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Food security status in seniors over their life course

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Abstract

The potentially complex relationships between senior hunger and the constellation of lifetime social, economic, and health statuses are not well understood, or even described. The primary purpose of this study is to assess patterns and associations among lifetime experiences of social, economic, food, and health hardship for food insecure seniors. A central feature of our work is the incorporation of a life stories approach in addition to longitudinal surveys. From June 2020-February 2021, we collected life history interviews from 107 participants. We conducted bimonthly follow-up interviews starting in August 2020 (continuing until March 2022). Interview guides for life histories and follow-up interviews included open-ended questions and survey style assessments, including the USDA Household Food Security Survey Module, the Survey of Income and Program Participation Adult Well-being Module, the WHO Quality of Life instrument, and the Mental Health Inventory 18. We conducted inductive analysis and content analysis of all qualitative data and estimated descriptive statistics of all quantitative data. Our primary themes for qualitative analysis relate to history of food insecurity, economic insecurity, and household health challenges. Additionally, the following themes emerged from our inductive analysis: violence, sexual and physical; traumatic events; racism, individual and systemic; perceptions of age discrimination; early experiences of sharecropping or leased land; and home gardens. The life course narratives reflect a complex experience of food and other material hardships throughout the lifetime, yet thus far in our analysis, previous experiences of food insecurity, particularly in middle age, have been the most notable predictor variable for senior hunger.

Executive Summary

Approximately 15% of the US population is over the age of 65, and this figure is expected to increase to almost 22% over the next 20 years.[2] In 2017, almost 8% of seniors were food insecure,[1,2] and increasing poverty in the senior population, particularly among growing minority populations,[2] suggest food insecurity will continue to be a problem and may even worsen over time. Despite multiple social safety net systems, this population is at risk for food, economic, and material hardships, which complicate and exacerbate health challenges. Extensive literature has examined these risks among children and adults in general, but there has been limited emphasis on the growing senior population.

The primary purpose of this study is to provide a comprehensive analysis of social, economic, and health characteristics extending beyond basic demographics and composition of households with food insecure seniors. A central feature of our work is the incorporation of a life stories approach in addition to longitudinal surveys. Life course perspectives seeking to examine different stages within an individual lifespan are limited in the literature yet have been identified as critical to our understanding of health-related phenomena.[3]

We employed a life course perspective to collect primary data utilizing both qualitative and quantitative measures to answer the following guiding research questions:

Research Question 1 (RQ1): What are the social, economic and other material hardships, and health characteristics of food insecure households with older adults, and how do these characteristics differ over the life course?

Research Question 2 (RQ2): How do previous experiences of food insecurity and other material hardships illuminate or predict current household characteristics for seniors?

Research Question 3 (RQ3): How might changes in individual/household characteristics affect food insecurity status among older adults? How might these changes also affect quality of life of seniors?

From June 2020- February 2021, we collected life history interviews from 107 participants recruited through various food assistance agencies in Dallas County. Interview length averaged 1.5 hours and ranged from one hour to 6.75 hours. We conducted bimonthly follow-up interviews starting in August 2020 (and continuing until March 2022). The average length for follow-up interviews was approximately 20 minutes and ranged from 10 minutes to one hour. Interview guides for life histories and follow-up interviews included open-ended questions and survey style assessments, including the USDA Household Food Security Survey Module, the Survey of Income and Program Participation Adult Well-being Module, the WHO Quality of Life instrument, and the Mental Health Inventory 18.

For RQ1, we conducted an inductive analysis of life course data to provide thick descriptions of current and past social, economic and other material hardships, and health characteristics of food insecure households with older adults. For RQ2, we conducted a content analysis of life course data to determine what combination(s) of individual/household characteristics and life circumstances (early, mid-life, and present) ameliorate or exacerbate the likelihood of senior food insecurity. And finally, for RQ3, we will conduct descriptive and bivariate analyses of follow-up survey data to examine the dynamic relationships between household characteristics, food insecurity (alone or in combination with other material hardships), and quality of life among seniors over a 12-month period.

Our primary themes for analysis relate to history of food insecurity, economic insecurity, and household health challenges. Common experiences of childhood food insecurity generally were

as follows: “We ate a lot of beans and tomatoes because that’s all we had.” Similarly, common experiences of economic insecurity (at the intersection of food security) were as follows: “I always pay my bills first… then whatever is left over, if anything, goes toward food… if it weren’t for [food assistance site] I don’t know what I’d do.” Health experiences throughout the life course were much more diverse. Additionally, the following themes have emerged from our inductive analysis that we are continuing to explore: violence, sexual and physical; traumatic events; racism, individual and systemic; perceptions of age discrimination; early experiences of sharecropping or leased land; and home gardens.

The data suggest a complex array of life experiences that either continue lifelong experiences with hardship or new onset of hardship as an older adult. Prior experiences of economic insecurity, particularly in middle age, are the most notable predictor variables for food insecurity in older adulthood. Household compositions and characteristics do reflect unique circumstances, but our data do not indicate similar enough patterns to suggest correlation between household characteristics and food insecurity in older adulthood. Presence of at least one chronic illness was slightly associated with food insecurity.

Pandemic restrictions at the start of our data collection prevented us from recruiting an even number of participants from our partner recruitment sites. This inhibited our ability to conduct a thorough analyses of the ways in which food assistance agencies ameliorate (or exacerbate) food-related hardship in older adulthood. However, we were still able to examine the ways in which our participants navigated the food assistance and social service system in general.

Introduction

Approximately 15% of the US population is over the age of 65, and this figure is expected to increase to almost 22% over the next 20 years.[2] In 2017, almost 8% of seniors were food insecure,[1,2] and increasing poverty in the senior population, particularly among growing minority populations, [2] suggest food insecurity will continue to be a problem and may even worsen over time. Despite multiple social safety net systems, this population is at risk for food, economic, and material hardships, which complicate and exacerbate health challenges. Extensive literature has examined these risks among children and adults in general, but there has been limited emphasis on the growing senior population.

