experiences shaped their childhoods to varying degrees, and as they and their children continue to struggle with food insecurity, they see their own struggles being repeated in the next generation.

These case studies suggest that adverse experiences in childhood and adolescence have a profound impact for years beyond the initial experience. The contours of child food insecurity may rest on extreme stress, anxiety, and depression. Exposure to violence in these cases are described as the most profound experiences shaping the participants' mental and physical health, earning potential, and food security status. We suggest there is a possibility that exposure to violence and neglect as a young child and adolescent are what distinguishes the caregivers who report child food insecurity from those who do not report child food insecurity.

A danger in communicating publicly about these exposures to violence (as both victims and perpetrators) is that there may be a tendency on the part of the public and lawmakers to place the blame on individuals for the violence they experienced and the poverty in which they have been trapped. Lacey, Irene, and Silvia do not seek to excuse the perpetrators of abuse they suffered nor justify their actions. They are acutely aware of the financial and social contexts in which these abuses occurred. They are aware also of their children's increased risk of being victims of abuse and violence based on their position in the world: growing up in violent neighborhoods, surrounded by family members who have abused others in the family, and/or exposed to the frustration and anger of their own parents, who are unable to make ends meet. These experiences highlight the overwhelming need for high-quality mental health and substance abuse treatment programs for low-income individuals and families.

While Silvia and Irene are in a very different place from Lacey, in that they are able to work and attend college, respectively, at this point in their lives, they and their children are still at risk. All 3 women and their children still struggle with food insecurity, and Silvia's and Irene's ability to visualize a better future for themselves and their children does not ensure that such dreams will be realized.

These cases call into question the concept of the "hard-to-reach population." This term is often used to describe those "on the margins" of society: people who are homeless, for example, or who engage in sex

work. They are often considered “hard to reach” because they may be reluctant to speak with outsiders, and traditional recruitment methodologies might fall short. Families experiencing food insecurity at the child level might also be considered “hard to reach,” given that paying a phone bill might be deemed less important than feeding the children or that frequent moves make follow up difficult. In a policy realm, these “hard-to-reach populations” can sometimes be ignored completely, because they are not deemed to be in great enough numbers to be statistically significant.

Yet another barrier when working with “hard-to-reach populations” is that many of their experiences are very painful to witness and difficult to comprehend. In this way, those who are “hard to reach” experience what economists may deem “unobservable” rather than unobserved. These individuals have underexplored experiences that have a strong impact on health choice, decisions, and capabilities. Not only may these factors shape people’s ability to find and maintain employment or continue with their educations, but they also affect their adult health and their ability to sleep, function, and remain healthy. It would be much easier to think about addressing the food insecurity Lacey, Irene, and Silvia are experiencing with programs designed solely to get food to people who need it. It is much more difficult to envision a way of undoing the damage created by years of exposure to traumatic experiences so that they will have the ability to move forward in their own lives and protect their children from suffering.

Conclusions: Implications for Research and Policy

Methods and frameworks of investigation have an extraordinary effect on the type of answers and conclusions of our studies. The qualitative approach we described here has deepened our understanding of the depths of food insecurity and the overwhelming adverse childhood experiences that may be related to it. Clearly, a life course approach with special attention to experiences during the formative years of early childhood and adolescence can help us understand how current caregivers have come to struggle as adults to feed their children.

To characterize accurately the experiences of child food insecurity, there must be a willingness to incorporate ethnographic methods that are inclusive and participatory. Exposures to violence as a child are not captured in the large datasets that track food insecurity and wage dynamics. While the kind of in-depth, qualitative research described in this paper does not provide the kind of quantitative data that often form the justification for many policies and programs, these cases do offer insight into the ways in which complex social problems may be connected.

Integrating these methodologies affords us the opportunity to think creatively about how to prevent and treat child food insecurity successfully.

Ways forward with quantitative research are to integrate measures of exposure to household and community violence and measures that capture adverse childhood experiences in the large national datasets that include the HFSSM.

We offer 3 general recommendations for systems-level change based on insight gained in this ongoing research: 1) create more coordinated approaches to address food insecurity; 2) expand an understanding of traumatic life experiences and their effects to all levels of the agencies administering income support programs and social services; and 3) involve the participation of those who are personally impacted by policies and programs in planning and implementation.

