

Healthy Food Access Among Minority Populations in Omaha, Nebraska



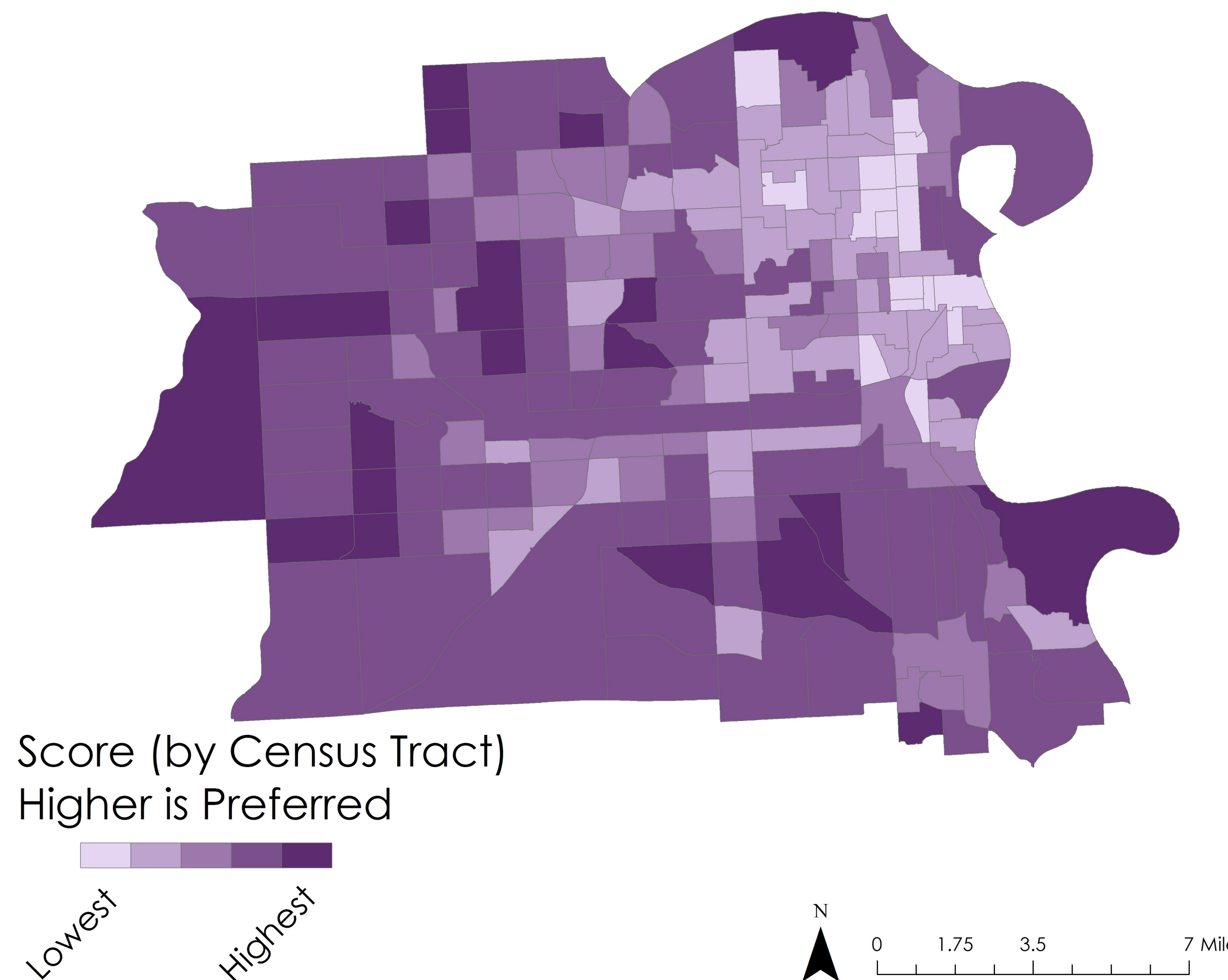
Introduction

This project is a spatial analysis that aims to examine minority populations and their access to healthy food in Omaha, Nebraska. It is often found that minority neighborhoods have poorer access to healthy food and easier access to fast food and convenience stores compared to primarily Caucasian neighborhoods.¹ This study was designed to determine if this relationship holds true for the Omaha metropolitan area. For the purposes of this project, the primary interest is in physical access to food, rather than financial access. Median income is considered, but variations in food prices in different areas of the city are not incorporated into the analysis. Policymakers can use the results of the study to design interventions and programs to improve healthy food access in the areas of the city that are most vulnerable. Access to healthy food has an impact on the health status of the population including levels of overweight and obesity and incidence of diabetes and cardiovascular disease. Prevalence of these diseases has an impact on the healthcare costs and economic productivity of the area, therefore poor access to healthy foods should be of concern to the public, not just the populations with limited access.

