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Name

Caitlin Boyd

Title of Paper

What's in the Fridge?: Risk of Food Insecurity as an Intersectional Issue

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Sociology of Health (SOC 238)

Faculty Name

Professor Ana Campos-Manzo

Student Major

Neuroscience Major

Narrative Questions

- 1. Describe how you came to choose your topic, specifically noting any pre-research that you did. What sources did you use in this pre-research? To what extent did you consult with librarians, faculty, or others? How did this pre-research lead you to your topic?**

For this project, I was very broadly given the options of choosing a topic under the umbrella of health. As there was such a wide range of topics to choose, I needed to participate in a thorough pre-research process. This mainly took the form of reading past journal articles to understand what research existed in the fields I was interested in. Before landing on the topic of food insecurity, I was also interested in studying prosthetics or the health of medical professionals. Because these three topics are very different I consulted articles from sociological journals, medical journals, psychology journals, and physiology journals. In order to find these background articles, I used the Connecticut College Library online databases including JSTOR, PubMed, and PsycINFO. It had been through consultations with the librarians during other courses that I learned about these important resources. Another important aspect of the pre-research process was becoming CITI certified in public health research. This certification was a four module course that allowed me to think about the ethics involved in public health research and prepared me for working with data from real people in a respectful way. In the pre-research phase of this project, I also met with both Professor Campos-Manzo at office hours to narrow down what the most interesting angle for the paper would be, as well as with Professor Lopez-Anuarbe. Professor Lopez-Anuarbe is the coordinator for the public health pathway. Once I had realized that food insecurity was a topic I was passionate about, I sought her guidance on how this project could be viewed from a public health lens and connect to my pathway project. Overall, the pre-research process was crucial to me choosing to focus on food insecurity as well as highlighting the intersectionality aspect of the issue.

2. Describe your process of finding information for your project. Note specifically the tools you used to undertake your research, as well as the specific search strategies you used within these tools. (Note: “Ebsco,” being an umbrella vendor, is not a specific enough response when identifying tools; listing the “library database” is also an unacceptably vague answer. Specific tools include JSTOR, America: History & Life, Web of Science, etc., along with OneSearch, the new library system.)

The research process for finding information for this project came in two waves: the background research and the interpretation of data presented in a dataset. During the background research phase of this project, I utilized primarily OneSearch, as well as diving deeper into the journal databases mentioned above. I chose JSTOR, PubMed, and PsychINFO because of their relevance to my fields of study. In order to narrow in on my topic, I used search strategies such as the "find sources cited in this" and "find sources citing this" features. This allowed me to stay close to my research topic while finding sources that don't match the key word search perfectly. Because my topic was so broad, I used key word searches to find the most accurate data. In the advanced search function on OneSearch, I have the option to search with an "and" or an "or". Using the "or" function allowed me to get one search that included "food insecurity", "hunger", and "malnutrition" so that I did not have to worry about missing an important source because of slight differences in vocabulary. Using the "and" function allowed me to search for articles that existed at the intersection of food insecurity and mental health that I was interested in. This project also allowed me to use the Inter Library Loan system available to Conn students for the first time. Through ILL, I easily gained access to two additional articles that would be important to adopting a more global perspective on this topic. In the second phase of this project, I used a statistical dataset to make conclusions about food insecurity trends. In order to select which dataset I wished to use, I scoured many databases that I found through Professor Campos-Manzo's recommendations, as well as the Data and Statistics section of the library database. From the library resources, the data.gov search page was extremely helpful in learning what datasets are available for public use. I ended up using the National Survey of Children's Health, which I discovered through research on CDC-endorsed datasets. Being able to search through raw datasets for relevant data to support my topic was a skill I developed during this research project. Now, I feel that my researcher toolbox is more full because I have the skills to synthesize a wider variety of resources.

3. Describe your process of evaluating the resources you found. How did you make decisions about which resources you would use, and which you wouldn't? What kinds of questions did you ask yourself about resources in order to determine whether they were worthy of inclusion?