Additionally, extensive work has delved into some household characteristics – such as multigenerational household status or the senior's marital status[1,4-6] – as moderators and qualifiers of food security, but we know of no studies that provide comprehensive descriptions of household characteristics in relation to food insecurity, economic and other material hardship, and health challenges. Because of the complexity of the relationships among food access, health, and household characteristics, research that relies exclusively on large population surveys is typically unable to shed light on important factors that may impact food insecurity and other hardship,[7]such as temporal dependency, combined impacts of hardships in diverse domains, and the lived experience of material hardship.

A central feature of our work is the incorporation of a life stories approach in addition to longitudinal surveys. Life course perspectives seeking to examine different stages within an individual lifespan are limited in the literature yet have been identified as critical to our understanding of health-related phenomena.[3] Narrative gerontologists and other medical scholars have highlighted the life-stories approach as a useful tool for understanding how seniors

perceive and identify turning points, causal and emotional relationships, shocks, and eras over the course of their own lives.[8-10] This is particularly useful to this project for several reasons.

First, longitudinal research evaluating food insecurity in children indicates that past history of food insecurity influences future outcomes; in addition, food security is a dynamic characterization rather than a constant state, and households are more likely to transition in and out of food insecurity than persist permanently as food insecure.[11-13] The life stories approach is well situated to capture this dynamic quality alongside household characteristics, which can similarly be expected to fluctuate over the life course.

Second, considering the conclusion that disparities in exposure to risk factors have greater effect on mortality as a person ages,[14] the life-stories approach can be used to further explore the complex situation of racial/ethnic identity and background within the broader experience of food (in)security among seniors due to the dynamics of said situations. For example, Hispanics and African Americans are more likely to enter into food insecurity, yet they are also more likely to exit out of food insecurity than their white counterparts.[1] In line with the growing attention to a wholistic approach to health equity which takes into account this kind of fluidity, the National Institutes of Health recently declared life course approaches to be an integral component of their research agenda to more comprehensively understand health disparities.

Third, missing from the adjacent literature is a sense of the cumulative stress and lifetime experiences of poor quality of life and mental well-being. Narrative gerontology is peculiar in its ability to contribute to a greater understanding of immediate and long-term stress associated with food insecurity; and the telling of a life story, especially when combined with systematic measurement of current quality of life and food security status, can hold a wealth of information

regarding seniors' perceptions of their emotional well-being and mental health in relation to food, aging, and differing household situations over the life course.

Finally, extant research examines how acute crises ("shocks") alter both household and individual family members' vulnerability to food-related hardship.[15-16] Coping strategies to address shocks and vulnerability vary considerably depending on household composition including factors such as age and presence of multigenerational members.[15,17-19] There are still significant gaps in the literature regarding the complex ways in which household characteristics shift over time and affect household members' experiences of hardship and coping strategies across the life course. The nature of narrative inquiry poises it to reveal types of information not revealed in other broad-scale surveys, especially in relation to the perceptions, reactions, adaptations, and coping strategies following a shock. Notably, our data collection and analysis coincided with the emergence of the COVID-19 pandemic, which disproportionately affected older adults. As such, key aspects of our project thus give it a particular ability to support the development of a senior-tailored approach to food security policy by exploring the nuances of possible risk factors and mediators of the food-related hardship and health of seniors.

The primary purpose of this study is to assess patterns and associations among lifetime experiences of social, economic, food, and health hardship for food insecure seniors. We employed a life course perspective to collect primary data utilizing both qualitative and quantitative measures to answer the following guiding research questions:

Research Question 1 (RQ1): What are the social, economic and other material hardships, and health characteristics of food insecure households with older adults, and how do these characteristics differ over the life course?

Research Question 2 (RQ2): How do previous experiences of food insecurity and other material hardships illuminate or predict current household characteristics for seniors?

Research Question 3 (RQ3): How might changes in individual/household characteristics affect food insecurity status among older adults? How might these changes also affect quality of life of seniors?

Research Methods

Our work is based in Dallas County, TX, an urban center with considerable socioeconomic and racial/ethnic diversity. Governmental and nongovernmental social service agencies are available throughout the county, and our data draws from recruitment at various nongovernmental agencies to ensure a breadth of representative narratives.

From June 2020- February 2021, we collected life history interviews from 107 participants. Life history interviews included a semi-structured question guide where participants were asked for an overall impression of their life then asked about specific circumstances during each decade of their life. Participants were also asked about their current and previous use of food assistance agencies, reasons why they used them, how often, and for how long. At the completion of the life history section, participants were also asked a series of structured questions and assessments, including questions regarding chronic health conditions and health care interactions, the USDA Household Food Security Survey Module, and the Survey of Income and Program Participation (Adult Well-being Module).

We utilized opportunistic sampling at various social service agencies throughout Dallas County, including traditional food pantries (53 participants), a congregate meal program (19 participants), community food distribution centers (20 participants), and resource centers (15

participants). Our initial assumptions included differences between types of food assistance agencies, and we initially designed our sample for an equal distribution of participants between a traditional food pantry, congregate meal program, and community food distribution centers. Due to the pandemic, we were not able to obtain an even distribution of sampling between the various food assistance agencies as we initially proposed, and we had to select additional recruitment sites. We selected all agencies based on previous collaborative relationships the research team had with agencies while also attempting for geographic dispersion. The unanticipated expansion of our recruitment sites allowed for a diverse sample broadly representing the older adult population accessing resources throughout the county. The traditional food pantries provide primarily food resources and assist with some social program applications, like SNAP. One also occasionally provides rent/mortgage assistance. The congregate meal program is part of a community-building program aimed at older adults through a faith-based organization. The community food distribution centers are neighborhood/community centers that provide food as part of a satellite distribution program managed through one of the traditional food pantry sites. Finally, the resource centers provide employment and financial stability support and training, as well as food assistance on occasion. Volunteers and staff at each recruiting site assisted by asking clients if they would be interested in participating in our study. We contacted each client who provided contact information, and we provided them with a detailed overview of the study. Clients who, after hearing the overview, stated they were still interested in participating were then scheduled for the baseline interview. At the start of the scheduled time, clients went through the informed consent process before starting the interview.