Methodology

Each census tract was assigned a healthy food access score based on six variables. A higher score indicates better access to healthy food options. The scores were then compared to the percentage of non-Caucasians in each census tract to determine if there is a relationship between food access score and racial composition. Data gathered from ReferenceUSA was used to map locations of four types of food outlets - traditional grocery stores, specialty grocery stores (such as ethnic food markets), convenience stores and fast food restaurants. The healthy food access score was based on what proportion of the census tract was within one mile of each type of food outlet. Access to traditional and specialty grocery stores received a high score, though traditional grocery stores were weighted more heavily than specialty stores because they generally have more healthy options and lower prices. Convenience stores and fast food restaurants received a low score. The U.S. Census was used to gather data on household median income by census tract. Median income was scored from 1 to 5 based on the categories shown in the map below with higher household median income receiving a higher score.

Healthy Food Access Score



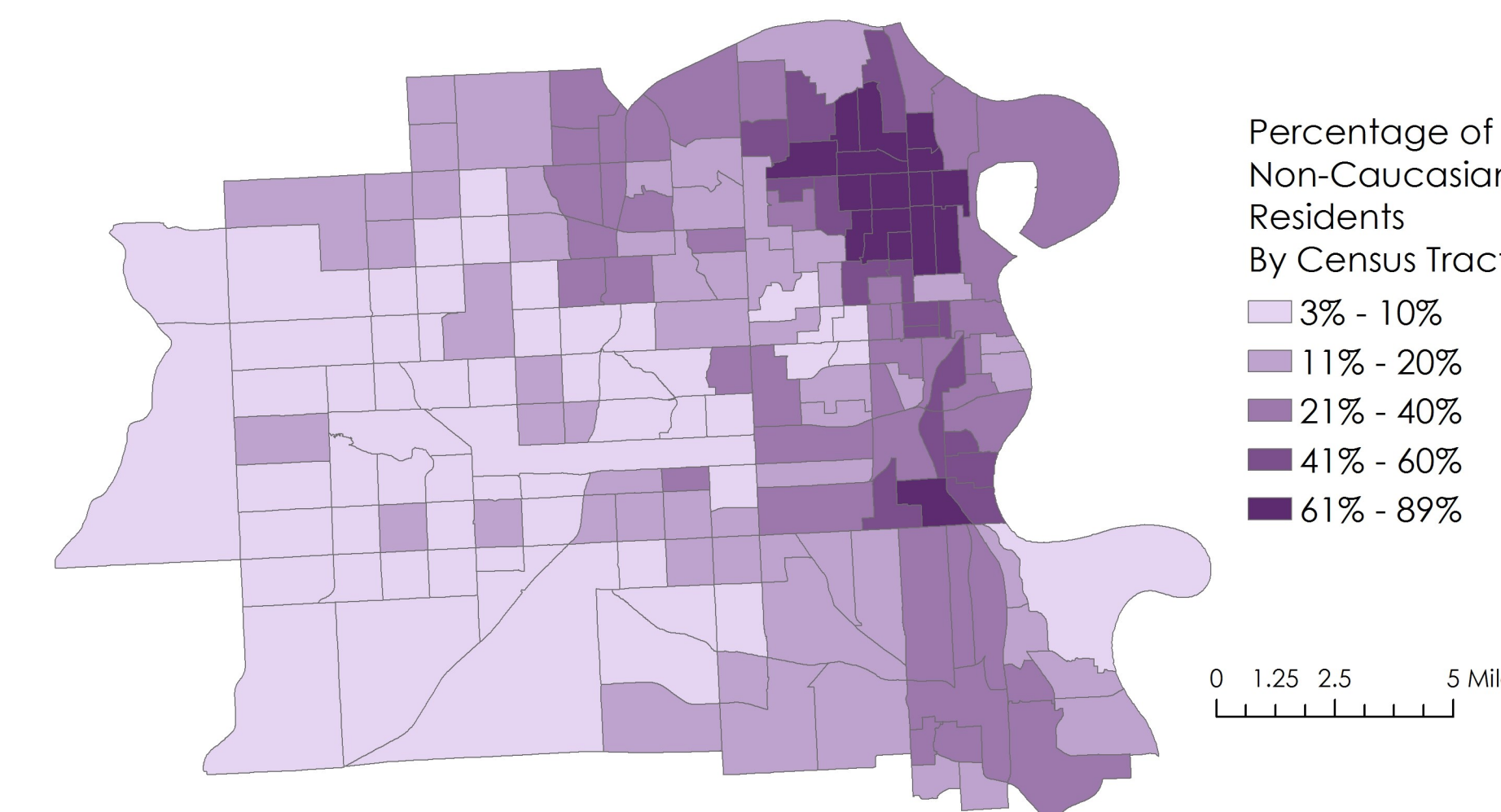
Methodology

Data from the American Community Survey was used to determine the percentage of households in each census tract that do not have access to a vehicle. Vehicle access is important to consider because Omaha has limited public transportation and many areas of the city are not easily accessible without a car. This characteristic of the city makes the distance to different types of stores an important factor in assessing access to food as people without a vehicle will have more limitations on the places where they can purchase food.

