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Research Article

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Demographic Research: Volume 45, Article 37
Research Article

Food insecurity among homeless and precariously housed children in the United States: Lessons from the past

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Abstract

BACKGROUND
Little is known at the national level about child food insecurity (CFI) among homeless and precariously housed US families, given sample and measurement limitations of existing studies.

OBJECTIVES
Drawing on 1990s data, we document the monthly prevalence of CFI for these families, compare it to the prevalence for domiciled families, and examine sources of CFI variation within homeless and precariously housed families suggested by our conceptual model.

METHODS
The 1996 National Survey of Homeless Assistance Providers and Clients (NSHAPC) contains a small subset of CFI measures identical to those in the food security module of the 1996 Current Population Survey (CPS), facilitating homeless–domiciled comparisons. We employ multiple logistic regression to evaluate potential correlates of CFI among the NSHAPC families.

RESULTS
Monthly prevalence of CFI in the NSHAPC families far exceeds that of their poor but domiciled CPS counterparts. Within the NSHAPC sample, CFI is a partial function of family composition, parental vulnerabilities, food stamp (SNAP) allotment, and access to nutrition-relevant organizations such as schools and health care settings. The NSHAPC data also hint at the uneven distribution of services and programs across communities.

CONTRIBUTION
Our research employs older data to provide a nationally representative picture of the magnitude and correlates of CFI among homeless and precariously housed American

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families. We offer a conceptual model for understanding how family risk and protective factors, parents' use of external resources, and the local institutional context are associated with CFI. This framework may apply to domiciled households experiencing material hardship as well.

1. Introduction

Food insecurity refers, at a minimum, to expressions of anxiety about having enough resources to obtain the amount and type of food necessary for a normal, active life. According to 2019 Current Population Survey (CPS) data, 6.5% of US households with children contained at least one food-insecure child (Coleman-Jensen et al. 2020), a percentage presumably on the rise during the subsequent COVID-19 pandemic (Schanzenbach and Pitts 2020). In 213,000 of those households, one or more children exhibited the disrupted eating patterns and reduced food intake that satisfy the official definition of very low food security, or VLFS. Any degree of child food insecurity (hereafter CFI) is reason for concern, given its potentially harmful consequences for a young person's development, health, psychosocial functioning, academic performance, and socioeconomic attainment in adulthood (Alaimo, Olson, and Frongillo 2001; Cook and Frank 2008; Gundersen and Ziliak 2015; Kimbro and Denney 2015). Such outcomes have made the elimination of childhood hunger a recurring public policy objective.

Ironically, homeless children have attracted limited attention from food insecurity scholars, perhaps because of the assumption that "by definition, every homeless family is food insecure" (Alaimo 2005: 283). Fueling this assumption are the extreme poverty and tenuous residential circumstances of homeless people, which reduce the ability to purchase food, prepare meals, and preserve perishable items. While a link between homelessness and food insecurity holds intuitive appeal, certain features of existing research give us pause. One problem is that the CPS and other large-scale surveys do not adequately capture households who lack a phone number or permanent address or who experience high housing instability. As a result, no recent national samples produce credible estimates of food insecurity among homeless and near-homeless families that can be compared to CPS benchmarks for the general population. The expansion of the homeless service infrastructure since the 1980s (Burt, Aron, and Lee 2001) further challenges the association of food insecurity with homelessness since access to free meals at shelters and other locations has increased over time. Absent definitive evidence on such issues, we begin our analysis by documenting the monthly prevalence of severe food insecurity among homeless and precariously housed children and their families and determining if it differs from that of domiciled households.

This comparison does not imply uniformity in the food situations of either the homeless or domiciled population. For example, a variety of studies find that some homeless persons are more food insecure than others (Baggett et al. 2011; Lee and Greif 2008; Whitbeck, Chen, and Johnson 2006). Our principal objective here is to explain *why* homeless families vary in their degree of CFI. Departing from the descriptive emphasis of much food insecurity scholarship, we develop a conceptual model that treats CFI as a function of risk and protective factors – including family composition, parental capital, and parental vulnerabilities – and the use of external (i.e., extra-household) resources such as food stamps/SNAP[3] or other forms of assistance. Parents' efforts to keep their children fed are more likely to be successful when these resources are abundant. Hence the final component of our model, institutional context, comprises the supportive policies, services, and programs that are locally available to homeless and near-homeless families. The adequacy of this context has been shown to differ markedly across communities, even those that are comparable in size (Burt, Aron, and Lee 2001).

We evaluate portions of the model with older yet unexploited data from the 1996 National Survey of Homeless Assistance Providers and Clients (NSHAPC). A few insights about institutional context are gleaned from the provider survey data, but measures of this component cannot be formally incorporated in the evaluation. Our analysis relies instead on the client survey, which contains selected adult and child VLFS measures from the CPS food security module for a national probability sample of service-using family households living in poverty that were currently homeless or precariously housed at the time of their NSHAPC interviews. The households in the latter group, some of whom had been homeless in the past, are retained in the analytic sample because of their broad similarities to the currently homeless families in socioeconomic status, parental background, and family composition. Together, the two groups comprise 714 parent respondents and the 1,561 children under the age of 18 in their care. The NSHAPC data paint a fuller picture of CFI among such families than has previously been seen. They also facilitate a comparison with CFI in the US domiciled population as measured in the 1996 CPS.

One might wonder whether a picture now 25 years old has any relevance today. While the consequential nature of certain intervening events (e.g., welfare reform, the Great Recession) cannot be ignored, the late 2010s (prior to the COVID-19 pandemic) and the mid-1990s resemble each other in several key economic and policy respects. So do the compositions of the homeless populations during these two periods. A case for the NSHAPC data can be made on scientific grounds as well. We maintain that 'seasoned' evidence of this sort may prove valuable for explanatory purposes if there is little reason

[3] The US food stamp program was renamed in 2008, in part to lessen the stigma associated with the 'food stamp' label, and is now officially known as the Supplemental Nutrition Assistance Program, or SNAP (US Department of Agriculture 2018). We use the two names for the program interchangeably.

to expect variation in CFI or its sources among homeless families to have changed dramatically over time. Moreover, such evidence has exploratory value, providing a foundation on which contemporary studies of the phenomenon might be built.

Finally, the NSHAPC data allow us to make a contribution to food insecurity research that extends beyond the homelessness literature. Many of the variables included in our conceptual model of CFI operate in domiciled families, not just homeless ones. As an illustration, parents experiencing mental health or substance abuse problems might struggle to prepare adequate meals for their children or ensure access to food assistance even if they are stably housed. Thus we suspect that family risk and protective factors and parents' use of external resources are salient to CFI in instances of material hardship less extreme than homelessness.

2. Background

2.1 Homeless families

The literature on homeless and precariously housed families highlights the stressful circumstances faced by parents as they try to meet their children's day-to-day needs (e.g., Choi and Snyder 1999; Schweid 2016; Vissing 1996). Although conditions clearly differ among families, a common theme is that food insecurity goes hand in hand with insecurity in housing, employment, and safety (Desmond and Kimbro 2015; Waxman 2017). This combination of challenges can feel overwhelming, particularly for the women who often head homeless and near-homeless families and who may suffer from personal vulnerabilities or inadequate social support (Howard, Cartwright, and Barajas 2009; Marra et al. 2009). Struggling to conform to the cultural norms of motherhood, these women worry about being perceived as neglectful and having their children taken away (Connolly 2000; Elliott and Bowen 2018). The sporadic involvement of fathers in their children's lives adds further turbulence to an already difficult situation.