Dr. Carla Pezzia (PI), a trained medical anthropologist, conducted all baseline and follow-up interviews. Due to the nature of the data being collected, it was beneficial to have only

one interviewer for data consistency, establishing rapport, and maintaining a greater sense of privacy for the participants. Baseline interview length averaged 1.5 hours and ranged from one hour to 6.75 hours. Approximately one-third of interviews were conducted in person at the client recruitment site, and the remainder were conducted over the phone at the request of the client. A phone interview option became necessary due to the Covid-19 pandemic. The PI conducted bimonthly follow-up interviews starting in August 2020. Dr. Pezzia attempted to contact all participants who completed a baseline interview. If after six months Dr. Pezzia had not been able to reach the participant, they were deemed lost to follow-up. Due to ongoing pandemic issues affecting enrollment and recent weather events, follow-ups continued to be collected through May 2022; however, some time-based components (e.g., food security module) were not asked for all participants due to length of time passed between interviews being inconsistent with previous follow-ups. This occurred primarily for latter follow-ups planned for 10 and 12 months. As such, analyses for this report only include completed follow-ups done up to the 8 months mark (see Table 1 for number of completed follow-ups). Average length for follow-up interviews was approximately 20 minutes and ranged from 10 minutes to one hour. Interview guides for life histories and follow-up interviews included open-ended questions and survey style assessments that were all administered by Dr. Pezzia (see Table 2 for schedule of assessments). In exchange for their participation, participants were provided $50 worth of Walmart gift cards after completion of the baseline/life history interview, and a $10 gift card for each follow-up they completed. The final follow-up was a little longer to summarize and reflect on the study year, and so participants were given $20 in gift cards.

Table 1. Interview Records July 2020-May 2022

	Interviews Completed

Life History Interviews	107
2 months	96
4 months	84
6 months	78
8 months	49

Table 2. Schedule of Survey Instruments Used in Interviews

		Follow-ups			
	Life History Interview	2 months	4 months	6 months	8 months
Food security: USDA Household Food Security Survey Module	X		X		X
Housing & Economic Security: Survey of Income and Program Participation (Adult Well-being Module)	X			X	
WHO Quality of Life (OLD) instrument		X	X		X
Mental Health Inventory 18				X	
Physical Health: Chronic disease, comorbidities, and health system interactions	X	X	X	X	X

Assessments

USDA Household Food Security Survey Module

This module measures levels of household food security (high, marginal, low, very low); senior food insecurity was the primary variable of interest for this study. We used the 10-item adult household food security module because our study focuses on senior adults. When children were present in the household, we made notes of when participants made specific mention of the eating patterns of children (typically, the comments were along the lines of "the kids eat first"). We assessed food security at baseline (for the 12 months prior), then again at every 4 months follow-up (with reference to the previous 4 months, or since last follow-up in the few cases when follow-up occurred sooner than 4 months) to get a better sense of how food security status may change over the course of the year. Based on previous experiences with our

participant population, we knew that any more frequent asking of the module would potentially impose a considerable emotional toll, and given our purposes, we did not feel that was necessary.

Survey of Income and Program Participation (Adult Well-being Module)

This module focuses primarily on housing-related material hardships and maintenance, such as the condition of appliances and structural features of the house. It also asks about ability to pay bills over a particular timeframe, and thus, we used this module as a concrete measure of current economic hardship. We included this module at baseline, then again at 6 months.

WHO Quality of Life (OLD) short form instrument

Our final guiding research question explicitly reflects on quality of life for seniors experiencing hardship. The OLD instrument is a validated assessment for older adults in various settings. We used the validated 6-item short form[20] (that includes two general questions for a total of 8 questions) to not overburden our participants. We recognized greater potential for frequent changes in mental well-being and perceived quality of life, and so we included this instrument at every follow-up period, except at 6 months when we asked the Mental Health Inventory. Scoring was based on established guidelines. Question responses were based on a Likert scale, such that the maximum score was 40. Higher scores indicate higher quality of life. Scores were coded as interval data.

Mental Health Inventory 18[21]

The Mental Health Inventory is a more comprehensive assessment of mental well-being. We included the inventory at 6 for a more thorough understanding of participants' mental and emotional states. We did not ask more frequently due to concerns for the emotional toll such questioning could elicit.

Analysis

For RQ1, we conducted an inductive analysis of life course data to provide thick descriptions of current and past social, economic and other material hardships, and health characteristics of food insecure households with older adults. Our initial coding of data focused on a priori themes related to food insecurity, economic insecurity, and household health. We also noted emergent themes in subsequent evaluations of life course data. In contrast to our a priori themes, the emergent themes were not established beforehand but were noted as common experiences expressed in the data. Emergent themes included experiences of violence (physical and/or sexual), traumatic events, racism (systemic or individual), age discrimination, sharecropping or leased land, and home gardens. For RQ2, we conducted a content analysis of life course data to determine what combination(s) of individual/household characteristics and life stages [childhood/teenage (0-19 years), young adult (20-39 years), middle age (40-59 years), and present (60+ years)] ameliorate or exacerbate the likelihood of senior food insecurity. When appropriate, qualitative data was quantified to perform Chi-square analyses assessing for correlations to identify any potential predictor variables. For multiple previous insecurities, we added together any previous experience of food insecurity, economic insecurity, disability, major household illness, healthcare insecurity, housing instability, and violence. We defined housing instability by "forced moves" (e.g., due to eviction or major negative life event such as divorce)[22] more than twice within one decade, while difficulties paying rent/mortgage is classified as part of economic insecurity. Total score ranged from 0-7, and we classified 1-2 prior insecurities as low, 3-5 as medium, and 6-7 as high. For multiple current insecurities, we included current economic insecurity, disability, healthcare insecurity, major household illness, and housing instability. Total score ranged from 0-5. And finally, for RQ3, we conducted descriptive and