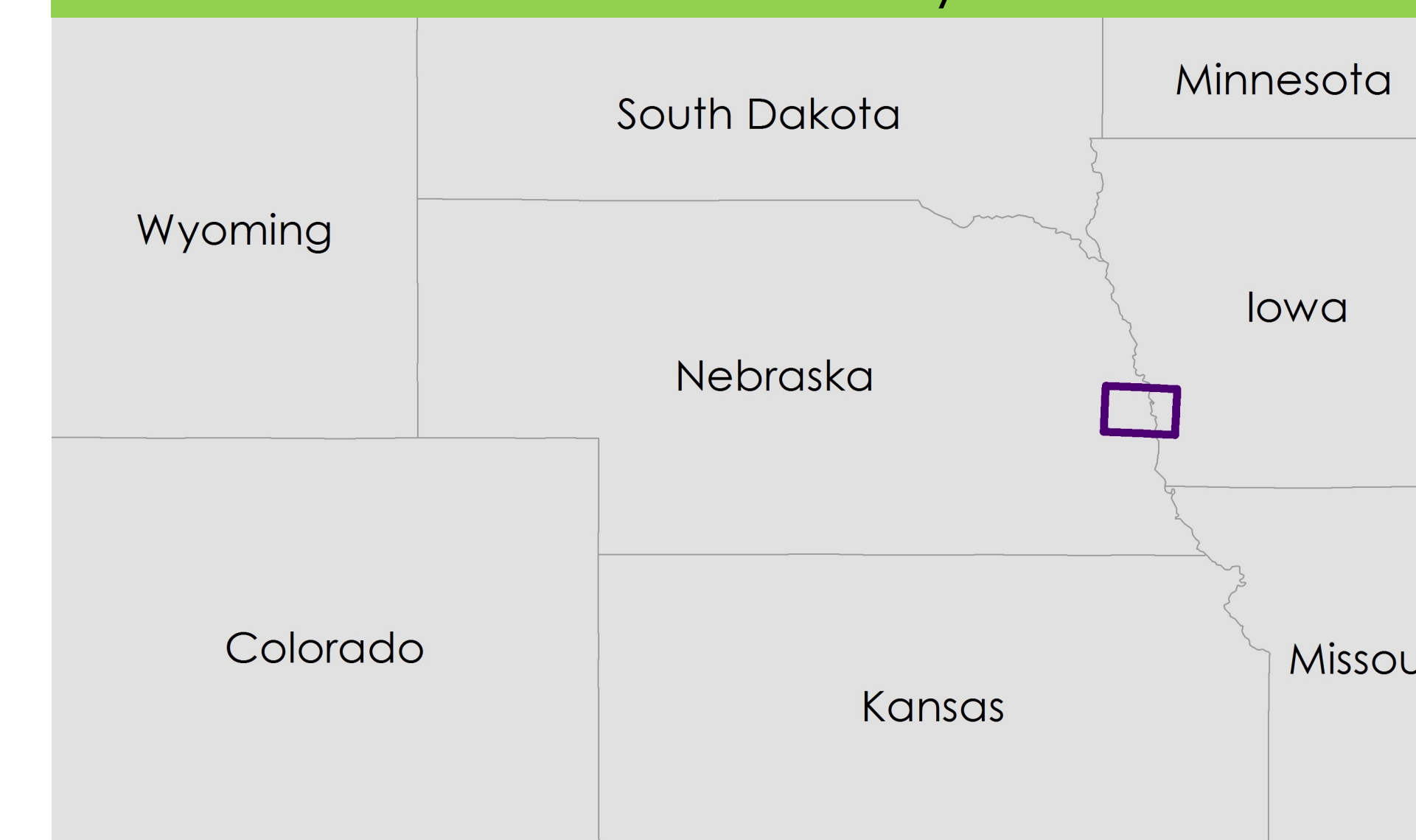
Results

Comparing the food access score map to the minority population map, the results indicate that there is evidence that neighborhoods with higher populations of minorities have worse access to healthy foods. The neighborhoods with high minority populations tend to have lower healthy food access scores, whereas the primarily Caucasian neighborhoods score highly. Areas of North Omaha, Midtown and South Omaha have the lowest scores. The city should take this trend into account and work to improve access in these more vulnerable areas.