In America many homeless families spend time in emergency or transitional shelters (US Department of Housing and Urban Development 2018). Shelter settings often constitute reasonable adaptive strategies, offering a modicum of structure and predictability (Friedman 2000). However, some are noisy, crowded, and erosive of parental control, forcing families to adhere to a rigid daily schedule or abide by policies that impinge on parents' decision-making autonomy (Choi and Snyder 1999; Connolly 2000; Pable 2012; Perlman et al. 2012). These features – also present to a degree when a family doubles up with another household – have been shown to undermine parents' responsiveness to children and the monitoring of their behavior (Narayan 2015). The

most extreme case, living on the streets, further compromises the ability of parents to provide for their offspring's well-being.

The immediate residential situation of homeless and precariously housed families is likely to heighten the odds of CFI when it limits access to food and kitchen facilities and constrains the choices of parents and their children about what, when, where, and how much they eat, not to mention with whom. Residential instability also interrupts school attendance, which in turn might keep homeless youths from receiving free or low-priced meals and snacks. Such instability can reduce information about and engagement with other institutions as well. For instance, homeless parents have low participation rates in certain government programs for which they are eligible (Greenberg and Baumohl 1996), including ones that might directly or indirectly address the nutritional needs of their offspring. Even though most do participate in SNAP (Gubits et al. 2013), there are nevertheless good reasons for expecting that homeless families in general are at high risk of being food insecure. This risk level leaves open the possibility that some families will possess the characteristics, resources, and support to avoid CFI.

2.2 Child food insecurity

Our research is partly motivated by the tenuous empirical foundation that past work has laid. To date, few national studies have investigated the prevalence or antecedents of CFI in homeless and precariously housed families. Most studies are local in scope, based solely on homeless individuals from shelters or clinical settings, or concerned primarily with nutrition (e.g., Baggett et al. 2011; Gelberg, Stein, and Neumann 1995; Wehler et al. 2004). Two partial exceptions to this rule stand out. The first, HUD's 12-city multi-wave Family Options Study (FOS), found that more than two-fifths of all sheltered families in the control group were still food insecure after three years, although the food insecurity survey questions inquired about the status of only adult family members (Gubits et al. 2016). The second exception is an analysis of the NSHAPC data that documents widespread food insecurity among homeless adults, especially those defined as long-term or chronically homeless (Lee and Greif 2008). Substantial majorities of the chronically homeless respondents reported eating infrequently or not getting enough food of the kind they preferred, while about one-half had recently gone a day without eating or were unable to afford food when they were hungry.

Much of what is known about severe food insecurity among homeless children comes from examination of the subsistence techniques that adolescent runaways and street youths employ as they try to survive on their own (Dachner and Tarasuk 2002; Whitbeck, Chen, and Johnson 2006). However, children in homeless and precariously housed families are younger and have at least one parent who is present and caring for

them. We might therefore anticipate them to be relatively food secure, but the scant evidence available remains inconsistent. Homelessness was more common for both school-aged and preschool children in the food-insecure than in the food-secure low-income households (near or below the poverty line) in the Worcester Family Research Project sample. More than one-half (55%) of the adults in the sample manifested food insecurity, yet that figure dropped to 17% for children, congruent with parental shielding behavior (when parents reduce their own food intake so that their children have enough to eat) (Gundersen et al. 2003; Wehler et al. 2004). By contrast, a study of homeless children in Minneapolis shelters (Smith and Richards 2008) reports large shares not having enough food (55%) and going to bed hungry (25%). Such different results are unsurprising, given the local scope of these investigations and their reliance on noncomparable food insecurity measures. They also point to the likelihood of real variation in CFI among homeless and precariously housed families.

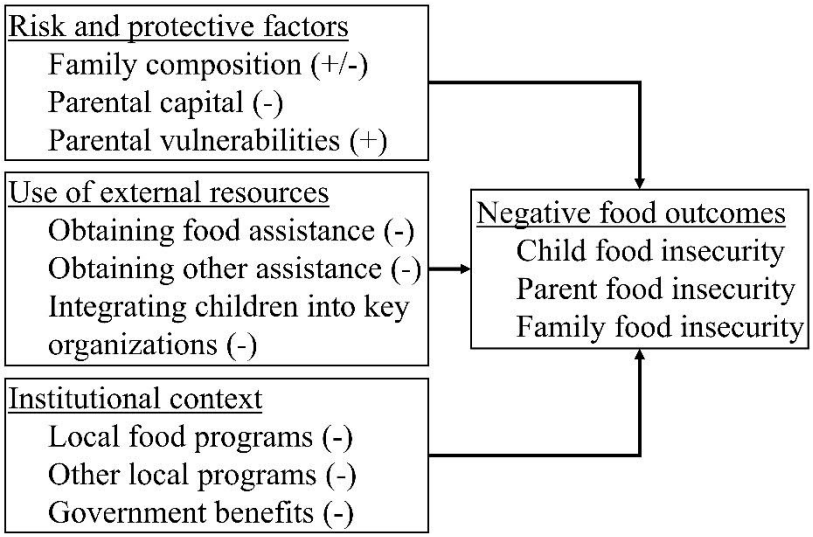
2.3 Conceptual framework

Another limitation of existing homelessness research is the lack of a comprehensive framework that recognizes the individual, family, and institutional antecedents of this variation in CFI. Before proposing one, we make explicit a process alluded to earlier: the selection of women into single parenthood within the homeless and precariously housed population. These women are likely to have experienced poverty during childhood, with negative consequences for their subsequent life chances. Their transition to homeless or near-homeless status is frequently preceded by conflict in the family of orientation, early childbearing, union dissolution, and male partners who provide little support for the offspring they father (Connolly 2000; Wildeman 2014). Normative pressures further encourage female custodial and nurturing responsibility for children (Devault 1991). This confluence of forces leaves women disproportionately exposed to housing instability and ultimately homelessness (Choi and Snyder 1999; Desmond 2012). The fact that most NSHAPC families are headed by single female parents underscores the significance of gender in any explanation of CFI.

Because of the high prevalence of single motherhood, we must look beyond parental gender for sources of heterogeneity in food insecurity. Why are some homeless and precariously housed children food secure while others are not? A partial answer can be found in empirical work on food insecurity in domiciled households, which identifies three sets of risk and protective factors as potential correlates (Anderson et al. 2016; Chilton, Rabinovich, and Woolf 2014; Coleman-Jensen, McFall, and Nord 2013; Gundersen and Ziliak 2014; Rose, Gunderson, and Oliveira 1998). As shown in the top box of Figure 1, our first set of factors describes family composition, specifically the

number and ages of children and the number of parents present. The risk of food insecurity is expected to be higher when a family contains more or older children, to be lower when there are fewer or younger ones, and to be higher with one parent rather than two. Mechanisms accompanying these compositional attributes include greater competition for food among numerous offspring and the tendency of parents to focus on their younger, more vulnerable children while hoping that older children provide for themselves. Also, getting everyone enough to eat becomes more difficult when – all else being equal – this function is the responsibility of one adult instead of two. The caveat here is that a problematic spouse (husband) might make things worse.