bivariate analyses of follow-up survey data to examine the dynamic relationships between household characteristics, food insecurity (alone or in combination with other material hardships), and quality of life among seniors over a 8-month period. Specifically, we performed paired sample t-tests when comparing across two time points and analysis of variance when comparing across three (i.e., baseline, four months, and eight months).

Data

We completed life history interviews with 107 clients from various food assistance agencies in Dallas (see Table 3 for a sample description), and our final set of completed follow-up interviews at 8 months includes 49 participants.

Table 3. Sample description at baseline

	N=107
Household structure	
Single adult	47%
Multiple older adult	19%
Multigenerational • With school-aged children	34% 24%
Recruitment food assistance agency	
Food pantry	49%
Congregate meal program	18%
Community food distribution site	19%
Resource center	14%
Food security (past 12 months)*	
High	32%
Marginal	30%
Low	24%
Very low	14%
Receiving SNAP benefits	52%
Race/Ethnicity	
Black/African American	57%
Hispanic/Latinx	33%
White	10%
Gender	
Female	78%
Male	22%
Chronic Illness	86%
Diabetes	25%

Cancer	12%
Cardiovascular	48%
Stroke	7%
Respiratory	12%
Dialysis	4%
Osteo	27%
Other	27%

* Food security assessed by the USDA Household Food Security Survey Module

Results

For the purposes of this report, we provide a cursory overview of our main findings regarding our guiding research questions. The data collected is expansive and is likely to generate further findings, especially as related to some emergent themes that are not directly tied to our research questions.

Research Question 1 (RQ1): What are the social, economic, and other material hardships, and health characteristics of food insecure households with older adults, and how do these characteristics differ over the life course?

Our a priori themes for analysis are related to history of food insecurity, economic insecurity, and household health challenges (see Table 4 for exemplar quotes for each). As noted above, we were not able to obtain an even distribution of sampling between the various food assistance agencies to assess any differences in participants based on their accessing of different resources, but we still examined some differences between the participants based on the primary reasons participants accessed resources at the recruiting agencies (Table 5). Unsurprisingly, the primary reason for accessing food assistance resources was to alleviate general hunger, with most participants who provided this answer recruited from the food pantry and community distribution centers. They noted that the food assistance was critical for them in being able to have enough food and some kind of variety in what they ate. While not wanting to sound

unappreciative, they did voice a desire for more fresh produce and less canned goods for health reasons. Namely, many were concerned about the high salt content from canned goods. They prided themselves in not wasting any of the food and, for those concerned about their sodium levels, would wash the canned foods before consuming. Moreover, if there was something they could not use for any reason, then they would offer it to a neighbor in need, usually another older adult.

The next most popular reason was for social reasons. This response was provided exclusively by those who attended the congregate meal program due to the nature of the program itself. These participants were also less likely to be experiencing overall (economic, food, and health) hardship, and the food provided by the program was perceived as a benefit but not a necessity. Currently, 52% of our sample receive SNAP benefits. Previous experiences with federal food assistance ("government cheese", "stamps", or SNAP) increased among participants throughout each life stage (13% of our sample recall receiving federal food assistance as a child). Yet nearly half of participants who do not receive benefits (47.9%) are experiencing food insecurity; likewise, more than half of participants who do receive benefits (55.6%) remain food insecure (Table 6). Many of these participants complained of the minimal amount of SNAP benefits they received (this improved for some due to benefit increases during the pandemic but there were concerns for when benefits decrease again). Participants who did not receive benefits complained that the process had been too difficult to only receive the minimal amount.

Table 4. Exemplar quotes of material hardship

Exemplar Quotes						
Material Hardship	Household Structure	Food Assistance Use	Food Security	Race	Gender	Quote

Food insecurity	Single	Food pantry	Very low	White	Male	*I've tried getting food stamps, but I make $15 over the cutoff. The food pantries don't do me a lot of good because of my throat cancer, I have limits to what I can eat. All my foods have to be soft, and I have to be careful with acidity levels that burn my throat, so most food pantry food goes to waste on me. Same with Meals on Wheels.*
	Multiple older adults	Food pantry	Low	White	Female	***We used to buy the discounted Six Flags passes for an exercise class… Then we started getting the food pass… and you eventually learn the 'tricks' to get certain foods, like fruit instead of fries. We used to save a lot of money…***
Economic insecurity	Single	Resource Center	Marginal	Latina	Female	*I have no problems paying my bills… but it's because they are artificially low because nothing works. My AC is broken. My water heater is broken. Half my lights don't work… Yes, I can pay my bills but I don't live well…*
	Multiple older adults	Comm Food Distrib	Very low	Black	Male	***I tell you I'm trying my best. I need to go back to work. What little money I get a month it ain't buy crap. It helps but it ain't enough.***

Household health	Single	Food pantry	Marginal	Black	Female	*…we discovered that she had cancer, breast cancer and they didn't want to… she was 87 or something like that. And they didn't want to do the chemotherapy. They said that it buy her at the most, two or three years, and they didn't want to do it… So they did try to do some kind of procedure where they went in…but I think that's what killed her… she lived with me about almost a year and then she died.*