When evaluating resources, the two most important things for me are reliability of the research, as well as relevance to my paper. In order to assure that the resources I am using are reliable, I always use the filters available in OneSearch to filter by peer-reviewed articles. When I am researching, I try to read in a way that gives me a broad foundational knowledge of my topic. Only after I have done a literature review and feel knowledgeable about what kind of argument I wish to make do I begin to look at my accumulated research through the critical lens of how well it fits with my topic. During this project, I had 3-4 articles that I read and gave me an idea about what kind of research was being performed on the topic of food insecurity, but I did not reference in my paper because they were not quite relevant. In order to make this distinction, I always ask "Is this research directly related to my topic?", "Do I feel like I am trying too hard to make it fit in my argument?", and "Does this article add information that another doesn't?". After going through these questions, I decide whether or not to include a source. Due to the sheer volume of data that exists about food insecurity, deciding which dataset to base my research on was critical to this project and took lots of decision making. Ultimately, deciding which dataset to use came down to relevance of questionnaire questions, population demographics, and ease of use. While the US Census and the Department of Agriculture have large databases about food insecurity, the National Survey of Children's Health allowed me to cross-analyze food insecurity with racial demographics and mental, emotional, and behavioral problems. Before deciding to use this survey, I did background research on the survey's collection methods to determine if they were reliable. On the Data Resource Center for Children and Adolescent Health website, they are transparent about their partnerships with the Johns Hopkins and the US Census Bureau. They also address potential questions about missing data points, the exact survey questions used, and how the data was collected. This transparency reassured me that this was a reliable resource to use for my paper.

What's in the Fridge?: Risk of Food Insecurity as an Intersectional Issue

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SOC 238: Sociology of Health

Professor Campos-Manzo

May 18, 2022

Abstract

This study examined the prevalence of food insecurity in households in the United States with children. Data for this research came from the National Survey of Children's Health 2019-2020 and included 70,574 participants. Descriptive statistical analysis methods were used to determine cross-sectional relationships in the data based on racial and ethnic background and mental, emotional, developmental, or behavioral issues. In general, 69.8% of participants reported food security, 25.2% reported marginal food security, 4.2% reported low food security, and 0.8% reported very low food security. Black children were the least food secure racial group (58.9%), and Asian children were the most food secure racial group (81.6%). Children with mental, emotional, developmental, or behavioral issues reported lower than average food security levels (59.4%). These results suggest that prevalence of childhood food insecurity is associated with social factors like race and disability.

Keywords: Food Insecurity, Childhood, Developmental Issues, Racial Disparities

Introduction

Food insecurity is a problem impacting millions of people across the United States today. Food insecurity in this paper is defined as not having access to enough food, or nutritious food, due to financial constraints. Despite excessive food waste, the inequity of food distribution has caused malnutrition and undernourishment to exist in nearly every community. Globally, this problem persists on all continents, with nearly 800 million people suffering from some form of food insecurity (Jones, 2017, p. 264). While this is a problem worldwide, this paper will be focusing on the specific ways that food insecurity is experienced in a wealthy, developed nation like the United States. Food insecurity in developing nations is also an important issue to research, but because the causes and solutions of this issue abroad are so different from the situation in the United States, research on other countries will be saved for a further paper. Food insecurity is also especially prevalent in households with children (Rhu & Bartfeld, 2012, p. 50). Because childhood is such a critical period for growth and development, childhood food insecurity is incredibly concerning. The following paper seeks to understand the disparities between the groups of children experiencing food insecurity and those who are not. It will also look at food insecurity as a phenomenon and explore the potential adverse health outcomes associated with experiencing food insecurity from a young age. This paper will start by reviewing what recent research on this topic has concluded, then narrow into the racial breakdown and mental illness correlation between food insecurity and mental, emotional, developmental, and behavioral issues. Finally, this paper will end with suggestions for future researchers and lawmakers on how to implement knowledge of food insecurity disparities into legal policies.