Figure 1: Conceptual model of food insecurity



The second set of factors comprises parental capital, broadly construed as socioeconomic characteristics conducive to food acquisition. Literature cited in the preceding paragraph finds that household food insecurity is negatively associated with parents' education, income, employment, and social network support. Third, studies of domiciled, low-income, and homeless families demonstrate that the risk of food insecurity increases in response to parental vulnerabilities. Among these vulnerabilities are parents' physical and mental health problems, substance abuse, and stressful life events (e.g., childhood molestation or neglect, adult victimization) (Baggett et al. 2011; Gundersen and Ziliak 2014; Noonan, Corman, and Reichman 2016; Nord and Bickel

2002; Wehler et al. 2004). Such problems may interfere with the performance of routine tasks such as meal planning and preparation, even in the presence of abundant parental capital.

The middle box in the figure reflects parents' use of external resources that are likely to improve their children's well-being. We have identified several such resource utilization efforts – some focused on food security and others more general – with corresponding measures in the NSHAPC data. The most obvious ones include obtaining food assistance, such as signing up for food stamps through SNAP. Parents can also seek other kinds of assistance in the form of income support or non-cash help from government agencies and nonprofit service providers. Finally, they might integrate their children into key organizations that promote food security. For example, ensuring consistent school and preschool attendance is a way to increase access to meals or snacks, while regular medical and dental care could alert parents to nutritional deficiencies experienced by their children. Evidence on low-income households suggests that the use of each type of resource is associated with reduced food insecurity for both parents and children (Bartfeld and Ahn 2011; Bartfeld et al. 2015; Schmidt, Shore-Sheppard, and Watson 2016).

The success of parents in meeting their offspring's sustenance needs depends in part upon the nature of the institutional context to which families can turn (lower box in Figure 1). This component is included in the conceptual model for theoretical completeness even though its importance cannot be empirically adjudicated for the NSHAPC families. Government programs, including food assistance, welfare, unemployment insurance, and other cash benefits, remain a significant feature of that context, differing in generosity from state to state (Bartfeld and Men 2017). In recent decades, the burden of service provision has increasingly shifted to secular and faith-based nonprofits operating at the local level (Allard 2009). These organizations offer people who are experiencing poverty in-kind assistance with food, housing, health care, and other basic resources.

Research documents considerable variation across communities in the number and types of services available and their capacity to meet demand (Allard 2009; Burt, Aron, and Lee 2001; Marwell and Gullickson 2013). Such geographic unevenness can be traced to federal devolution and intensifying local competition for funding, which boost organizational turnover in the service landscape (Allard 2009). Even those providers receiving federal or state support often differ in administrative processes and informal practices (Brodkin and Majmundar 2010). The implication for our conceptual model is that the likelihood of CFI will be shaped by the ease (or difficulty) homeless families experience when seeking resources in local environments with more or fewer service providers.

In the analysis that follows, we begin with the negative food outcomes box in Figure 1, describing the monthly prevalence of CFI and parent food insecurity among homeless and precariously housed NSHAPC families and comparing CFI in those families to levels

for their domiciled counterparts. The explanatory portion of the analysis then examines how the risk and protective factors and resource utilization variables (left side of the figure) are related to CFI in the NSHAPC families. Note that only the direct effects of these antecedents are considered, even though some could operate indirectly as well. Also, the arrow running from institutional context – especially local programs and services – to CFI remains unexamined in the NSHAPC sample since we cannot link contextual data to specific families.

3. Methodology

3.1 Data sources

The best source for answering our questions about the prevalence and antecedents of CFI in homeless and near-homeless families is NSHAPC, sponsored by the Interagency Council on Homelessness and fielded by US Census Bureau personnel in late 1996 (Burt et al. 1999; Burt, Aron, and Lee 2001). NSHAPC featured a multistage probability sample of geographic units, service providers in the selected units, and clients using the selected services. The sample of geographic units comprised 28 large metropolitan areas, 24 medium and small metro areas, and 24 clusters of rural (non-metro) counties. Telephone and mail surveys were employed to gather information from 16 diverse types of service providers within each geographic unit. To be eligible for inclusion, a provider had to serve homeless people, but most providers helped others in need as well. Finally, face-to-face interviews were conducted with clients drawn from a sample of service providers in each area. We rely primarily on this client survey, although the service provider data are briefly discussed later.[4]

Of the 4,084 total client respondents, our analytic sample is restricted to 714 adults who were parents with one or more of their own children under age 18 in their care. Two-thirds of the parents (n = 473) qualify as currently homeless, lacking a permanent and adequate nighttime residence of their own. The unweighted sample of parent respondents also includes 241 poor but domiciled service-using persons, some of whom had been homeless in the past. These domiciled persons make up what we refer to as the 'precariously housed,' an apt term given their tenuous living arrangements: Two-fifths had spent at least one night during the week before the interview at a location other than their residence. Most of our analysis combines the homeless and precariously housed families, focusing on levels and correlates of CFI for the group as a whole. This approach

[4] The NSHAPC client survey codebook, which contains the wording of the interview items used in our analysis – including those measuring food security and all independent and control variables – is available at https://www2.census.gov/programs-surveys/nshapc/technical-documentation/codebook-client-data.pdf.

acknowledges what the NSHAPC families have in common: difficult social and economic circumstances, an insecure residential situation, and the use of service providers to meet basic needs.

Missing data for the currently homeless and precariously housed families were not extensive, with only five variables exceeding a missingness rate of 5%. Nevertheless, we employed multiple imputation via chained equations to create 50 waves of imputed data, following the advice of Bodner (2008) and others. This approach has been shown to produce more precise estimates than the common practice of relying on ten or fewer imputed waves. The 50 waves were combined in both descriptive and regression analyses to adjust for within and between variance in the imputed samples (Acock 2005). Our imputation model included the main dependent variable – a composite CFI measure – and an analogous parent measure, which had only eight and three missing cases, respectively. Omitting these missing cases did not alter the results reported here. All analyses were conducted in Stata, while RStudio was used for graphing.

The NSHAPC client survey remains more geographically extensive in scope than subsequent investigations of our topic. Its careful design also heightens representativeness, permitting adjustment for the probability of selection into the study. We apply a sample weight variable to account for (1) the probability of selecting a service provider from which respondents were recruited and (2) clients' characteristics, including their frequency and types of service usage. Because some clients used services from two or more providers, the sample weight has been constructed to preclude their double counting. This weight ensures that NSHAPC estimates do a reasonable job of reflecting the national population of clients who consumed any homeless services in an average week during the mid-October through mid-November 1996 survey period.

To compare the magnitude of CFI in the sample families to that of domiciled families, we utilize the food security supplement from the 1996 CPS. For decades the US Census Bureau has carried out the CPS, interviewing a large sample of households representative of the national population located in housing units with at least one civilian occupant. The food security supplement, which contains items originally developed by the US Department of Agriculture (USDA), is among a number of monthly CPS modules on social and economic issues. In the September 1996 supplement, a knowledgeable adult in each household was asked about food consumption and concerns during the previous 30 days and the previous year. Our analysis employs a handful of CFI measures – all with NSHAPC counterparts – for family households, defined as having at least one parent and one child present. We extracted these measures and a few other variables from the 1996 CPS microdata file, made available online by the National Bureau of Economic Research.[5]

[5] Technical documentation for the CPS module can be accessed at https://www.nber.org/research/data/current-population-survey-cps-supplements-food-security.