Table 5. Primary reasons for accessing resources at recruitment sites

	Traditional food pantry	Congregate meal program	Community distribution site	Resource center	Total
General Hunger	14	2	9	0	25
Social	0	14	0	0	14
Unemployment	3	1	1	5	10
General Financial	2	0	1	4	7
Pandemic	4	0	2	0	6
Health issues	6	0	0	0	6
How food was distributed (e.g., food choice)	5	0	1	0	6
Support for family	3	0	0	2	5
Retirement	3	1	1	0	5
Insufficient SNAP benefits	4	0	1	0	5
Balancing budget	4	0	0	0	4
Food selection	1	0	1	0	0
Other	4	1	2	4	11

Table 6. Senior Hunger by SNAP benefits

Crosstab

		Institutional support as a senior?					
		Yes		No		Total	
		N	%	N	%	N	%
Food insecurity as a senior?	No	24	44.4%	25	52.1%	49	48.0%
	Yes	30	55.6%	23	47.9%	53	52.0%
Total		54	100.0%	48	100.0%	102	100.0%

A total of 22% of our sample reported perceiving some degree of food insecurity as a child. In most of these cases, childhood food insecurity was resolved by their teenage years when the older children were able to contribute more to the household or were moving out on their own, relieving some of the stress on available resources. Most participants recalled having home gardens with fresh fruits and vegetables, and they also shared memories of their mother canning various vegetables for use throughout the year. However, those experiencing food insecurity as a child did share some commonalities in eating the same things repeatedly or having a limited amount of food. Common experiences of childhood food insecurity generally were as follows: "We ate a lot of beans and tomatoes because that's all we had." Some (13%) did recall receiving institutional food assistance ("government cheese") and about a handful remember getting food from food pantries or neighbors. These participants, in particular, expressed the importance of seeking assistance when necessary.

More of our participants indicated some degree of economic insecurity when they were a child (44.3%). Again, this number went down considerably in their teenage years due to increased contributions of older children and others moving out of the house (24.5%). As participants recounted their experiences in early and middle adulthood, perspectives on what was considered economically stable varied considerably. For example, many described being

economically stable when their spouse worked multiple jobs, while few perceived the need to work multiple jobs as an indication of their economic insecurity. Yet as participants aged, common experiences of economic insecurity (at the intersection of food security) were as follows: "I always pay my bills first… then whatever is left over, if anything, goes toward food… if it weren't for [food assistance site] I don't know what I'd do." The Elder Index, measuring the salary necessary for seniors to live independently, is currently measured for Dallas County at $30,192/year (elderindex.org). Of the participants who provided their monthly income, their yearly salary was far below the Elder Index, averaging closer to $20,000/yr.

Health experiences throughout the life course were much more diverse. Childhood recollections of health and health care focused on medicinal plants and folk remedies. Most participants laughed when they were asked about going to the hospital as a kid. The exceptions were those who grew up close to the local county hospital where it was seen as an accessible resource. As participants aged, the primary resource for healthcare was the local county hospital, and a handful had private insurance. As a senior, participant healthcare needs were met through Medicare or the local county hospital financial assistance program (if still under 65). The local county hospital has community clinics; most participants sought regular healthcare at the nearest community clinic.

Additionally, the following themes have emerged from our inductive analysis that we are continuing to explore: violence, sexual and physical; traumatic events; racism, individual and systemic; perceptions of age discrimination; early experiences of sharecropping or leased land; and home gardens.

Research Question 2 (RQ2): How do previous experiences of food insecurity and other material hardships illuminate or predict current household characteristics for seniors?

We expected to find predictor variables for senior hunger, but our ongoing analyses has not yielded much in terms of predictable characteristics. For example, experiences of food insecurity during childhood, teenage, young adult, or middle aged adult years were not significantly correlated with senior hunger ($p>.05$; Table 7). However, prior experiences with economic insecurity did correlate with economic and food insecurity in older adulthood (Table 8). Economic insecurity in middle age (40s and 50s) suggested a natural progression to food/economic hardship as an older adult [$\chi2(1,N=101)=7.223$, $p=.007$].

Table 7. Senior hunger by previous food insecurity

Crosstab

		Food insecurity at any time prior to older adulthood					
		No		Yes		Total	
		N	%	N	%	N	%
Food insecurity as a senior?	No	31	57.4%	20	40.0%	51	49.0%
	Yes	23	42.6%	30	60.0%	53	51.0%
Total		54	100.0%	50	100.0%	104	100.0%

$\chi2(1,N=104)=3.1479$, $p=.076$

Table 8. Senior hunger by economic insecurity in middle age

Food insecurity as a senior? * Economic insecurity in middle age? Crosstabulation

		Economic insecurity in middle age?					
		Yes		No		Total	
		N	%	N	%	N	%
Food insecurity as a senior?	No	11	30.6%	38	58.5%	49	48.5%
	Yes	25	69.4%	27	41.5%	52	51.5%
Total		36	100.0%	65	100.0%	101	100.0%

$\chi2(1,N=101)=7.223$, $p=.007$

Composition of household (single, partnered, or multigenerational) was not significantly correlated with senior hunger. A reassuring finding was that households with children under the age of 18 were not significantly more likely to have an older adult experiencing hunger. Yet almost 2/3 of multigenerational households with kids (11 out of 18) still do experience some

level of food insecurity (p>.05; Table 9). There was no correlation between homeownership and senior hunger. While many participants had already paid off their mortgage and did not worry about rising housing costs, many homeowners still struggled to pay their mortgages, partially because of employment issues during the pandemic.[1]

Table 9. Senior Hunger by Multigenerational Households

Food insecurity as a senior? * Children in House? Crosstabulation

		Children in House?					
		Yes		No		Total	
		N	%	N	%	N	%
Food insecurity as a senior?	No	7	38.9%	42	49.4%	49	47.6%
	Yes	11	61.1%	43	50.6%	54	52.4%
Total		18	100.0%	85	100.0%	103	100.0%

$\chi 2(1,N=103)=0.66$, p=.417

The presence of at least one chronic illness was correlated to senior hunger [$\chi 2(1,N=106)=3.62$, p=.057]. Due to Medicare for those over 65 and the county hospital financing plan (Parkland Plus), only a handful of participants could be identified as being healthcare insecure. Detailed narratives on experiences with healthcare provide a more complete picture of access to care for low-income older adults, but the collected data do not directly correspond to experiences of senior hunger.