First, we must create more comprehensive responses to child food insecurity to include interventions that extend beyond nutrition assistance. We have learned from this research that child abuse, mental illness, homelessness, and other adverse child experiences can co-occur with child food insecurity and may also affect future experiences with food insecurity. National data show a clear relationship between socioeconomic status and all forms of child abuse and neglect.⁵³ However, as readers know, currently in the United States, we do not have a singular social safety net or anti-poverty program but rather a multiplicity of different programs on a federal and state level, each of which addresses some particular aspect of the experience of poverty. These efforts are rarely coordinated.⁵⁴

Nutrition assistance programs are a natural starting point for enhanced screening and support, as they serve families who have self-identified as needing assistance with food. Research has shown that nutrition assistance programs can protect against hospitalization, promote child development, and in our most recent Children's HealthWatch research, can mitigate maternal depressive symptoms.⁵⁵ What we have learned from Lacey, Irene, and Silvia is that no singular government program was able to protect them from the experience of food insecurity when they were children, yet these programs were prominent in their young lives. In programs such as WIC there are great opportunities for identifying families in need of assistance who are also experiencing issues of violence and mental health. Studies have shown that WIC offices can successfully integrate screenings for intimate partner violence into their regular appointment schedule⁵⁶ and that such screenings can be universally implemented in a clinical setting without additional staffing burden.⁵⁷ Some research suggests that simply screening for intimate

partner violence and providing a list of resources can be as effective as providing case management in reducing exposure to and severity of violence,⁵⁸ indicating that such screening would not place undue burden on WIC offices to provide follow-up support.

In addition to the vitally important nutrition assistance programs, more attention should be paid to programs and policies that relate to the well being of low-income children. This includes the availability and adequacy of childcare subsidies and Head Start, afterschool enrichment programs, financial literacy training, improved housing and neighborhood conditions to reduce drug trafficking and prostitution, and widespread violence prevention efforts.

Efforts must be made to foster greater coordination among the various federal agencies tasked with providing support to low-income and vulnerable families. A national task force to end childhood food insecurity, for example, should be created to uphold the President's pledge to end child hunger by 2015. As we have outlined previously, this task force should not be the sole domain of the USDA but should also include representation from the Departments of Health and Human Services, Housing and Urban Development, and Labor.⁵⁹ Greater coordination could be fostered if, as programs that primarily serve low-income children come up for reauthorization, any changes to the programs are considered in light of the measurable impact such changes may have on other programs that support the health and well being of children. For instance, if the health and well being of children had been used as a benchmark during the December 2010 tradeoff of digging in to the SNAP budget to fund the Healthy Hunger-Free Kids Act of 2010, legislators would have seen how such a change could have serious negative consequences for children who comprise 50% of SNAP participants. Our policy makers need to be held more accountable to consider the impacts of their policy changes on child health and food insecurity.

Second, advocates, policy makers, and administrators need to begin to speak about and address these unobserved experiences of childhood trauma. Such experiences cannot remain solely within the realm of the Administration for Children and Families division of the Department of Health and Human Services, the federal department under which child abuse has been addressed over the past several decades. The current nutrition assistance and other welfare assistance programs, as well as other social services, are not designed to be supportive to survivors of trauma.⁶⁰ One potential mechanism by which to shift these structures can be seen in Philadelphia, where in a groundbreaking shift, the Department of Human Services of Pennsylvania and the Office of Supportive Housing

of Philadelphia are undergoing training and restructuring based on a trauma-informed approach to client care.⁶¹ This is so agencies that are meant to help the most vulnerable families do not exacerbate the consequences of past trauma but rather find ways to incorporate attention to trauma in other services they provide. Such a model could be expanded to WIC and other nutrition programs serving families with children. Although it has been shown that caregivers who receive TANF underreport exposure to domestic violence,^{62,63} offices that administer TANF could incorporate screenings for violence and trauma in order to provide referrals and supportive services for families in need. Similarly, Head Start programs could also incorporate food security screening and domestic violence screenings to provide swift referral to SNAP, WIC, and other nutrition programs and to provide families with access to no-cost behavioral health and domestic violence support programs.

Finally, a true effort to end child food insecurity in the United States must include at the core, and at all levels of the process, the participation of those who know firsthand the experience of food insecurity. The full participation of those who know hunger, or are currently experiencing it, is difficult on multiple levels, and it is easy to see why it is typically avoided. It is difficult for those who have experienced the traumatic experience of very low food security to share those experiences with an audience that might be less than empathetic. For an individual whose interactions with government policy has been limited to the role of a passive recipient of services, it can be difficult to believe that speaking out might do anything more than result in being cut off of benefits. Full participation is also difficult because it forces all involved in the process to confront the messy, traumatizing nature of very low food security. But by integrating such knowledge, we are sure to develop smarter and more comprehensive programs and legislative policies that truly protect the most vulnerable children.

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