Minority Population



Area of Study

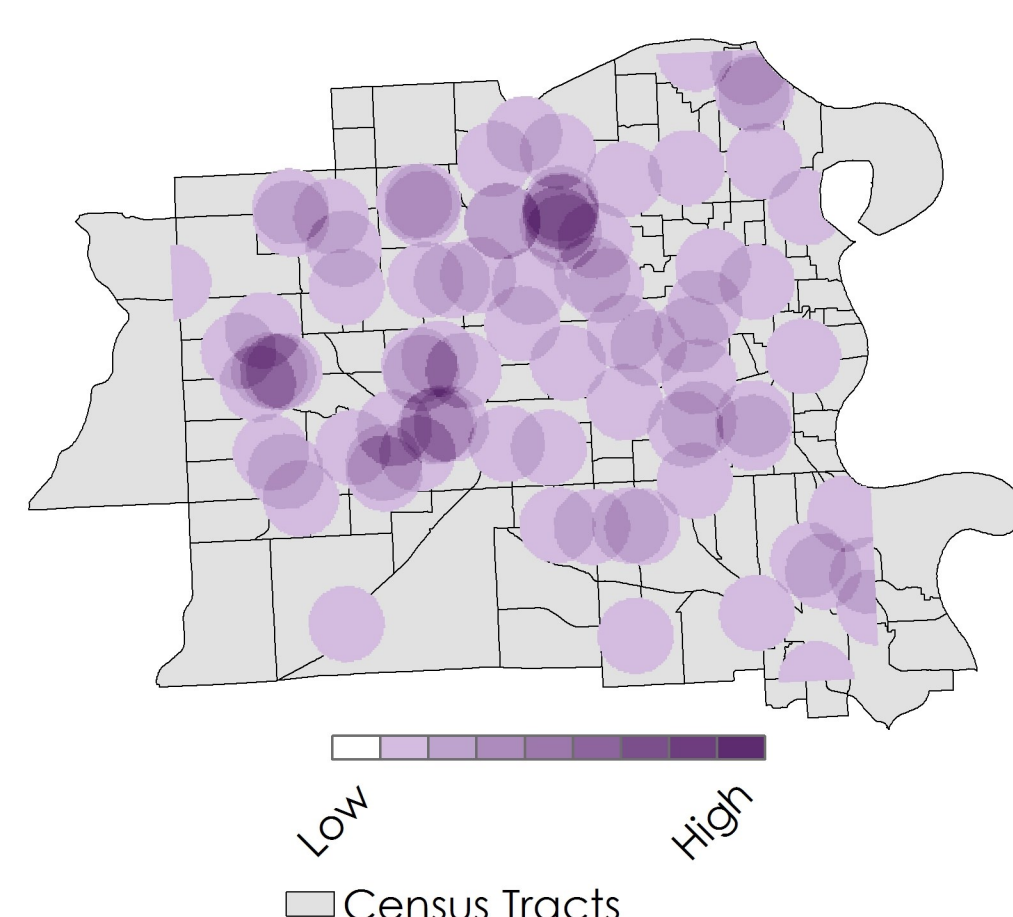


References

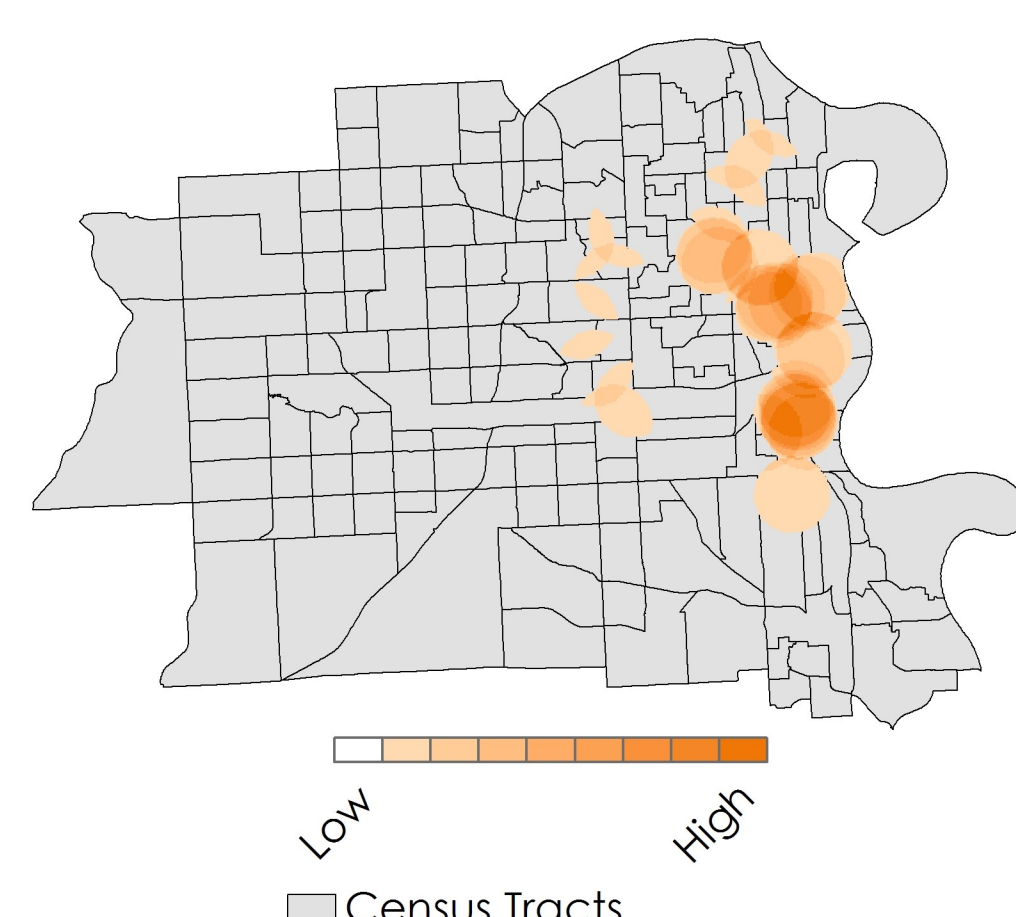
Cartographer: Ashley McCarthy
 Date: May 2, 2014
 Coordinate System: NAD 1983 StatePlane Nebraska FIPS 2600 Meters
 Data Sources: ReferenceUSA, US Census 2010, US Census 2012 American Community Survey, US Census TIGER tracts, ESRI, North American Industry Classification System
¹Larson, NI, Story, MT, Nelson, MC. (2009) Neighborhood environments: disparities in access to healthy foods in the U.S. *American Journal of Preventive Medicine*, 36(1): 74-81.