Finally, experiencing multiple insecurities throughout one's lifetime was significantly correlated with senior hunger [$\chi 2(3,N=91)=11.349$, p=.010] (Table 10). Current multiple insecurities were also correlated with senior hunger [$\chi 2(5,N=84)=17.603$, p=.003](Table 11).

Table 10. Senior Hunger by Previous Insecurities

[1] Out of a sense of moral obligation, Dr. Pezzia provided names of resources (e.g., number for Dallas Area Agency on Aging) to any participant who was struggling to pay bills, needed home repairs, or looking for employment. In some cases, she reached out to specific organizations if a participant mentioned not being able to contact them directly.

Food insecurity as a senior? * Sum of insecurities experienced grouped Crosstabulation

		Sum of insecurities experienced grouped									
		None		Low		Medium		High		Total	
		N	%	N	%	N	%	N	%	N	%
Food insecurity as a senior?	No	1	100.0%	12	85.7%	24	38.7%	6	42.9%	43	47.3%
	Yes	0	0.0%	2	14.3%	38	61.3%	8	57.1%	48	52.7%
Total		1	100.0%	14	100.0%	62	100.0%	14	100.0%	91	100.0%

Table 11. Senior Hunger by Current Insecurities

Food insecurity as a senior? * Sum of insecurities as senior Crosstabulation

		Sum of insecurities as senior													
		0		1		2		3		4		5		Total	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
Food insecurity as a senior?	No	6	100.0%	10	62.5%	11	40.7%	5	27.8%	2	14.3%	2	66.7%	36	42.9%
	Yes	0	0.0%	6	37.5%	16	59.3%	13	72.2%	12	85.7%	1	33.3%	48	57.1%
Total		6	100.0%	16	100.0%	27	100.0%	18	100.0%	14	100.0%	3	100.0%	84	100.0%

$\chi 2(5,N=84)=17.603$, p=.003

Research Question 3 (RQ3): How might changes in individual/household characteristics affect food insecurity status among older adults? How might these changes also affect quality of life of seniors?

We ran our analyses and looked for differences within each household on the 49 completed follow-ups at the 4 and 8 months mark (see Table 11 for follow-up sample demographics). Our analyses reflect a general stability in household characteristics at this stage in life but with considerable changes in food insecurity status from baseline to end of the follow-up period (see Table 12 for food security rates for sample at baseline and each follow-up interview). On average, our participants fared better at the 8 months mark (M=1.3, SD=1.2) than at baseline (M=1.8, SD=2.08). This improvement was statistically significant (at the .10 level), $t(48)=1.84$, p<.007. Participants indicated the pandemic-related increase in SNAP benefits and stimulus checks as the primary drivers for increased food security. Between baseline and 8 months, there were 11 changes in household status, and nine of these changes showed improvement or no changes in food security status. In two cases (one who moved her grandchild and herself in with her sister while waiting on section 8 housing and one whose grandchild

moved out) the change in household status resulted in worse food security. When participants moved in with other family members, they typically reported improvements in material conditions, as an increase in hardship generally preceded the move. In three of these cases, the reason a participant moved in with a family member was due to extreme weather events. When a household gained a member(s), there were no changes in food security due to the resources the new household member(s) brought with them.

Table 11. Sample description at 8 months follow-up

	N=49
Household structure	
Single adult	43%
Multiple older adult	14%
Multigenerational	43%
Race/Ethnicity	
Black/African American	51%
Hispanic/Latinx	37%
White	12%
Gender	
Female	84%
Male	16%

Table 12. Food security at baseline and follow-ups

*Food security**	N=49		
	Baseline	Four months	8 months
High	39%	51%	57%
Marginal	33%	27%	27%
Low	20%	16%	8%
Very low	8%	6%	8%
Receiving SNAP benefits	55%	49%	57%

* Food security assessed by the USDA Household Food Security Survey Module

On average, there were no significant differences in quality of life scores between the 4 month (M=30.3, SD=4.9) and 8 month (M=29.5, SD=5.4) follow-up interviews. However, notable differences were found among individuals who had experienced a traumatic event (e.g., car accident or death of loved one) or worsening health condition. Changes in food security

status did not seem to have an impact on quality of life scores; however, those with high food security had higher quality of life scores (see Table 13). Changes in household composition also did not seem to have an impact on quality of life, except in the cases where someone moved out or passed away.

Table 13. Quality of life at 4 and 8 months by food security status

Food security status	Average quality of life score	
	4 months	8 months
High	32.8	31.2
Marginal	26.8	27.8
Low	28.8	22.3
Very low	26.7	30.5

These findings may be limited due to the likely stability of those who were still available for follow-up. For example, two participants who were struggling with mortgage payments were lost to follow-up after the third follow-up. It is unclear if they lost general interest in participation or were experiencing such hardship that they were reluctant/unable to answer their phone. Others have potentially died (we have confirmed four deaths) or are suffering from new onset of severe illness that prohibits them from answering the phone (one such case was someone who learned of a pulmonary cancer diagnosis around the time of first follow-up and has not been able to be reached since).