3.2 Food insecurity measures

As in the CPS module, NSHAPC parents reported on the food situations of their children in the aggregate rather than on each child separately. The numerous topics addressed in the interview limited how many questions about CFI could be included. Three of those questions are nearly identical to items that fall at the extreme end of the USDA child food security scale contained in the CPS, denoting VLFS (Coleman-Jensen, McFall, and Nord 2013; Nord and Bickel 2002; Nord and Hopwood 2007). The three items constitute a subset of the eight items in the child scale. These in turn are part of the 18 items that make up the full USDA/CPS household food security scale. Because they capture reduced food intake and disrupted eating patterns, the three CFI questions featured in NSHAPC are thought to indirectly indicate the presence of hunger. Analyses of the three with CPS data have consistently ranked them as more severe than the five other child items and thus less often affirmed by respondents (Bickel et al. 2000; Nord and Bickel 2002). The high bar they set for CFI among NSHAPC families should be kept in mind.

Homeless and precariously housed parents were asked if in the past 30 days any of their children (1) felt hungry but the parent couldn't get food, (2) skipped a meal because the parent couldn't get them enough to eat, or (3) went a whole day without eating anything. The three items, all dichotomies, are used to create a binary composite measure indicating whether any child had suffered from one or more of the three component conditions.[6] To measure parental food insecurity, a key control variable, we rely on two questions borrowed from the USDA food security scale: adult versions of the felt-hungry and day-without-eating items. A third item, asking parents how many times they usually ate in a day, provides an indicator of food insecurity when recoded to "under three meals." Following the procedure for children, we combine these items into a single binary measure. (For more detail on the food insecurity measures, see our online supplement at https://github.com/lippertam/DemographicResearch-LeeLippert.)

There are two important differences between the NSHAPC and CPS food security data. First, only the occurrence of food insecurity in the month prior to interview can be tapped with our NSHAPC measures, while research relying on the CPS normally examines annual prevalence. Fortunately, past-month measures are available in the CPS files as well, allowing us to maintain temporal comparability. The second difference

[6] Our binary measurement of child and parent food insecurity is grounded in both conceptual and methodological considerations. Because we sought to identify any evidence of severe CFI and its correlates, alternative approaches that quantify degrees of severity in CFI seemed inappropriate. Such approaches are illustrated by the USDA's method of categorizing households into levels of adult and child food insecurity based on scores derived from item-response models that rank individual food insecurity items according to their severity or 'difficulty' (Bickel et al. 2000; Nord and Bickel 2002). Methodologically, this kind of sophisticated measurement approach is viable when using all 18 items in the USDA household food security scale. However, when limited to the three CFI items available in the NSHAPC data file, it may yield unreliable results.

concerns the extensive validation efforts undertaken for the USDA food security scales in the CPS and the lack thereof for the rather sparse NSHAPC measures. To address this issue, we have evaluated the correspondence between the two sets of measures using the 1996 CPS data alone. The results of the analysis, available in the online supplement, suggest an acceptable degree of agreement.

3.3 Independent variables

The three sets of risk and protective factors discussed previously are included in our empirical evaluation of the conceptual model. We capture family composition with the total number of children under age 18, dummy indicators for their distribution across age categories, and the presence of a spouse or partner accompanying the parent respondent. To gauge parental capital, we use the parent's educational attainment, employment status at the time of the interview, and share of her (or his) lifetime spent working. Another measure taps the social support dimension of capital: whether the family had received any financial assistance from relatives or friends in the previous month. Parental vulnerabilities are both adult and childhood problems. To assess the former, we look at the number of chronic health conditions reported, mental health and alcohol/drug problem indices, and a dichotomous measure of whether the respondent was ever incarcerated. For the latter, we draw upon indicators of abuse or neglect, school difficulties, and foster care placement, all while under 18 years old. (Our online supplement provides additional information about several of the risk and protective variables.)

We employ five variables that represent the effectiveness of a family's use of external resources to meet its sustenance needs. The first is a quasi-continuous indicator of the value (in $25 increments) of any food stamp/SNAP allotment received. Separate indicators reflect parental efforts to obtain other government assistance (SSI, Social Security, veterans' benefits, Medicaid, etc.) and to seek various types of non-cash or in-kind aid in the previous month (for help with clothing, transportation, legal matters, employment, and the like). The government assistance variable is dichotomous (current receipt of any assistance), while in-kind aid is tapped with a ten-item additive index. We measure the share of children in a family enrolled in day care, preschool, or conventional school (K–12) and whether children are receiving adequate medical and dental care. These last two measures proxy the ability of parents to integrate their children into organizations that can provide meals or monitor nutritional status. A later section briefly speculates about how these family-level forms of resource utilization may be conditioned by variability across local service environments.

Finally, our model assessment includes controls for the parent respondent's gender, age, race, homeless status (currently homeless versus precariously housed), and location in an urban, suburban, or rural community. We control for parental food insecurity as well, presenting distributional information on this variable in Table 2. Weighted descriptive statistics for all other independent variables can be found in Table 1. The means show that NSHAPC families in our analytic sample contained approximately two children on average, that just over half of the families were currently homeless, and that almost as many resided in an urban community. These families were headed by single female parents in their early 30s, somewhat more likely to be white than Black, who possessed limited education and were unemployed. Although a disproportionate number of parents reported personal vulnerabilities, many had accessed resources through relatives or friends, government programs, or organizational settings. (For descriptive information on the homeless and precariously housed segments of the sample, see Appendix A.)

Table 1: Description of risk and protective factors, external resource use variables, and controls (N = 714)

Variable	Mean/ Proportion	SE	Range
Family composition			
Number of children	2.17	.09	1–7
Ages of children			
All ≤ 5 years (ref)	.33	.04	
All > 5 years	.41	.04	
Mix of ages	.26	.04	
Accompanied by spouse/partner	.27	.03	
Parental capital			
Education			
Less than high school (ref)	.43	.04	
High school/equivalent	.28	.03	
Postsecondary	.29	.04	
Current employment			
Not working (ref)	.67	.04	
Working temporary job	.12	.04	
Working steady job	.22	.03	
Lifetime work history			
Worked half of lifetime or less (ref)	.40	.04	
Worked more than half of lifetime	.60	.04	
Received financial support from family/friends (past month)	.32	.04	
Parental vulnerabilities			
Count of chronic health conditions	.80	.07	0–5
Mental health problem index	.10	.01	0–.95
Alcohol or other drug problem index	.22	.04	
Ever incarcerated	.23	.04	
Abused or neglected as minor	.23	.03	
Experienced school problems as minor	.53	.04	
Placed in foster care as minor	.16	.03	

Table 1: (Continued)

Variable	Mean/ Proportion	SE	Range
Use of external resources			
Current food stamp allotment (in $25 increments)	5.56	.43	0–16
Current receipt of other governmental assistance	.62	.04	
Sum of recent non-cash assistance sources	1.29	.12	0–10
Children's medical/dental needs met	.82	.03	
Children in day care/preschool/school			
None (ref)	.23	.04	
Some	.24	.04	
All	.52	.04	
Controls			
Gender (female)	.81	.04	
Age (in years)	32.93	.58	17–66
Race/ethnicity			
Non-Hispanic white (ref)	.43	.04	
Non-Hispanic Black	.34	.03	
Hispanic	.14	.02	
Other	.09	.04	
Currently homeless	.52	.04	
Location			
Urban (ref)	.47	.04	
Suburban/urban fringe	.18	.03	
Rural	.34	.04	

4. Results

4.1 Prevalence of child and parent food insecurity

We address our initial empirical objective in Table 2, documenting levels of child and parent food insecurity. According to the left column of the upper panel, 12.6% of NSHAPC families had experienced severe CFI in the preceding month based on our composite variable. Skipping meals was the most common form of insecurity among children while going an entire day without eating was the least common. Among families with CFI, 57.6% reported one specific insecurity item and the rest reported two or more.