Literature Review

The research on food insecurity in the United States is extensive, specifically within the last fifteen years. These articles show empirical data about outcomes of food insecurity, as well as causes, and demographic data. Research has been done to show food insecurity as a cause for many different health outcomes. The study performed by Gundersen et al. (2015) presented data that found food insecurity in childhood was linked with increased risk of birth defects, anemia, asthma, worse oral health, and being hospitalized. While food insecurity affects these physical and developmental aspects of a child's life, it also impacts mental health. The same study found an increased rate of cognitive problems, aggression, anxiety, behavioral issues, and depression (Gundersen et al., 2015). Food insecurity has also been linked with hyperactivity, impulsivity, and inattentiveness in children (Melchior et al., 2012). Compared to children in food-secure homes, those growing up with food insecurity have twice the odds of overall health being fair or poor, in contrast to good or excellent (Gundersen et al., 2015). This can be seen in longitudinal studies in addition to the cross-sectional studies described above. Ryu & Bartfeld (2012) found that the number of years spent in food-insecure households affected the overall health of the child. Monitoring a group of participants over a period from kindergarten to eighth grade, the researchers found that only 58.1% of children in households experiencing food insecurity during all four check-in years were in good or excellent health in eighth grade (Ryu & Bartfeld, 2012). This was compared to 88.5% of food secure children, 78.9% of children who were food insecure during one of the check-in years, 73.7% of children were food insecure for two years, and 67.3% of children who were food insecure for three years. This research supports the idea that duration spent experiencing food insecurity, and degree of food insecurity, impact the extent to which the condition affects overall health.

There are many different reasons why a family could be experiencing food insecurity. As this topic is so entwined with income and financial stability, it is understandable that the amount of food insecurity experienced in the United States rose with the onset of the two largest recessions of the twenty-first century: the Great Recession of 2008, and the Coronavirus Recession. The rates of food insecurity among households with children increased 30% from the onset of the Great Recession to one year after (Gundersen et al., 2015, p. 1831). This change in financial stability impacted nearly everyone, but immigrants were more likely than US-born workers to lose their jobs and suffer from a lack of food accessibility during the Recession and many years after (Arteaga et al., 2017, p. 1051). Similar decreases in food security can be seen in the aftermath of the economic turmoil of the Covid pandemic. Preliminary studies looking at the lockdown in the spring of 2020 have shown that low and very low food security became more prevalent between the fall of 2019 and May of 2020 (Adams et al., 2021). While the level of food insecurity decreased between May and September of 2020, the September levels were still higher than pre-pandemic numbers.

Race, nativity, and ability are all factors that impact how likely a person is to experience food insecurity. Historically, “food insecurity...disproportionately affects racial/ethnic minority populations facing long-standing health inequalities” (Adams et al., 2021, p. 416). This disparity can also be seen based on immigration status. In a study looking at Hispanic US-born versus foreign-born mothers, foreign-born mothers are not only more likely to be food insecure, but the gap between these two groups is increasing over time (Arteaga et al., 2017). This study found that in 1998, 9.7% of Hispanic women born in the United States were experiencing food insecurity. In contrast, 17.7% of Hispanic women born outside of the United States, but living stateside experienced food insecurity (Arteaga et al., 2017). These numbers increased to 12.4%

and 26.9% respectively in 2011. This shows that as anti-immigrant sentiment in the United States increases, the disparity between foreign-born and US-born mothers' food access is also increasing.

Disability status can also increase the likelihood of a child experiencing food insecurity. Sonik et al. (2016) found that households with one or more children with a disability were more likely to run out of food, not be able to afford balanced meals, have family members skip meals or eat less, and have a parent go an entire day without eating (p. 48). This study also highlights the unique position of children with disabilities because they often are living in homes with adults with disabilities. This is especially problematic because a report from the United States Department of Agriculture found that "33.5% of households with working-age adults who had disabilities making them unable to work were food insecure" (Sonik et al., 2016, p. 43). These impacts from parental experiences have been shown to affect children's health, regardless of parents attempts to shield them. "Although mothers seem to buffer their young children from the nutritional impacts of household food insecurity, they may not necessarily buffer children from the psychological impacts" (Whitaker et al., 2006, p. 867). This is consistent with qualitative research studies where food-insecure mothers report food insecurity as a type of toxic stress that impacts parents and children (Knowles et al., 2015). These findings suggest the health status of parents is contributing to childhood food insecurity, and indirectly impacting the child's health status.