Discussion

Our analytical goal was to examine if food insecurity, with or without other material hardship occurring simultaneously, is more likely associated with some individual/household characteristics, particularly as they relate to health outcomes, over the life course. Our analyses of RQ1 and RQ2 highlight how multiple forms of hardship throughout one's lifetime are correlated with senior hunger. Extensive longitudinal research examines how childhood

experiences can affect adulthood. For example, adverse childhood experiences correlate with poor well-being and food insecurity among parents of young children,[23] especially among female caregivers.[24,25]Additionally, children whose households participate in SNAP and WIC are found to have improved food security over the life course, while those who are eligible but do not participate in social safety net programs are likely to continue to struggle with food security as an adult.[26] We add to this work by examining how multiple childhood experiences can have an impact on older adulthood. These multiple experiences reflect vulnerability in old-age, defined as "a dynamic process of stress and resources across various domains of life (i.e., work, family, health, etc.), levels (i.e., person, group, collective), and time (i.e., long-term processes)",[27] that place seniors at risk for food insecurity. Economic insecurity in middle age was most clearly associated with food insecurity in older adulthood.

The vast majority of our participants were experiencing multiple forms of hardship alongside food insecurity. Seniors must juggle these competing demands while also navigating potential new "shocks" that further stress resources. For example, an unexpected adverse health event ("health shock") may increase expenses for healthcare and increase burdens to obtaining medications.[28] Our participant narratives support previous research suggesting that "shocks" themselves do not cause poverty but instead impose stress upon vulnerabilities that have accumulated over the life course.[29] This was noted in the ways in which our participants discussed the "shock" of the pandemic. The majority of these older adults were already experiencing multiple hardships and negotiating tradeoffs, and so they had multiple adaptive strategies already in place, such as receiving food assistance. However, the pandemic did alter the ways in which many agencies distributed their food, potentially stressing vulnerabilities among our participants. Our data suggests that assistance agencies and governmental programs

could better serve older adults through multifaceted programming that takes into account overlapping hardships. It is critical to better understand how these overlapping hardships also have an impact on program participation and satisfaction. Common complaints from participants regarding difficulties navigating the system need to be addressed to ensure older adults do not needlessly suffer. Indeed, Texas has implemented multiple initiatives to help streamline the process for seniors specifically, such as expanding time between recertifications. The FNS-funded Evaluation of Alternatives to Improve Elderly Access to SNAP[30] found that in other states these types of initiatives have generated mixed results. As such, it is necessary to monitor the new initiatives in Texas to ensure their effectiveness.

This project enables us to provide thorough descriptions of the hardships faced over the life course and the ongoing difficulties older adults face. In recollecting the participants' lives, we relied on their memories of perceived hardship throughout their life. We then used objective measures (e.g., USDA Household Food Security Module) to assess current hardship. The combination of subjective and objective data allowed us to better understand the ways in which older adults requiring food assistance make sense of their lives. Many of the participants with perceived hardship as a child and whose parents received institutional or agency support were less likely to express shame when needing to ask for extra help. Destigmatization of accessing resources could be beneficial in ensuring that the needs of older adults are met. Extant research demonstrates a link between positive perceptions of SNAP and better mental health among SNAP participants,[31] such that policy changes that help both improve the perception of SNAP and promote increased participation in SNAP could provide multiple benefits for older adults.

For the participants recruited from the food pantry and community distribution centers, the food assistance provided was an essential component of their ability to maintain a complete

diet, albeit with a nutritional tradeoff (e.g., high salt content of many canned goods). As Ziliak has found, financial challenges that may contribute to pantry use do not preclude people from accessing food, but they do shape the kinds of food people can eat.[32] Indeed, a recent review demonstrates that, though the dietary intake of food pantry users is understudied, available data suggest that food pantry users' diets do not meet recommended nutritional guidelines.[33] Most of our participants found a way to use all the foods that were given to them, but on occasion they would share with neighbors (usually other seniors) suggesting an important informal mechanism for addressing hunger in older adults.

Conclusion

This report includes the major findings of our analyses regarding the complex relationships between senior hunger and other forms of hardship over the life course. Our data suggest that food and economic challenges were common among many of our participants, but health challenges experienced throughout the life course were much more diverse. Prior experiences with economic insecurity, particularly during middle age, correlated with economic and food insecurity in older adulthood. Experiencing multiple insecurities throughout one's lifetime also correlated with senior food insecurity. Household changes following the baseline interview until the 8 months follow-up were minimal and did not correlate with quality of life. The increase in SNAP benefits and stimulus checks in response to the ongoing COVID-19 pandemic did help to reduce food insecurity among our participants. We are continuing to examine the life history data to further understand emergent themes that may speak to different features that assist with navigating older adulthood (e.g., experiences of violence or discrimination that may inform senior coping mechanisms). We are also continuing to explore

follow up interview data regarding pandemic and other events our participants are currently experiencing.

Bibliography

1. Ziliak J, Gundersen C. The State of Senior Hunger in America 2017: An Annual Report. Supplement. Report submitted to Feeding America. 2019.

2. Administration on Aging. (2017). Profile of Older Americans. In *ACL Administration for Community Living*. https://doi.org/10.1300/J369v06n01_06

3. Jones NL, Gilman SE, Cheng TL, Drury SS, Hill CV, Geronimus AT. Life course approaches to the causes of health disparities. *American journal of public health* 2019;109(S1):S48-S55.

4. Dean WR, Sharkey JR, Johnson CM. Food insecurity is associated with social capital, perceived personal disparity, and partnership status among older and senior adults in a largely rural area of central Texas. *Journal of nutrition in gerontology and geriatrics* 2011;30(2):169-86.

5. Davis MA, Randall E, Forthofer RN, Lee ES, Margen S. Living arrangements and dietary patterns of older adults in the United States. *Journal of Gerontology* 1985;40(4):434-42.

6. Henning-Smith C. Quality of life and psychological distress among older adults: The role of living arrangements. *Journal of Applied Gerontology* 2016;35(1):39-61.