Table 2: Child and parent food insecurity (N = 714)

Food insecurity measure	Full sample % (SE)	Currently homeless % (SE)	Precariously housed % (SE)
Child			
Felt hungry	7.0	8.8	5.0
	(1.8)	(3.2)	(1.6)
Skipped meals	10.3	8.9	11.7
	(2.6)	(3.3)	(4.0)
Day without eating	1.7	1.0	2.3
	(.6)	(.5)	(1.1)
Composite variable	12.6	11.4	13.9
	(2.6)	(3.4)	(4.0)
Count of items endorsed by families with CFI (%)			
1	57.6	42.9	70.7
	(11.1)	(14.0)	(11.5)
2	34.2	50.2	19.9
	(11.0)	(15.4)	(8.9)
3	8.2	6.9	9.4
	(3.8)	(4.1)	(6.1)
Parent			
Felt hungry	23.7	23.1	24.4
	(3.1)	(4.4)	(4.3)
< 3 meals/day	51.3	45.9	57.2
	(3.9)	(5.8)	(4.7)
Day without eating	33.7	36.0	31.3
	(3.6)	(5.5)	(4.6)
Composite variable	60.7	56.0	65.7
	(4.0)	(6.3)	(4.5)
Count of items endorsed by families with AFI (%)			
1	43.6	36.6	50.0
	(4.2)	(5.4)	(6.1)
2	33.2	39.2	27.6
	(4.1)	(6.2)	(5.3)
3	23.2	24.3	22.3
	(4.1)	(6.2)	(5.3)

Two consistent differences are worth noting in the remainder of the table. First, the prevalence of food insecurity was much greater for parents (lower panel) than for their children, with three-fifths of the former (60.7%) responding affirmatively to one or more of the adult survey items and 56.4% to two or more. This difference hints at the occurrence of shielding (Dammann and Smith 2009; McIntyre et al. 2003). However, another portion of the difference could be due to parental underreporting of CFI. Because NSHAPC interviewers were not known and perhaps not trusted by parent respondents, fear of losing one's children might have motivated untruthful answers. It is also possible that parents were influenced by social desirability bias, or they may have been unaware that their children were feeling hungry or anxious about food, especially if the children attempted to hide this fact (see Fram et al. 2013; Nord and Hanson 2012).

The second difference is that CFI turns out to have been somewhat *less* likely among currently homeless than among precariously housed families, both overall (11.4% versus 13.9%) and on two of the three component items. Homeless parents' food insecurity was generally lower as well.[7] This seemingly anomalous difference could result from the concentration of the homeless families in shelters, which – despite their disadvantages – often provide regular meals and a structured routine when compared to the chaotic circumstances faced by many of the precariously housed. The NSHAPC data also show that homeless families received larger average food stamp allotments and received non-cash assistance from more sources than did their precariously housed counterparts.

4.2 Comparisons with domiciled families

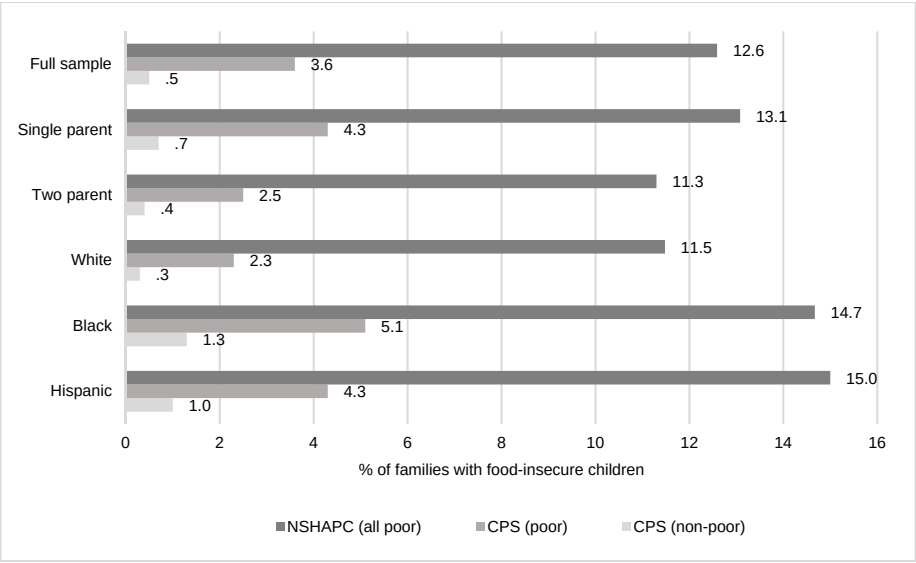
The other part of our first objective considers severe CFI among homeless and precariously housed families within a comparative framework. Specifically, we juxtapose composite measures based on the same CFI items (felt hungry, skipped a meal, went a day without eating) for members of the NSHAPC sample and the domiciled families who participated in the 1996 CPS. Figure 2 displays 30-day prevalence estimates for NSHAPC (dark bars), CPS poor (gray bars; at or below the 1996 federal poverty line), and CPS non-poor (light bars; above the poverty line) families, broken down by the number of parents present and race. Striking contrasts are apparent at a glance. For example, CFI was reported by 12.6% of the homeless and precariously housed families but by far smaller shares of poor and non-poor domiciled families (3.6% and 0.5%, respectively). This rank ordering holds for single-parent and two-parent families and across all racial categories. Differences between NSHAPC respondents and the domiciled poor tend to be largest for white and two-parent families – the NSHAPC estimates are about four to five times greater – yet the gaps remain substantial for one-parent and Black and Hispanic families as well (three to four times greater).

Simply put, the prevalence of CFI in homeless and near-homeless families dwarfs that in domiciled ones, regardless of the latter's poverty or other characteristics. Because of the aggregate nature of the CFI measures, which refer to any of the parent respondent's children, this prevalence translates into 90 of the 714 families in our analytic sample having at least one food-insecure child. Ninety thus represents a lower-bound estimate of the actual number of food-insecure children. We can also define an upper bound by assuming that parents' reports apply to *all* offspring in their care. That assumption pushes the upper bound to 197 children, more than double the lower one. Note, however, that

[7] Despite their lower prevalence, CFI and parental food insecurity in the currently homeless families were based on the endorsement of multiple insecurity items more often than in the precariously housed families.

the families not reporting any CFI – at least of the severe kind tapped by the NSHAPC measures – contain a total of 1,364 children.

Figure 2: Child food insecurity in NSHAPC and CPS family samples



4.3 Model assessment

Table 3 summarizes our main empirical task: to evaluate hypotheses about the correlates of severe CFI in homeless and precariously housed families. We estimate a multiple logistic regression model in which the NSHAPC family households serve as cases and the binary dependent variable denotes the presence of any of the three manifestations of CFI (feeling hungry, meal skipping, going a day without eating) for any child. This dependent variable is treated as a function of the three sets of risk and protective factors and the five resource utilization measures featured in our conceptual framework, along with the six controls identified earlier (not shown in the table).[8] The potential role played by institutional context is addressed in the next section.