Despite research showing racial disparities among households experiencing food insecurity, as well as the relationship between mental and behavioral health and childhood food insecurity, the following research seeks to provide more light on the intricacies of these two demographic categories. Through the use of a national sample study, the following research uses

descriptive statistics to first look at how prevalent different levels of food insecurity are in the population, then analyzes this prevalence based on racial and ethnic makeup, and finally looks at the correlation between children experiencing food insecurity and experiencing a mental, emotional, developmental, or behavioral disorder.

Methods

The data for this study was collected from the National Survey of Children's Health (NSCH) from the combined 2019-2020 cohort. It is important to note that the 2020 data for this survey was collected prior to the onset of the Covid-19 pandemic in the United States. Invitation to participate in the study was sent via mail and the questionnaire was completed either online or on a mail-in paper survey. The survey was available to participants in either English or Spanish. The survey was completed by parents or guardians on behalf of one of the children in their household. Children included in this dataset were between the ages of 0-17. This survey included children from all fifty states and Washington D.C., and is considered to be nationally representative, with children with special health needs slightly overrepresented. 72,210 surveys were completed in the 2019-2020 cohort, but only the 70,574 that disclosed food security status are included in this study. This survey was designed to be useful for cross-sectional studies, and, therefore, included many questions regarding social life, physical and mental health, and access to healthcare.

With a nationally representative sample, this study takes place on the macro level of analysis and looks at how societal systems overlap to create an environment that allows for disparities of food security. This study focused on the responses to the question "Which of these statements best describes your household's ability to afford the food you need during the past 12

months?” The four possible responses were: (1) We could always afford to eat good nutritious meals, (2) We could always afford enough to eat but not always the kinds of food we should eat, (3) Sometimes we could not afford enough to eat, (4) Often we could not afford enough to eat. Moving forward, these four possible answers will be referred to based on the four main categories of food security. Those who agreed with Statement One are considered the Food-Secure Group; those who agreed with Statement Two are considered the Marginal Food Security Group; those who agreed with Statement Three are considered the Low Food Security Group; those who agreed with Statement Four are considered the Very Low Food Security Group. Though this does not follow the USDA standard 18-item scale used to define food security status in the United States, this non-standardized measure will be sufficient for the purposes of this study. These responses were then cross-analyzed with race and ethnicity, followed by analysis comparing whether or not the child had a Mental, Emotional, Developmental, or Behavioral problem (MEDB). As this is a descriptive study, only descriptive statistics are utilized to interpret the data. All population patterns are described through comparing percentages of samples as well as reporting weighted population estimates.

Results

Figure 1 shows the rate of household food insecurity in households with children during the 2019-2020 years. This data shows that 69.8% of participants in the study were food secure, 25.2% of participants were marginally food secure, 4.2% were categorized as low food security, and 0.8% were considered very low food security.

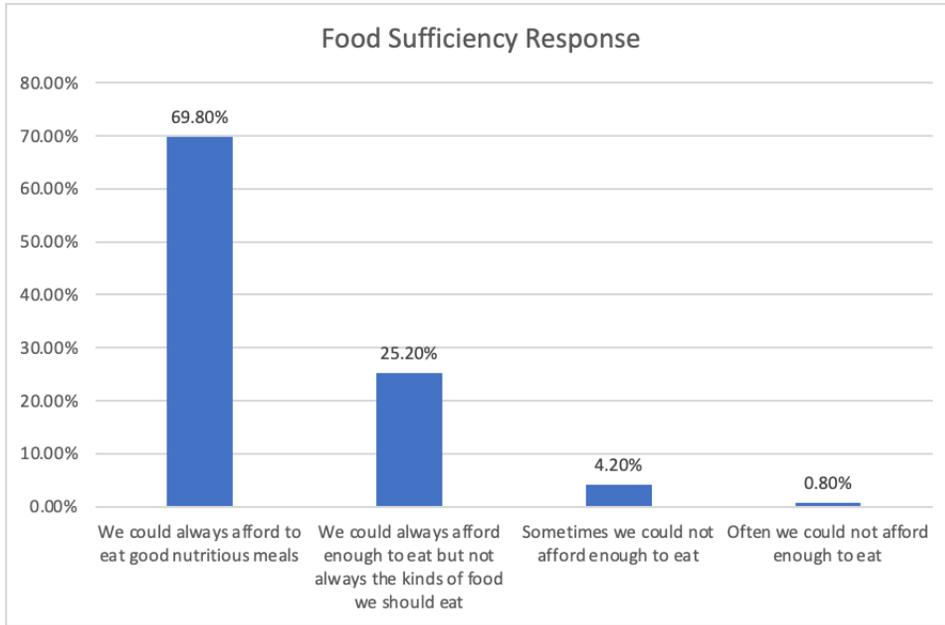


Figure 1. Food Security Levels for Households with Children in the United States, 2019-2020.