Healthy Food Access Score Variables

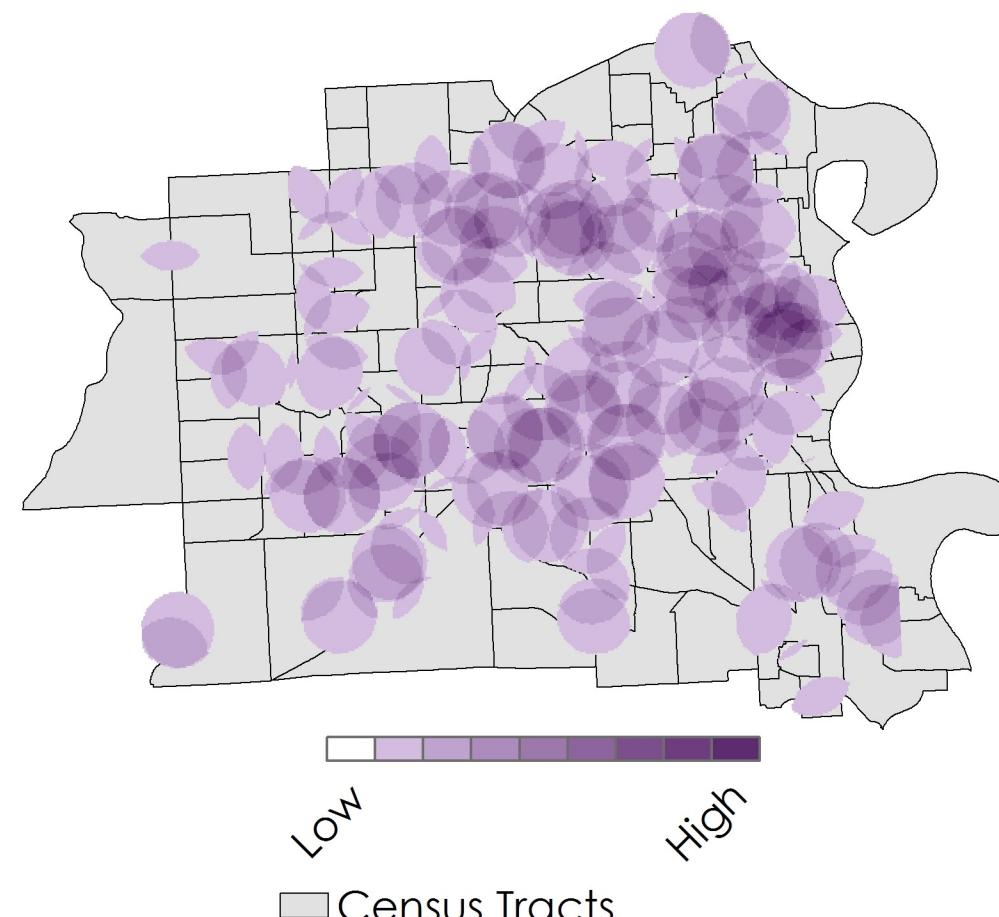
Traditional Grocery Store Density



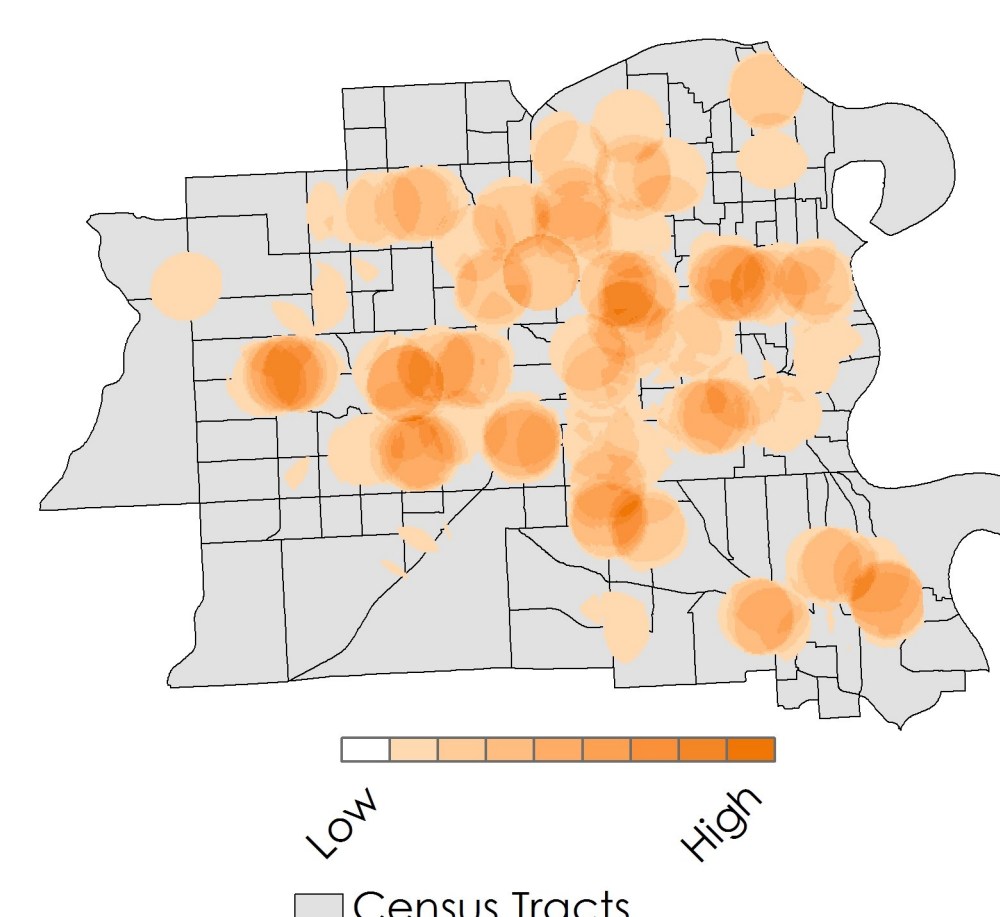
Specialty Grocery Store Density