[8] The large number of predictors and controls of interest raises a concern about multicollinearity. To assess this potential problem, we tested variance inflation factors (VIFs) for all covariates in the fully adjusted model. The results were promising, with no variable yielding a VIF greater than 2.79. VIF values above 2 were limited to a pair of categorical measures: the ages of children in parental care and children's attendance at day care,

Table 3: Logistic regression of child food insecurity on risk and protective factors, external resource use variables, and controls (n = 714)

Family and parent characteristics	b	95% CI	p
Family composition			
Number of children	.71	.31, 1.10	.000
Ages of children (ref = all ≤ 5 years)			
All > 5 years	1.45	.20, 2.69	.023
Mix of ages	.44	–.93, .82	.530
Accompanied by spouse/partner	–.42	–1.36, .51	.374
Parental capital			
Education (ref = less than high school)			
High school/equivalent	–.20	–1.06, .66	.645
Postsecondary	.27	–.59, 1.14	.533
Current employment (ref = not working)			
Working temporary job	1.53	.48, 2.58	.004
Working steady job	.02	–.98, 1.03	.966
Worked > half of lifetime (ref = ≤ half of lifetime)	–.35	–1.08, .38	.348
Received financial support from family/friends (past month)	–.45	–1.44, .54	.377
Parental vulnerabilities			
Count of chronic health conditions	.00	–.41, .40	.983
Mental health problem index	2.23	.40, 4.06	.017
Alcohol or other drug problem index	–.65	–1.84, .54	.285
Ever incarcerated	.54	–.51, 1.59	.312
Abused or neglected as minor	1.21	.36, 2.06	.005
Experienced school problems as minor	.44	–.34, 1.22	.269
Placed in foster care as minor	–.85	–2.03, .34	.162
Use of external resources			
Current food stamp allotment (in $25 increments)	–.11	–.19, –.03	.009
Current receipt of other governmental assistance	.45	–.59, 1.48	.396
Sum of recent non-cash assistance sources	–.18	–.48, .11	.221
Children's medical/dental needs met	–1.04	–1.92, –.16	.020
Children in day care/preschool/school (ref = none)			
Some	–1.35	–2.90, .20	.087
All	–1.26	–2.53, –.01	.050

An initial finding from the regression analysis concerns the importance of family composition. Indeed, the number of children present constitutes one of the strongest predictors. As expected, the more children there were to feed, the greater the likelihood of CFI. CFI also increased in response to another compositional characteristic: the presence of children only over 5 years of age relative to having only children younger than that. This finding presumably reflects the increase in food intake associated with age and the need for older children (especially teens) in materially deprived families to take some responsibility for feeding themselves.

preschool, or school. Removing either measure did not change model parameters. VIF values for all other variables ranged from 1.09 to 1.85, well below traditionally accepted cut points indicating collinearity. Given these generally low VIF values and substantive as well as statistical consistency across a range of specifications, we have elected to go with the expansive model shown in Table 3.

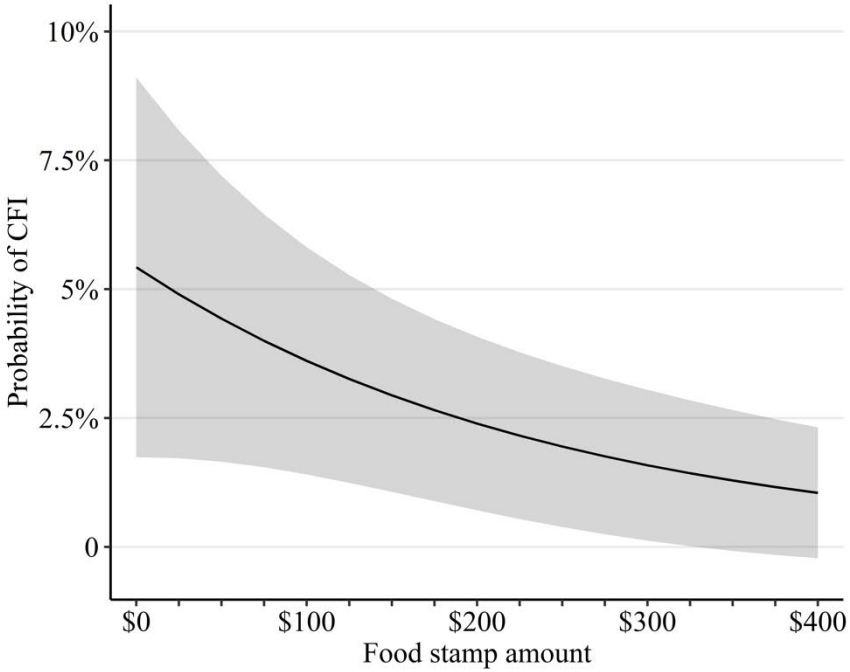
In terms of parental capital, working a temporary job (compared to not working at all) was related to a higher rather than a lower likelihood of CFI. A satisfactory interpretation of this counterintuitive result remains elusive. However, additional evidence suggests that temporary work left some homeless and precariously housed people on the bubble in terms of eligibility for benefits. Their average monthly incomes were only marginally higher than those of unemployed persons ($505 versus $495), yet they received smaller food stamp allocations and less non-food government assistance and in-kind aid. Temporary employment could also increase the chances of CFI if families were disrupted by an unpredictable work schedule and parents had to shift budgetary resources away from food purchases to cover work-related transportation and child care costs. Edin and Lein (1997) report similar difficulties for poor but housed single mothers toiling in the lowest-wage jobs (also see Schneider and Harknett 2021).

A pair of parental vulnerability variables is moderately associated with CFI as hypothesized. Having a mental health problem as an adult, which exhibits the expected positive coefficient, may have complicated parents' ability to provide daily sustenance and satisfy other basic needs for their children. Parental experience of abuse or neglect while a minor also increased offspring's chances of being food insecure among the NSHAPC families. This result demonstrates how adverse childhood events can reverberate in ways that have intergenerational consequences.

Most efforts by parents to utilize external resources take the hypothesized negative sign in Table 3, with three measures worthy of attention. The payoff from participating in a key government program is especially reassuring: The greater the dollar value of the food stamp/SNAP allotment received by NSHAPC families at the time of the interview, the lower their odds of severe CFI.[9] The extent of this reduction can be seen in Figure 3. The horizontal plot line indicates the predicted probability of CFI associated with a particular level of monthly food stamp assistance when the coefficients for all other variables in Table 3 (including controls) are set at their means. (The shaded area captures the 95% confidence interval around the predicted probabilities.) As the downward curve of the plot line reflects, additional $25 increments to a family's level of assistance would produce declines in CFI across the board.

[9] Food stamp allotments are determined on a formulaic basis, taking into account family size and income. However, the influence of these two characteristics should not be overstated, at least for the NSHAPC families. In a separate analysis, we found that number of children, presence of a spouse or partner, and income explained about 25% of the variance in the dollar value of the allotment among those families receiving food stamps.