When broken down on the basis of race and ethnicity, the data shows a different perspective. This data can be found in Figure 2. Black children consistently had the lowest food security—compared to Hispanics, whites, Asians, and those who do not identify as one of these five categories—at 58.9%. This data also shows Asian Americans as the highest percentage of food security with 81.6% of families reporting food security. This is a 22% difference based on race. This racial pattern changes briefly in the Very Low Food Security category where the percentage of Asians experiencing very low food security is slightly higher than that of white Americans (0.6% versus 0.5%, respectively). This data should be taken with caution however as the 0.6% of Asian Americans represented by this figure are a total of only seven children.

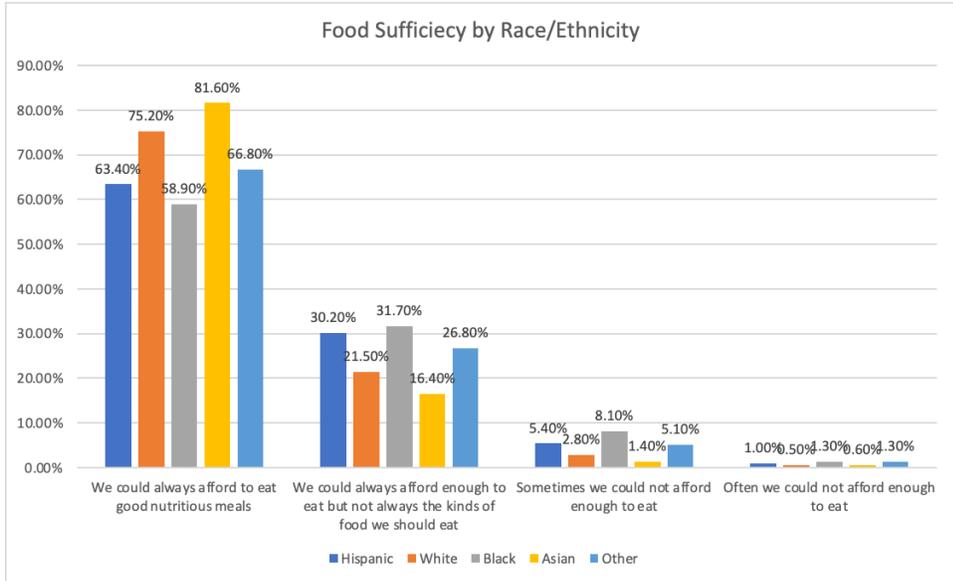


Figure 2. Food Security for Households in the US with Children Based on Race Ethnicity, 2019-2020.

Figure 3 below shows the distribution of children experiencing food insecurity cross analyzed with mental, emotional, developmental, or behavioral (MEDB) problems reported by their parent or guardian. The rate of food security for children with one or more MEDB problems is 10% lower than the US average. Children with MEDB problems are more highly represented across the marginal, low, or very low food security categories compared to their non-MEDB peers.

