

Assessing Food Pantry Usage and Distance to a Food Pantry in El Paso County, Texas

Gregory S. Schober

 <https://orcid.org/0000-0002-1170-4850>

The University of Texas at El Paso, USA

Jayajit Chakraborty

 <https://orcid.org/0000-0003-0290-7362>

University of California, Santa Barbara, USA

Kayley N. Castillo

 <https://orcid.org/0009-0002-0408-5286>

The University of Texas at El Paso, USA

Eva M. Moya

 <https://orcid.org/0000-0001-9893-2110>

The University of Texas at El Paso, USA

ABSTRACT

Food pantries play an important role in meeting the basic food needs of many United States households. Surprisingly, recent studies have found that spatial factors are not predictors of food pantry usage. This article examines whether household distance to a food pantry acts as a barrier to pantry usage in El Paso County, Texas. Using primary survey data and multivariable generalized estimating equations, the authors analyze the relationship between various household distance measures and food pantry utilization. The results show that multiple continuous measures of household distance to the nearest pantry are negatively related to food pantry usage, with households living within one mile (via the road network) being more likely to use a food pantry. These findings can guide insights for food assistance providers and policymakers, emphasizing the importance of establishing food pantry sites in areas with the greatest need and potential for collective impact.

KEYWORDS

Emergency Food, Food Environment, Food Insecurity, Food Pantry, Spatial Analysis

INTRODUCTION

Food insecurity—defined as “whenever the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain” (Anderson, 1990, p. 1560)—is a major human development challenge in the United States (Cook & Frank, 2008). It is estimated that the national household food insecurity rate is 12.8%, with some states and communities facing much higher rates (Rabbitt et al., 2023). Food insecurity is associated with several negative consequences, including low cognitive performance and poor educational outcomes (Gao et al., 2009; O’Neill & Maguire, 2017; van Woerden et al., 2019), as well as poorer physical and mental health (Banerjee et al., 2017; Drennen et al., 2019; Essien et al., 2016; Maynard et al., 2018).

The emergency food system provides assistance in the form of unprepared or prepared food to socially disadvantaged individuals and families (Poppendieck, 1994). In the United States, food banks

DOI: 10.4018/IJAGR.385015

This article published as an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

and food pantries play an increasingly important role within this system, helping to mitigate food insecurity (Burke & Huffman, 2023; Mabli et al., 2013; Martin, 2021). Food banks collect and store emergency food for the local region, distributing it to a network of local emergency food distribution sites (Poppendieck, 1994).

A food pantry is a non-governmental organization that distributes unprepared food (i.e., groceries) to people in need (Poppendieck, 1994). Food pantries encompass a wide range of community-based organizations, such as brick-and-mortar food pantries, mobile food pantries, faith-based organizations, and even food banks that offer onsite food distribution (Burke & Huffman, 2023; Poppendieck, 1994). According to national survey data, nearly 7% of United States households used a food pantry in 2020 (Coleman-Jensen et al., 2021), including over 40% of low-income, food-insecure households (Brady et al., 2023).

Several studies have examined the determinants of food pantry usage at the individual or household level (Brady et al., 2023; Daponte et al., 1998; Esaryk et al., 2021; Fong et al., 2016; Harper et al., 2022; Hosler et al., 2021; Mabli & Worthington, 2017; Prayogo et al., 2018). Within this growing literature, some studies have demonstrated that key social variables, including race and ethnicity, are associated with food pantry use (Brady et al., 2023; Daponte et al., 1998; Esaryk, et al., 2021). Other studies have found that participation in government food assistance programs, such as the Supplemental Nutrition Assistance Program (SNAP), affects food pantry use (Harper et al., 2022; Mabli & Worthington, 2017). Additional studies point to transportation constraints as key barriers to both food pantry access and food security (Dawes, 2020; DeMartini et al., 2013; Haskett et al., 2023; Moya et al., 2023).

Synthesizing the literature on transportation barriers and food deserts (Dutko et al., 2012; Mulangu & Clark, 2012; Santarossa et al., 2022), Waity (2016) introduced the concept of a food assistance desert, defined as “locations where those who are food insecure have to travel far to secure aid” (p. 104). Multiple studies have used aggregate-level spatial analysis to map the locations of food assistance deserts, often utilizing a one-mile distance—measured from a population center to the nearest food pantry—as the boundary line between food assistance deserts and non-deserts (Casellas Connors et al., 2023; Curran & Armenia, 2021; Waity, 2016). When measuring and mapping these deserts, distance has used either Euclidean (straight line) distance or road network distance (the distance traveled via roads).

Despite the growing academic attention on food assistance deserts, recent household-level studies have found that spatial factors are not predictors of food pantry use (Lowrey et al., 2023; Schramski et al., 2023).¹ Using original data from Columbus, Ohio, and Silver City, New Mexico, these studies found no statistically significant relationship between household distance to the nearest food pantry—defined as the distance between a household’s street address and the nearest food pantry—and the actual food pantry use. These findings challenge the concept of food assistance deserts by suggesting that travel distance may not influence a household’s decision to seek food assistance.

This study examines two primary questions:

1. Does household distance to a food pantry influence food pantry usage in an alternative geographic setting (El Paso County, Texas)?
2. Are those living in close proximity to a food pantry more likely to use the services, even after accounting for relevant spatial and social factors?

Thus, the study aims to assess the relationship between household distance to the nearest food pantry and food pantry usage, and to determine whether proximity increases the likelihood of receiving emergency food assistance.

Drawing on findings that emphasize transportation barriers to emergency food access (Daponte et al., 1998; DeMartini et al., 2013; Haskett et al., 2023; Moya et al., 2023), the authors hypothesize that household distance to the nearest food pantry is negatively associated with food pantry usage.

16 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/article/assessing-food-pantry-usage-and-distance-to-a-food-pantry-in-el-paso-county-texas/385015

Related Content

Monitoring Urban Sprawl and Sustainable Urban Development Using the Moran Index: A Case Study of Stellenbosch, South Africa

Walter Musakwa and Adriaan van Niekerk (2014). *International Journal of Applied Geospatial Research* (pp. 1-20).

www.irma-international.org/article/monitoring-urban-sprawl-and-sustainable-urban-development-using-the-moran-index/118256

Urban Sprawl and the Quantification of Spatial Dispersion

Federico Martellozzo and Keith C. Clarke (2013). *Geographic Information Analysis for Sustainable Development and Economic Planning: New Technologies* (pp. 129-142).

www.irma-international.org/chapter/urban-sprawl-quantification-spatial-dispersion/69053

Identifying Surface Mine Extent Across Central Appalachia Using Time Series Analysis, 1984-2015

Michael Lee Marston and Korine N. Kolivras (2021). *International Journal of Applied Geospatial Research* (pp. 1-15).

www.irma-international.org/article/identifying-surface-mine-extent-across-central-appalachia-using-time-series-analysis-1984-2015/266455

Creating an Interactive Web Map: A Service-Learning Project Aligned to the Geospatial Technology Competency Model

Lesli M. Rawlings (2015). *International Journal of Applied Geospatial Research* (pp. 110-125).

www.irma-international.org/article/creating-an-interactive-web-map/129811

On Modeling and Analysis of Multidimensional Geographic Databases

Sandro Bimonte (2013). *Geographic Information Systems: Concepts, Methodologies, Tools, and Applications* (pp. 91-107).

www.irma-international.org/chapter/modeling-analysis-multidimensional-geographic-databases/70437