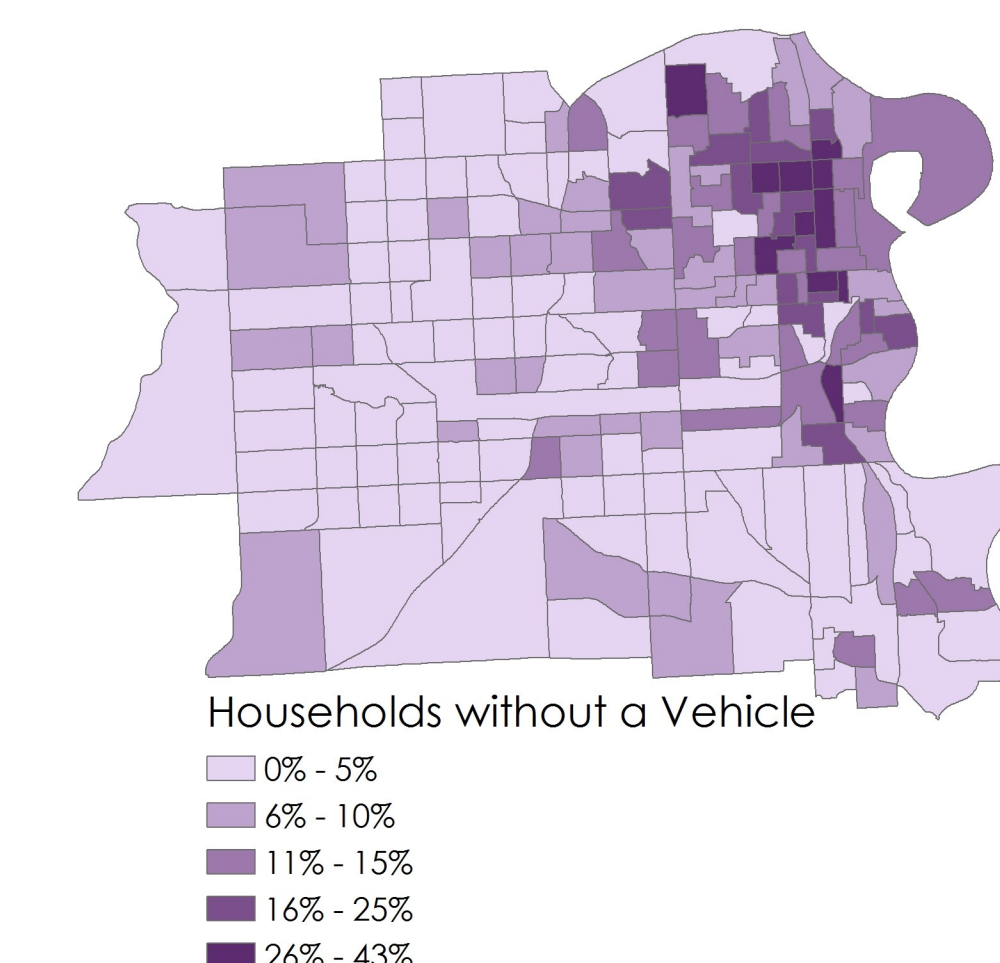
Convenience Store Density



Fast Food Restaurant Density



Access to a Personal Vehicle



Household Median Income