Figure 3: Predicted probability of child food insecurity by food stamp allotment (N = 714)

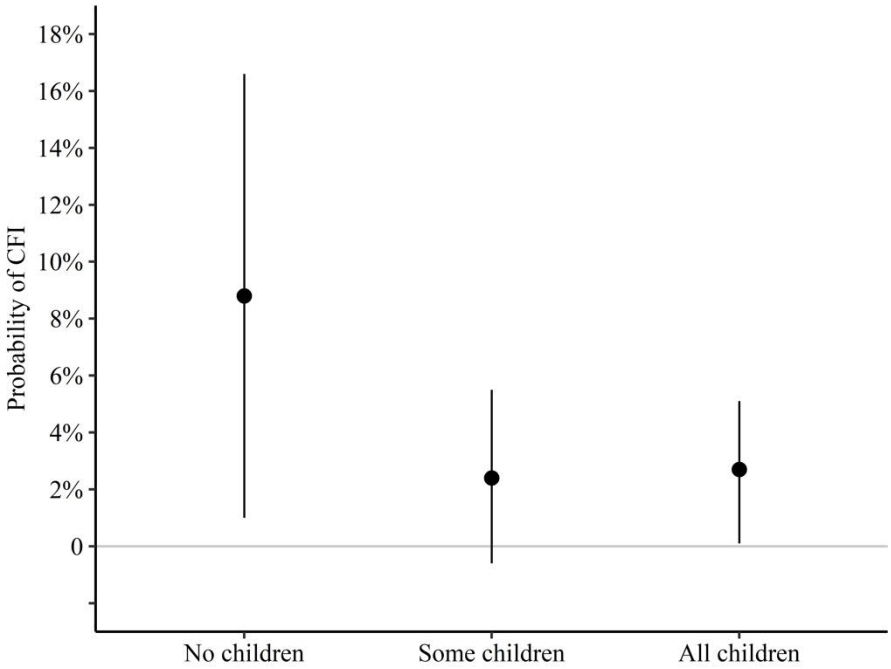


Note: Estimates are based on multiply imputed survey-weighted data and adjusted for all variables shown in Table 3.

Similarly, the regression results in the table show that when parents could access health care and educational environments – ensuring that their children's medical and dental needs were met and that the children were enrolled in day care, preschool, or regular school (K–12) – CFI tended to be less likely. In both kinds of environments, children are often screened or monitored for food insecurity and parents receive information about food assistance programs. Direct nutritional benefits can be gained from educational settings as well, in the form of snacks and free or reduced-price meals. The predicted probabilities in Figure 4 visually convey the importance of school enrollment. Again setting all other variables at their means, we see that if none of a family's children participated in such programs, the predicted chances of CFI approached 9%, albeit with nontrivial uncertainty (as indicated by the long 'whiskers'). However, when some or all of the children participated, the probability fell to the 2%–3% range.

Our final insights from the regression analysis in Table 3 concern the control variables for which the models are adjusted. Just two of the controls, parental food insecurity (+) and residing in a rural rather than an urban area (–), are meaningfully associated with CFI. The signs of their coefficients suggest that CFI is much more likely when a parent is food insecure, and that rural families may have an advantage over urban ones in terms of food resources received from relatives, friends, churches, and other local institutions. Because parental food insecurity might be considered endogenous with CFI, we have re-estimated the model excluding the former measure. The results remain essentially the same.

Figure 4: Predicted probability of child food insecurity by proportion of children in day care, preschool, or school (N = 714)



Note: Estimates are based on multiply imputed survey-weighted data and adjusted for all variables shown in Table 3.

4.4 A note on local service environments

Ideally, we would like to incorporate measures of institutional context in a multilevel analysis of CFI to evaluate the conceptual model in Figure 1. Due to confidentiality and statistical concerns, however, the NSHAPC data file precludes linking client survey respondents with specific geographic units, and no restricted version of the file is available. We have therefore opted for the next best alternative: examining local service patterns in the 76 sampled units – large metropolitan areas, medium and small ones, and clusters of rural counties – with particular emphasis on food assistance. The relevant information, which was generated via the service provider surveys mentioned earlier, has been presented by Burt, Aron, and Lee (2001: 241–318) in tables, graphs, and a detailed appendix.

The key insight from these materials is based on Burt and associates' rates of daily service contacts per 10,000 members of the local poverty population, which give a sense of how well potential demand for housing, food, health care, and other types of assistance was being met in 1996. The highest contact rates and greatest variability in such rates occurred in medium-sized metro areas and rural counties, not in dominant metropolises such as New York or Los Angeles. But substantial variation was present within all geographic categories. Daily soup kitchen service rates (meals served per 10,000 poor residents) nicely illustrate this fact. Among large metropolitan areas, the rate was 646 in San Francisco but only 88 in Houston. Similarly, the 70 meals served per 10,000 in Shreveport, Louisiana, pales when compared to the 615 in Oklahoma City, both midsized metros. Another axis of variability is the percentage of all daily service contacts generated by food programs. Despite a mean of 49% for the 76 sampled units, the percentage ranged from 0 in Redding, California, and a few rural settings to 90 in Savannah, Georgia.

Such documented differences in the capacities of service providers from one community to the next confirm that institutional contexts tend to be marked by unevenness rather than uniformity. Such a generalization also applies to safety net resources delivered at the state level (Bartfeld and Men 2017). Homeless and precariously housed families may thus have an easier or harder time accessing food assistance based on where they live, independent of the assortment of individual- and family-level risk and protective factors analyzed here.

5. Conclusion and limitations

The exclusion of homeless and precariously housed families from nationally representative surveys makes evidence about food insecurity in this population hard to come by. Lacking a better, more recent option, we have turned to the 1996 NSHAPC data to address two research questions focused on severe CFI. In response to the first, descriptive question, the monthly prevalence of food insecurity among homeless and near-homeless children (12.6%) was substantially lower than that of their parents but much higher than that of their domiciled 1996 CPS counterparts living in poverty. The complement to this result is that a large majority of the NSHAPC children still qualified as food secure, challenging the assumption that food insecurity and homelessness always go hand in hand. However, any temptation to assert a weak association between the two must be tempered by the extreme nature of the NSHAPC measures. Their location near the VLFS end of the USDA scale suggests that our analysis underestimates parents' anxiety about purchasing low-cost food, being unable to prepare balanced meals, and other 'milder' types of food insecurity. Parents may also have misreported CFI out of fear of losing their children or because they did not realize that the children were hungry or worried about food.

In response to the second, explanatory question, we show that variation in CFI within the NSHAPC sample can be partially accounted for by components of our conceptual model. These components include the number and ages of children present (+), parents' mental health problems (+), and past (childhood) experiences of abuse or neglect (+). Of special interest is the fact that the use of external resources matters: Food stamp/SNAP allotments and parents' efforts to integrate their children into nutrition-promoting organizations such as schools and health care settings were all negatively associated with CFI. The importance of such resource utilization measures underscores the potential role played by institutional context, as does the Burt, Aron, and Lee (2001) profile of differences in the local service environments accessible to the NSHAPC families.

Our reliance on NSHAPC data requires close scrutiny due to the passage of a quarter century since the study was conducted. One issue is whether the character of the US homeless population has changed so much that it threatens the contemporary relevance of the client sample. As an example, the perceived rise in mental health problems – a significant predictor in Table 3 – suggests that CFI could be more prevalent among homeless and precariously housed families now than in the 1990s. Similarly, the dramatic increase in the number of immigrants during the period – many with more children than native-born families – could modify our results, given the apparent link between immigrants' food insecurity and housing instability (Huang and King 2018). However, persons in families with children still comprise roughly one-third of the national homeless

population, compared to 37% in the NSHAPC total sample. NSHAPC estimates also resemble those from HUD and the 12-city FOS in other compositional dimensions, including adult age, gender, race, income, and employment (Burt, Aron, and Lee 2001; Gubits et al. 2013; US Department of Housing and Urban Development 2017, 2018).

