CONTRIBUTING FACTORS TO FOOD INSECURITY

AMONG OLDER ADULTS LIVING

IN TARRANT COUNTY

by

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ABSTRACT

In 2022, 9.1% of households with adults aged 65 or older were food insecure at some point during the year. A cross sectional descriptive design study evaluated current factors contributing to food insecurity (FI) among older adults living in vulnerable areas in Tarrant County, Texas. Research sites were identified using demographic information collected from US Census Bureau public data repositories and included household income, percent with a disability, percent without a car, age >65 years, percent >65 years with a disability, and percent >65 years in poverty. Meals On Wheel (MOW) of Tarrant County administration identified three at- risk community sites, which were Southside Community Center in Fort Worth (site 1), Bedford YMCA in Bedford (site 2), and Magnolia Apartments in Arlington (site 3). Following IRB approval, researchers interviewed 48 older adults at these sites. Quantitative and qualitative data were analyzed using SPSS and NVivo, respectively. Participants were 74.1+/-7.7 years of age with a range of 61-93 years. Over 83% (n=40) were female, while 16.7% (n=8) were male. Participants were 58.3% (n=28) White, 33.3% (n=16) Black/African American, and 6.3% (n=3) Asian. Over 29% (n=14) of participants identified as Hispanic. Participants (36.2%, n=17) agreed that "Most older people I know are able to afford enough food to eat" and (66.7%, n=32) reported causes of FI related to finances including low income, loss or lack of jobs, inflation, lack of or limited government assistance. Participants at sites 1 and 2 reported that raising awareness is most needed, while those at site 3 reported that food was most needed to help older adults with FI. Knowing FI causes and barriers to resources informs the development of tailored solutions to improve the quality of life for older adults in these areas.

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CHAPTER I

INTRODUCTION

The objectives of this research project were to identify factors leading to food insecurity (FI) among older adults living in Tarrant County, analyze causes for FI and barriers to resources to help facilitate solutions, and lastly compare the causes of FI and barriers to resources between different high-risk areas. Meals on Wheels is an organization located across the United States that is dedicated to decreasing FI. In 2023, approximately 15.6% of older adults in the United States are experiencing limited or uncertain access to adequate food.[1] In fact, the most recent data from Feeding America states that in 2021 Texas ranked among the top ten states with both the highest rates of FI for seniors and for very low food security (VLFS) among seniors.[1] Adults aged 65 and older are a rapidly increasing segment of the population, which is predicted to represent roughly one in six Americans by the year 2060.[2] Therefore, researchers' understanding of why and how FI affects seniors aged 60 years and older will continue to grow as the older adult population within the United States continues to increase.

Meals on Wheels (MOW) provides home-delivered meals to individuals who are homebound and physically or mentally unable to prepare meals for themselves. There are no specific age criteria that need to be met for an individual to qualify for MOW and individuals do not need to be United States citizens to participate. Additionally, MOW provides meals at congregate meal sites. These congregate meal sites also serve as social settings to combat feelings of isolation that many older adults endure. Lastly, adults 60 years or older who have limited access to food can have frozen meals and fresh produce delivered to their houses through the services provided by MOW. The research conducted by the MOW research team will be used

to determine why people who qualify for Meals on Wheels in high-need areas are not utilizing their services.

CHAPTER II

LITERATURE REVIEW

Nutrition Assistance Programs

Meals on Wheels of Tarrant County (MOW) is a food assistance program that allows members of the community who are homebound and unable to prepare nutritious foods themselves with high-quality meals and case management services. The MOW organizations within Texas serve meals to approximately 100,000 people in need every day.[3] Another food assistance program that has proven to be successful is the Supplemental Nutrition Assistance Program (SNAP). Older adults who participate in SNAP after a year, have a 23% decrease in the likelihood of entering a nursing home and a 4% decrease in the likelihood of becoming hospitalized.[4] However, an individual must meet income and work requirements to qualify for SNAP. Individuals in Tarrant County do not have to meet income or work requirements to qualify for MOW, which provides a similar type of food assistance. Thus, MOW can help decrease health-related risks associated with FI for a broader population of individuals.