7. Higashi RT, Lee SC, Pezzia C, Quirk L, Leonard T, Pruitt SL. Family and social context contributes to the interplay of economic insecurity, food insecurity, and health. *Annals of anthropological practice* 2017;41(2):67-77.

8. Miquel Verd J, López M. The Rewards of a Qualitative Approach to Life-Course Research. The Example of the Effects of Social Protection Policies on Career Paths. *Forum: Qualitative Social Research* 2011;12(3):1–24.

9. Lalanda Nico M. Bringing life "back into life course research": Using the life grid as a research instrument for qualitative data collection and analysis. *Quality & Quantity* 2016;50(5):2107–2120. https://doi.org/10.1007/s11135-015-0253-6

10. Randall WL, Kenyon GM. Time, Story, and Wisdom: Emerging Themes in Narrative Gerontology. *Canadian Journal on Aging* 2004;23(4):333–346. https://doi.org/10.1353/cja.2005.0027

11. Jyoti DF, Frongillo EA, Jones SJ. Food insecurity affects school children's academic performance, weight gain, and social skills. *The Journal of nutrition* 2005;135(12):2831-2839.

12. Wilde PE, Nord M, Zager RE. In longitudinal data from the survey of program dynamics, 16.9% of the US population was exposed to household food insecurity in a 5-year period. *Journal of Hunger & Environmental Nutrition* 2010;5(3):380-398.

13. Ryu JH, Bartfeld JS. Household food insecurity during childhood and subsequent health status: the early childhood longitudinal study—kindergarten cohort. *American Journal of Public Health* 2012;102(11):e50-e55.

14. Mehta NK, Zheng H, Myrskylä M. How do age and major risk factors for mortality interact over the life-course? Implications for health disparities research and public health policy. *SSM - Population Health* 2019;8:100438. https://doi.org/10.1016/j.ssmph.2019.100438

15. Hadley C, Crooks DL. Coping and the biosocial consequences of food insecurity in the 21st century. *American Journal of Physical Anthropology* 2012;149(S55):72-94.

16. Leonard T, Hughes AE, Pruitt SL. Understanding How Low–Socioeconomic Status Households Cope with Health Shocks: An Analysis of Multisector Linked Data. *The ANNALS of the American Academy of Political and Social Science* 2017;669(1):125-45.

17. Messer E. Intra-household allocation of food and health care: Current findings and understandings—Introduction. *Social Science & Medicine* 1997;44(11):1675–1684. doi:10.1016/S0277-9536(96)00370-X

18. Corbin J, Strauss A. Managing chronic illness at home: three lines of work. *Qualitative sociology* 1985;8(3):224-47.

19. Leatherman T. A space of vulnerability in poverty and health: political-ecology and biocultural analysis. *Ethos* 2005;*33*(1):46-70.

20. Fang J, Power M, Lin Y, Zhang J, Hao Y, Chatterji S. Development of short versions for the WHOQOL-OLD module. *The Gerontologist* 2012 Feb 1;52(1):66-78.

21. Veit CT, and Ware JE. Mental health inventory. *Psychological Assessment* (1983).

22. Desmond M, Gershenson C, Kiviat B. Forced relocation and residential instability among urban renters. Social Service Review. 2015 Jun 1;89(2):227-62.

23. Jackson, Dylan B., Mariana Chilton, Kecia R. Johnson, and Michael G. Vaughn. "Adverse childhood experiences and household food insecurity: findings from the 2016 national survey of children's health." *American Journal of Preventive Medicine* 57, no. 5 (2019): 667-674.

24. Chilton, Mariana, Molly Knowles, Jenny Rabinowich, and Kimberly T. Arnold. "The relationship between childhood adversity and food insecurity:'It's like a bird nesting in your head'." *Public health nutrition* 18, no. 14 (2015): 2643-2653.

25. Sun, Jing, Molly Knowles, Falguni Patel, Deborah A. Frank, Timothy C. Heeren, and Mariana Chilton. "Childhood adversity and adult reports of food insecurity among households with children." *American journal of preventive medicine* 50, no. 5 (2016): 561-572.

26. Insolera, Noura, Alicia Cohen, and Julia A. Wolfson. "SNAP and WIC Participation During Childhood and Food Security in Adulthood, 1984–2019." *American Journal of Public Health* 112, no. 10 (2022): 1498-1506.

27. Spini D, Bernardi L, Oris M. Toward a life course framework for studying vulnerability. Research in Human Development. 2017 Jan 2;14(1):5-25.

28. Smith, James P. "Unraveling the SES: health connection." *Population and development review* 30 (2004): 108-132.

29. Choudhury, Sharmila. 1997. *Life-cycle aspects of poverty among older women*. No. 71. Social Security Administration, Office of Research, Evaluation, and Statistics.

30. Levin, Madeleine, et al. (2020). Evaluation of Alternatives to Improve Elderly Access. Prepared by Social Policy Research Associates for the USDA Food and Nutrition Service, 2020. Availabe at https://www.fns.usda.gov/research-analysis

31. Bergmans, Rachel S., Lawrence M. Berger, Mari Palta, Stephanie A. Robert, Deborah B. Ehrenthal, and Kristen Malecki. "Participation in the Supplemental Nutrition Assistance Program and maternal depressive symptoms: Moderation by program perception." *Social Science & Medicine* 197 (2018): 1-8.

32. Ziliak, James P. 2021. “Food hardship during the COVID-19 pandemic and Great Recession.” *Applied Economic Perspectives and Policy* 43(1): 132-152.

33. Simmet, Anja, Julia Depa, Peter Tinnemann, and Nanette Stroebele-Benschop. "The dietary quality of food pantry users: a systematic review of existing literature." *Journal of the Academy of Nutrition and Dietetics* 117, no. 4 (2017): 563-576.