Another type of change worth considering is in the major structural contours of American society. Despite the passage of time, some commonalities can be observed. Both the mid-1990s and the late 2010s (prior to COVID-19) featured prosperous economies, shrinking stocks of affordable housing, and restrictive social welfare regimes (Edin and Shaefer 2016; US Department of Labor 2018). The last of these forces, which was intensified by the Personal Responsibility and Work Opportunity Act of 1996, reflects the consequences of long-term devolution and retrenchment. Of the various strands of the social welfare safety net, the federal food stamp program is particularly germane to our research. Renamed SNAP in 2008, the program thrived throughout the Obama years, bolstered by additional resources, increased benefit levels, and a reduced administrative burden for recipients (US Department of Agriculture 2018). Beginning in 2019, however, the Trump administration attempted to shrink SNAP via a series of regulatory actions (Fadulu 2019; Rosenbaum and Neuberger 2020).

Efforts of this sort do not bode well for homeless and precariously housed children in light of the inverse relationship we document between food stamp allotment and CFI. Yet even if the Trump-era budget and benefit cuts had been fully implemented, seismic shifts in the patterns and correlates of food insecurity within homeless families between 1996 and the present seem unlikely. A telling clue is that contemporary estimates of food insecurity among FOS parents are only modestly lower than the percentages reported in Table 1 (Gubits et al. 2016; Waxman 2017). More importantly, the theoretical foundation of the present analysis remains solid, offering little cause to doubt the plausibility of the mechanisms involved. Indeed, because most of the variables in Figure 1 operate in domiciled families in addition to homeless ones, our model may have broader relevance. For any households encountering material hardship, food insecurity will likely be associated with family risk and protective factors and parents' use of external resources, which in turn are conditioned by the nature of the surrounding institutional context.

Ultimately, though, a strategy that attempts to draw contemporary lessons from older data can take us only so far. What is needed is new research that focuses on food insecurity not only among homeless and precariously housed families but among others experiencing significant forms of deprivation. One task of this research would be to revamp NSHAPC's nationally representative sample design, defining a larger universe while expanding the sample size. Such a change would facilitate valuable comparisons between different segments of the disadvantaged population. Beyond tweaks in sampling, the thin measurement of food insecurity constitutes an obvious data limitation. We recommend that the full USDA food security scale be employed, along with innovative

techniques for assessing CFI (Nord and Hopwood 2007). Qualitative work on the correspondence between parents' reporting of CFI and children's own concerns about food intake and quality should be pursued as well (Connell et al. 2005; Fram et al. 2013). These steps will allow for more sophisticated analyses of gradations in food insecurity and better inform how we interpret results.

Another limitation of NSHAPC is the inability to deal with institutional context in a satisfactory manner. Because geocodes are unavailable for the client survey, data from the service provider surveys on local food programs and other relevant forms of assistance cannot be linked to the sample families. Both NSHAPC and our model are also guilty of some key omissions. For example, shifting to a micro-contextual level, neither give much attention to the immediate residential circumstances of the families, such as whether they were staying in a shelter that served meals or had communal kitchen facilities. The data and model also neglect certain aspects of family functioning, including shared beliefs and goals among members, parenting practices, resilience, and the like.

This last omission raises the possibility that unmeasured properties of parents and families influence CFI, challenging the robustness of our results. It also points to a broader concern about causal inference: that the cross-sectional nature of NSHAPC complicates the interpretation of statistical relationships. The significant negative effect of one form of resource usage on CFI – parents' ability to ensure that their children's medical and dental needs were met – is illustrative. In fact, the association may be due to the better health of food-secure children, who in turn had fewer needs. Reverse or reciprocal relationships of this kind prove difficult to detect without appropriately time-ordered longitudinal data. Until such data exist, the causal story implicit in Figure 1 will remain an aspiration, necessitating that results be described in correlational terms.

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7. Supplemental material

The NSHAPC and CPS data sets analyzed here are freely available online. Users can obtain the NSHAPC data at https://www.census.gov/data/datasets/1996/demo/nshapc/nshapc-datasets.html (select "client data"). For CPS data, go to https://www.nber.org/research/data/reading-current-population-survey-cps-data-sas-spss-or-stata (select "September 1996"). We have created a separate website that includes four components specific to our analysis: (1) a "Notes on Measurement" document with additional detail on selected dependent and independent variables; (2) a Stata syntax file for recoding variables from the NSHAPC data set, implementing multiple imputation, estimating regression models, and retaining marginal mean predicted probabilities of the CFI variable for graphing; (3) a Stata syntax file that recodes 1996 CPS data for comparison of CFI between poor domiciled families and the NSHAPC families; and (4) an R Markdown file used to graph predicted probabilities of CFI. These components can be accessed online at https://github.com/lippertam/DemographicResearch-LeeLippert.

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Appendix A: Description of risk and protective factors, external resource use variables, and controls for homeless and precariously housed subsamples (N = 714)

	Currently homeless		Precariously housed	
Variable	Mean/ proportion	SE	Mean/ proportion	SE
Family composition				
Number of children	1.99	.11	2.36	.13
Ages of children				
All ≤ 5 years (ref)	.38	.06	.27	.05
All > 5 years	.36	.05	.47	.05
Mix of ages	.26	.06	.26	.04
Accompanied by spouse/partner	.22	.05	.34	.04
Parental capital				
Education				
Less than high school (ref)	.50	.06	.36	.04
High school/equivalent	.21	.04	.35	.05
Postsecondary	.29	.06	.29	.05
Current employment				
Not working (ref)	.66	.06	.67	.04
Working temporary job	.16	.06	.07	.02
Working steady job	.18	.04	.26	.04
Lifetime work history				
Worked half of lifetime or less (ref)	.39	.06	.42	.05
Worked more than half of lifetime	.61	.06	.58	.05
Received financial support from family/friends (past month)	.29	.06	.36	.06
Parental vulnerabilities				
Count of chronic health conditions	.63	.10	.98	.08
Mental health problem index	.11	.02	.09	.02
Alcohol or other drug problem index	.30	.06	.13	.03
Ever incarcerated	.33	.07	.12	.03
Abused or neglected as minor	.28	.05	.18	.03
Experienced school problems as minor	.55	.06	.51	.05
Placed in foster care as minor	.24	.06	.07	.02
Use of external resources				
Current food stamp allotment (in $25 increments)	6.19	.68	4.87	.51
Current receipt of other governmental assistance	.57	.06	.67	.04
Sum of recent non-cash assistance sources	1.59	.19	.96	.16
Children's medical/dental needs met	.83	.03	.82	.04
Children in day care/preschool/school				
None (ref)	.29	.06	.18	.04
Some	.23	.06	.25	.04
All	.48	.06	.57	.05
Controls				
Gender (female)	.74	.07	.88	.03
Age (in years)	31.73	.82	34.22	.83
Race				
Non-Hispanic white (ref)	.35	.05	.52	.05
Non-Hispanic Black	.38	.05	.29	.05
Hispanic	.13	.03	.15	.03
Other	.14	.07	.04	.01
Location				
Urban (ref)	.58	.06	.35	.05
Suburban/urban fringe	.21	.04	.15	.03
Rural	.21	.07	.49	.05