Food Insecurity and Disease Management

Individuals suffering from FI are less likely to make doctor appointments, and therefore more likely to have poorer chronic disease management.[5] People suffering from FI are often economically challenged, meaning that they have to make choices between spending money on nutrition or medical care.[5] Therefore, a person who is forced to choose between going hungry or paying for a doctor's visit will most likely choose to eat and not go hungry. However, poor chronic disease management and the absence of regular check-up with a doctor can negatively impact health. These individuals are then more likely to be hospitalized and need acute care services.[5]

Food Insecurity and Accessibility

Individuals suffering from FI are likely to struggle with physical impairments as well.[6] Many older adults have mobility issues that make it difficult for them to walk, drive, or even get out of bed. These individuals may rely on public transportation to get them to their destinations. If an individual relies on public transportation, then they may be required to walk to bus stations and transit spots. Therefore, this makes it difficult for people with physical impairments, like many older adults, to make it to the grocery store. Not only is it difficult to travel to the grocery store, but it may be difficult to travel to government buildings or organizations that can arrange resources and services for those in need.
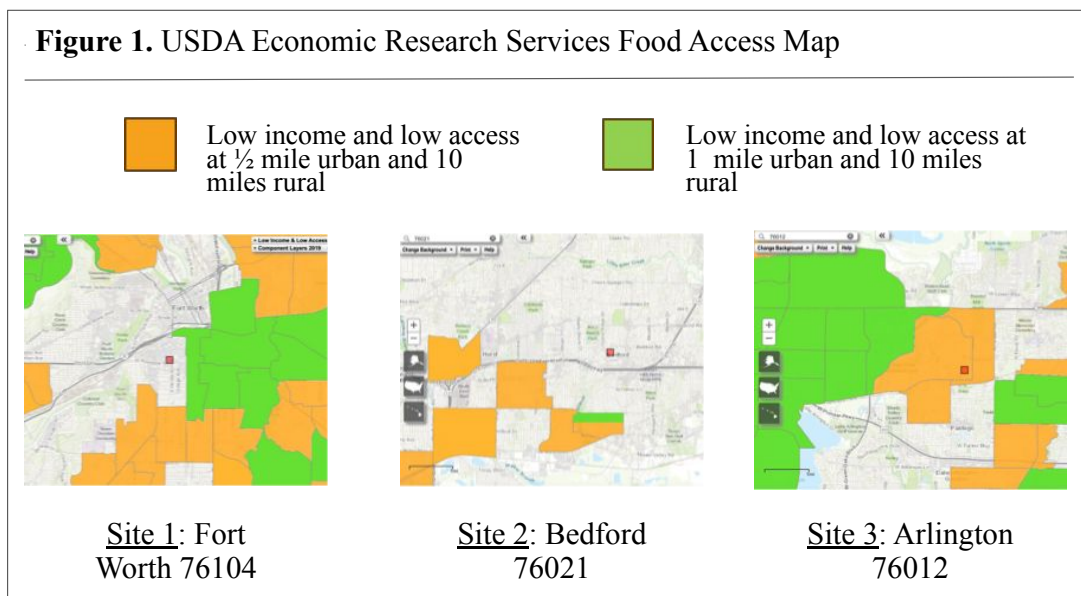
CHAPTER III

METHODS

Study Design

This cross-sectional descriptive design study was approved by the Texas Christian University (TCU) IRB and supported by a TCU College of Science and Engineering Research (SERC) grant and funding from Meals on Wheels (MOW) of Tarrant County

A geospatial analysis was conducted to identify priority areas with high FI and gaps in MOW service. Data was collected from US Census Bureau repositories and included household income, >65 years with a disability, and >65 years in poverty. A composite score ranked neighborhoods by priority. An interactive map was created with overlays regarding information from the US Census Bureau and MOW participation. Three sites were chosen by MOW with input from researchers, based upon having a high population of older adults who should qualify for MOW but with less participation than expected. The community sites where interviews took place were located in three different zip codes: Site 1 Fort Worth (76104), Site 2 Bedford (76021), and Site 3 Arlington (76012). The USDA Economic Research Services Food Access Maps in Figure 1 show the prevalence of food insecurity risk factors, such as low access and low income, surrounding the three sites.