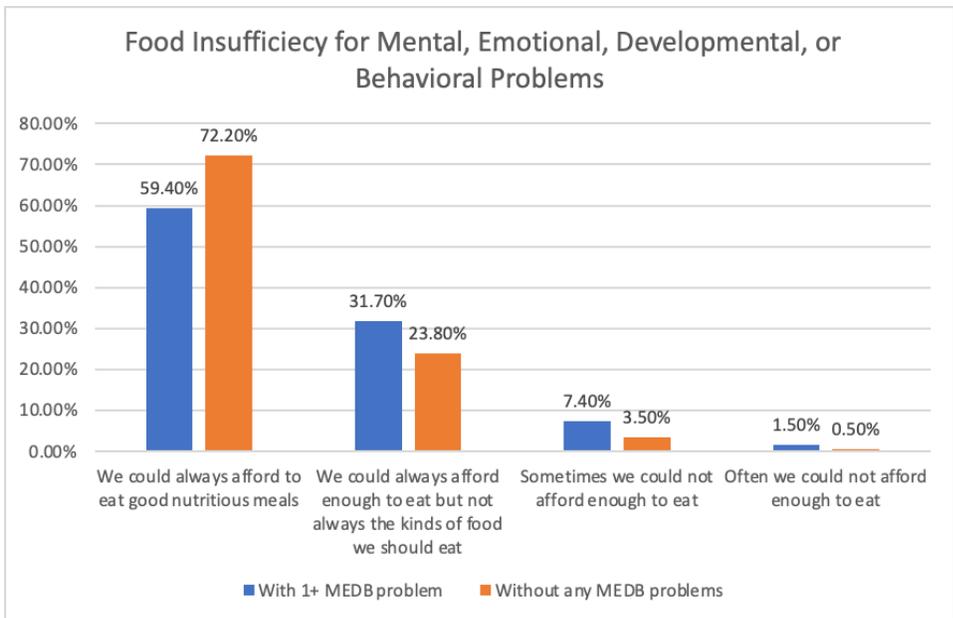


Figure 3. Food Security for Households in the US with Children Based on MEDB status, 2019-2020

Discussion

This data adds to the existing literature to better understand what populations are experiencing food insecurity. The research presented in this paper found significant differences between the prevalence of food insecurity in homes of white and Asian families compared to Hispanic, black, and other families. This suggests that food insecurity is a racial issue and prevention tactics should focus their efforts especially in areas that have large black and Hispanic populations. The presence of the “other” category in the racial breakdown of food insecurity suggests that more research should be done on the intricacies of this phenomenon. In the raw dataset, the data could be analyzed by race that either included or excluded Asians. If Asians had not been given their own category and were included as “other” in this data, Figure 2 would suggest that white children have the highest rates of food security, followed by “other”. This would be ignoring a large variety within the “other” category and would not be presenting the data in a meaningful way. The lack of indigenous populations in this survey sample suggests that there is not fully accurate knowledge about the disparities in minority food security.

The mental health data presented in this study suggest that mental, emotional, developmental, and behavioral problems are highly linked with food insecurity. The data above showed a 12.8% difference in food security between children with MEDB problems and those without. This is consistent with the literature that children with mental disabilities are more likely to experience food insecurity. This data expands the research done by Sonik et al. (2016) to include children with generalized anxiety disorder and major depressive disorder in addition to disabilities like learning disorders, ADHD, and autism. Without running a regression, it is unclear where the causation lies in this relationship, though many mechanisms are reasonable. A possible suggestion as to why rates of food insecurity are higher amongst children with MEDB

problems is that a lack of proper nutrients halts the brain's development during a crucial period of life. Another mechanism could be that children with MEDB problems tend to have higher medical bills than other children which provides financial strains for families, causing them to be unable to afford food. A third possibility is that MEDB problems are somewhat genetically linked and adults with these problems face higher rates of unemployment and therefore food insecurity for them and their children. Lastly, it could be the case, as argued by Knowles et al. (2016), that food insecurity can cause stress-related depression for parents, which increases stress response for children. Further regression research is recommended to better understand the causation of this relationship.

While the data collected in this study is descriptive and largely preliminary, understanding what populations are at higher risk for food insecurity is essential for creating future studies and making recommendations to professionals. Recommendations for future studies would include, as mentioned above, including indigenous populations and looking further at the causal relationship between mental health and food insecurity. Future studies should also include homeless populations, not just households, as well as the relationship between maternal depression and food insecurity experienced in childhood. The data from this study can be used by policymakers to better support the populations experiencing food insecurity in childhood. It can be used on the local level to install food banks in minority communities, at the regional level for school districts to pair their mental health resources and free/reduced meal programs, and at the national level for lawmakers to expand SNAP benefits to be based on more than just income. Food insecurity is a problem affecting millions in the United States. Further research and policy implementation is crucial for correcting the negative effects of being food insecure.

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