Figure 1. USDA Economic Research Services Food Access Map

Low income and low access at ½ mile urban and 10 miles rural

Low income and low access at 1 mile urban and 10 miles rural

Site 1: Fort Worth 76104

Site 2: Bedford 76021

Site 3: Arlington 76012

Once the locations were identified, a group of five research assistants who were students in either the Nursing or Nutritional Sciences departments went through extensive training and orientation sessions regarding how to properly conduct interviews. The interview questions were designed to evaluate the participants' knowledge of MOW and to gauge the participants' perception of FI among older adults in their community. These questions included short answers, Likert scale questions, true/false, and multiple choice. After the research team gained permission and support from the different sites, they advertised that they would be conducting interviews with older adults in their community in exchange for a $20 Walmart gift card. Additionally, community liaisons, who were retired public health workers in Tarrant County, helped recruit participants and walked the participants through the informed consent process.

Once participants were recruited by the liaisons, trained researchers conducted and recorded semi-structured interviews in both English and Spanish. Next, these researchers used a professional transcription service to transcribe the interviews, which were then reviewed for accuracy using their field notes from the interviews. The transcriptions were translated from

Spanish to English as needed. Figure 2 shows examples of responses to the interview question regarding what participants believed was the cause of food insecurity for older adults in their community.

Figure 2. Causes of Food Insecurity among Older Adults in Tarrant County

FI Cause	Examples	% (n=x)	Sample of Participant Quotes Related to FI Cause
Financial	Low income, lack or loss of jobs, inflation, lack of limited access to government assistance	67% (n=32)	"I get a card from my social security, with that I pay my light. If I have (money) leftover, I buy (food)." "Older adults rely on social security benefits for their daily expenses. With a rise in prices, utilities, gas, and housing and medicine, or course, not to mention clothing and other essentials, food has become a non-priority over all of those expenses."
Health Related	Despair, poor appetite, illness, excessive hospital bills, and dietary restrictions	20% (n=10)	"Usually, old adults sometimes because of health reasons, they are not able to prepare their food. Or they're not able to–– because of medication, some food they can't eat." "I just eat because I have to. I don't have an appetite. I just eat."
Lack of Transport	Lack of transportation, lack of support, or insufficient information	12.5% (n=6)	"Not having transportation or not having anybody to help them. Sometimes you might have a way to go, but then there's nobody to go in the store with you to help you. I'm blessed."
Meal Prep Challenges	Cooking, preparing meals, mobility issues in kitchen, knowledge deficit	12.5% (n=6)	"They need somebody to come and help them out with fixing food sometimes. Some of them can't do it themselves." "When you're used to fixing for a family and then it's just you, it's hard to come up with little small amounts or really a health meal."

Lastly, two members of the research team conducted thematic content analysis. These members conducting thematic content analysis have extensive knowledge and experience in public health. The researchers evaluated the transcriptions separately for themes and then compared their results. NVivo software to detect patterns and themes related to FI. Quantitative data were analyzed using SPSS version 29. The thematic content analysis team decided to organize the data into seven categories which included: causes of food insecurity, sources of food, participant knowledge of MOW, ways that participants learned about MOW, reasons that older adults do not use MOW, outreach and marketing strategies to promote MOW services, and suggestions of methods to help older adults who are hungry.

Participants

Those who are eligible to participate in this study include adults ages 60 years and older who are living in one of the three communities and neighborhoods in Tarrant County that were identified by our geospatial analysis as high-risk areas for FI. Participants must speak either English or Spanish.

CHAPTER IV

RESULTS

Over 83% (n=40) participants were female and 16.7% (n=8) participants were male. Additionally, participants were 58.8% (n=28) white, 33.3% (n=16) Black/African American, 29% (n=14) were Hispanic, and 6.3% (n=3) Asian. To evaluate the participants' perceived causes of food insecurity for older adults in their community, the researcher first repeated this statement "The United States Department of Agriculture defines food insecurity as a lack of consistent access to enough food for an active, healthy lifestyle." Then, after repeating this statement, the researcher asked the participant "What causes this to happen among older adults that you know?" The participant's responses to this question resulted in the identification of five primary causes of food insecurity: finances, health-related causes, lack of transportation, meal prep challenges, and lack of support. Among the 48 participants, 32 (67%) specifically shared that problems related to finances including low income, loss or lack of jobs, inflation, competing expenses, and lack of or limited access to government assistance programs such as Supplemental Nutrition Assistance Program (SNAP) and social security contributed to FI. Furthermore, approximately 20% (n=10) of participants shared that health-related causes contribute to FI. Participants listed contributors such as despair, poor appetite, illness, excessive hospital bills, and dietary restrictions related to medication.

There were differences regarding the causes of FI between each of the three sites. For example, meal prep challenges were more prominent at Site 1 than at any of the other locations. Approximately 28% (n=4) of participants at Site 1 mentioned meal prep challenges as a cause for food insecurity. However, only about 9% (n=1) of participants at Site 2 and about 4% (n=1) of participants at Site 3 mentioned meal prep challenges as a cause of food insecurity. Similarly,

27% (n=3) of participants at Site 2 referenced transportation as a cause of food insecurity, while only about 7% (n=1) at Site 1 and about 4% at Site 3 mentioned transportation as a cause of food insecurity. Therefore, differences in geography or infrastructure could affect the barriers that older adults at each site faces when it comes to accessing food. Figure 3 shows the causes of food insecurity at each site.

Figure 3. Causes of Food Insecurity Identified by Participants at Each Research Site
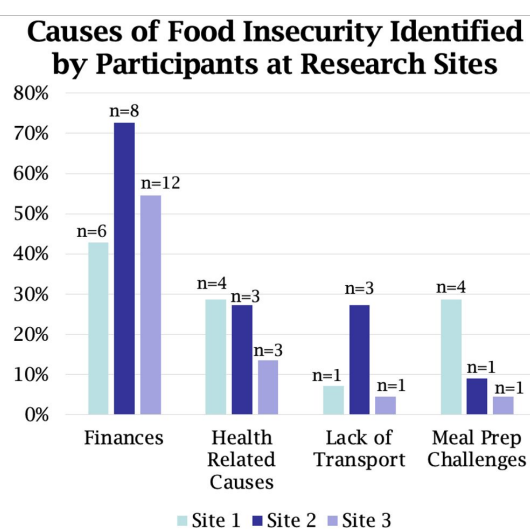
Another question that the researchers asked participants was "Where do older adults in your community get food?". The most common sources of food for older adults include food distribution centers and grocery stores. Approximately 33% (n=16) of participants at all three sites said that grocery stores were their main source of food. Wal-Mart was specifically mentioned five times. About 29% (n=14) of participants at all three sites said that food distribution centers were their main source of food. It is important to note that the responses to the questions regarding food sources differed between sites. For example, approximately 50% (n=14) of participants at Site 1 reported food distribution centers as their main source of food,

but only about 9% (n=2) of participants at Site 3 reported food distribution centers as their main source of food. Similarly, approximately 55% (n=6) of participants at Site 2 reported grocery stores as their main source of food, but only about 14% (n=2) of participants at Site 1 reported grocery stores at their main source of food. Other reported food sources were churches, SNAP, fast food, and MOW. Figure 4 shows the reported food sources for the participants at each site.

Figure 4. Reported Food Sources for Older Adults among Participants at Each Research Site
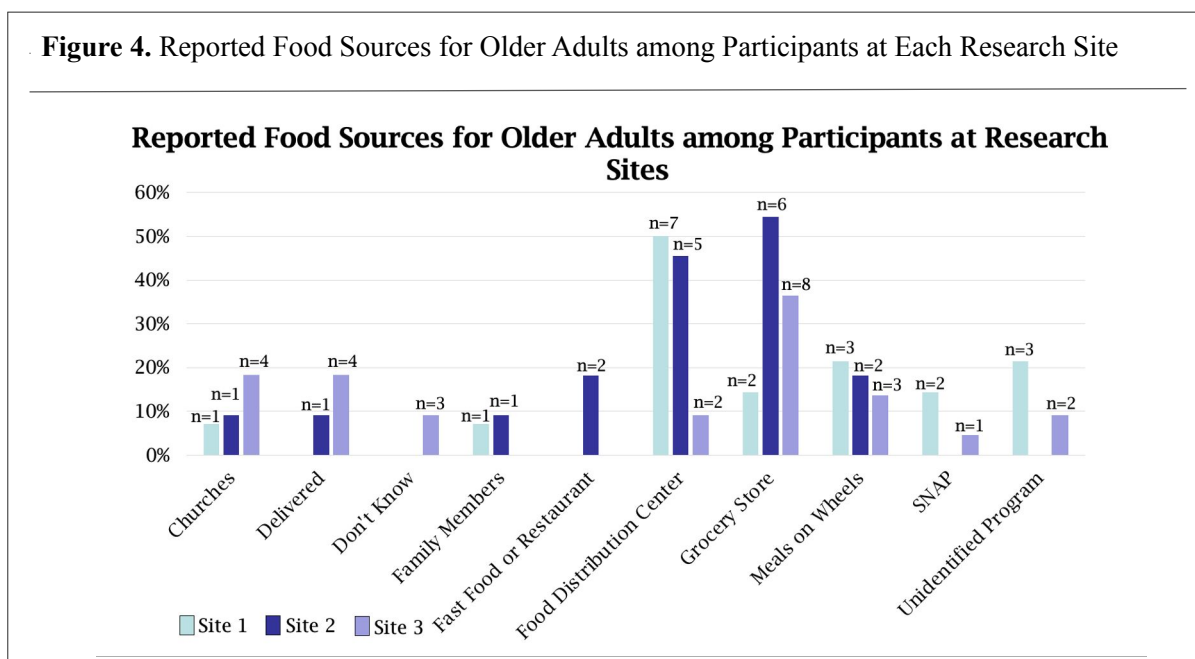
Furthermore, interviewers evaluated participants' knowledge of MOW by asking them true or false questions such as: I know someone who gets help from MOW, someone under 60 years old may receive meals from MOW, people must pay for MOW, and people who US citizens are not can receive MOW. The results from the interviews show that over 77% (n=37) of respondents knew someone who received MOW, while 20.8% (n=10) did not know anyone who received MOW. Almost 60% (n=28) of participants reported a lack of knowledge regarding MOW. For example, they did not know that people under 60 years old can participate in MOW or that MOW is a free service. Approximately 54% (n=26) of participants responded that those who are not US

citizens can receive meals from MOW. In other words, about 46% (n=22) of participants did not know that people who are not US citizens can still participate in MOW.

Lastly, the interviewers asked questions regarding what the participants thought was the best way for MOW to conduct outreach and increase their participation. These questions included: What are the best ways for older adults in your community to find out about MOW? In your opinion, what is needed most to help older adults who are hungry? Approximately 35.4% (n=17) of participants said that a community organization or partner is best to support MOW outreach. About 33% (n=16) of participants said that face-to-face communication is best for outreach.

CHAPTER V

DISCUSSION & CONCLUSIONS

After analyzing the data that was extracted from the interview transcriptions, it was clear that there were differences between the sites regarding causes of FI and food sources. It is important to note that the 76104 zip code that Site 1 is located in has the lowest life expectancy in Texas at 67 years.[7] As described in the literature review, FI can cause a cascade of health-related consequences that could decrease a person's life expectancy and increase the risk for mortality. This could explain why Site 1 has a large population of older adults experiencing FI and abnormally short lives. The participants at Site 1 reported relying heavily on food distribution centers, whereas the other two locations, Site 2 and Site 3, reported relying heavily on grocery stores. This suggests that Site 1 could be a location similar to a food desert where grocery stores are not accessible or affordable for the community. Furthermore, an example of how these sites differed from each other is how participants at Site 2 said that transportation was an issue affecting their access to food. Increasing public transportation in this area could help solve this issue, however, increasing public transportation in Site 1 or Site 3 may not make a difference since that was not a highly reported cause of FI in those locations.

Additionally, participants at Site 1 reported that community centers were the best way to spread knowledge of MOW. All Sites reported a high lack of knowledge regarding Meals on Wheels. This explains why these areas have a high number of individuals who qualify for Meals on Wheels but are not utilizing their services. Our survey results show that one of the best ways to educate people about Meals on Wheels is through community partner organizations. Although Site 1, Site 2, and Site 3 were all struggling with FI and agreed that raising awareness and community outreach was needed, their obstacles and barriers to food differed greatly. Thus,

solutions for addressing FI in Tarrant County must be tailored to the needs of that specific community or zip code. The needs of the older adults in Tarrant County vary from neighborhood to neighborhood, and zip code to zip code based on geography, infrastructure, transportation, safety, and accessibility. Future studies should look at implementing solutions specific to each neighborhood that we studied in Tarrant County. Then, they should record the effectiveness of their implemented solutions and whether they improved FI for the older adults in those neighborhoods.

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