A SPATIAL EVALUATION OF HOUSING AND SUPPORTIVE SERVICE LOCATIONS FOR THE FORMERLY HOMELESS: THE CASE OF CHARLOTTE, NORTH CAROLINA

by

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ABSTRACT

FAITH MARIE BUTTA. A Spatial Evaluation of Housing and Supportive Service Locations For The Formerly Homeless: The Case of Charlotte, North Carolina. (Under the direction of DR. JOANNE CARMAN)

The lack of affordable housing and homelessness continues to be a serious public policy issue. Even though homelessness has been decreasing nationally, major cities have seen increases late in the last decade. The purpose of this study was to learn more about the locations of housing placements and assess their proximity to supportive services and public transit in Charlotte, North Carolina. Using geospatial analysis, the findings revealed that housing placements were quite clustered, suggesting poverty concentration. The majority were located in just six zip codes, which were socioeconomically and demographically different than the areas without housing placements. Although most housing placements were close to bus stops, they were not close to other services (e.g., nonprofit organizations, grocery stores, pharmacies, or recreation areas). This confirmed that housing placements for people with layered vulnerabilities were in locations that may not have been conducive for their recovery or housing stability. Moreover, nonprofit service providers responding to an online survey acknowledged that transportation, staffing, and funding for supportive service provision could be better. By adopting Housing First and implementing other efforts to increase affordable housing, Charlotte has demonstrated a clear interest in addressing homelessness. Yet, there are still opportunities to do things differently by learning from other communities, which have adopted a range of creative and innovative policy solutions.

Keywords: homeless, formerly homeless, housing placements, accessibility, public transit affordable housing, permanent supportive housing, poverty concentration

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Most importantly, I would like to thank my family (especially my children), and friends (living several states away) who never wavered in their support and encouragement during my academic career. They have been my biggest cheerleaders even when schoolwork took away from our family time. May they always follow their dreams and work to right the wrongs they see.

DEDICATION

The following quote I heard during an ethics class which prompted my interest in this specific disadvantaged population and the policies surrounding them: “If all that we are, is all that we have, then who are we if we have nothing?” This made me really grapple with how we, as a society, treat those who have little to no material things.

This work is dedicated to all of the individuals who have, or are, experiencing homelessness, as well as to those who work in our community to help them overcome barriers to achieve housing stability.

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LIST OF ABBREVIATIONS

BIPOC	Black, Indigenous, and People of Color
CATS	Charlotte Area Transit System
COC	Continuum of Care
FMR	Fair Market Rent
HOPE	Housing Opportunities for People Everywhere
HUD	United States Department of Housing and Urban Development
LIHTC	Low-Income Housing Tax Credit
LYNX	CATS Light Rail
NIMBY	Not-In-My-Backyard
NPO	Nonprofit Organization
PIT	Point-in-Time Count
PSH	Permanent Supportive Housing
QCT	Qualified Census Tract
RRH	Rapid Re-Housing
TH	Transitional Housing

CHAPTER 1: INTRODUCTION

Homelessness is a complex public policy problem, which is often considered an outcome or product of larger systemic issues, such as poverty, lack of affordable housing, and unemployment (Gattis, 2012; Kulik et al., 2011; Nooe & Patterson, 2010; O'Toole et al., 2015; Sample & Ferguson, 2019), as well as individual factors, such as substance use and addiction, physical or mental illness, and the breakdown of families (Mago et al., 2013; Parsell & Parsell, 2012; Piat et al., 2015; Vázquez et al., 2017, 2018). Providing permanent supportive housing has become one of the policy solutions for addressing long-term or chronic homelessness (Henwood et al., 2013), often accompanied by wrap-around, supportive services such as health care, counseling, employment, and other services (Elder & King, 2019).

1.1 Problem Statement

According to the 2021 Annual Homeless Assessment Report (AHAR) to Congress, more than 580,000 Americans experienced homelessness on a single night in January 2021 (HUD Exchange, 2021, p. 1). Nineteen percent (110,528) were chronically homeless individuals (HUD Exchange, 2021, p. 64), which refers to:

> an individual with a disability who has been continuously homeless for one year or more or has experienced at least four episodes of homelessness in the last three years where the combined length of time homeless on those occasions is at least 12 months. (HUD Exchange, 2021, p. 2).

Other populations that experience homelessness include families with children, victims of domestic violence, youth, veterans, and people with a history of incarceration (HUD Exchange, 2021; National League of Cities, 2021; U.S. Department of Housing and Urban Development, 2019). Some of these groups reside in encampments, which refers to individuals living in temporary structures or unsheltered places that are not designed for long-term continuous occupancy (Cohen et al., 2019).

Ending homelessness in America became a priority in 1987 when the federal government enacted the McKinney Homeless Assistance Act (Leginski, 2007). Currently known as the McKinney-Vento Homeless Assistance Act, the purpose of the Act was to (a) establish an Interagency Council on the Homeless; (b) use public resources in a more coordinated manner to meet the needs of the homeless; and (c) provide program funds for the homeless, with special emphasis on elderly persons, handicapped persons, families with children, Native Americans, and veterans (Stewart B. McKinney Homeless Assistance Act of 1987, Section 102b). One of the most important aspects of this Act was that it created grants and funding for programs and services for homeless Americans.

Later, the Americans with Disabilities Act of 1990 and the Olmstead Decision of 1999 were enacted with provisions for states to provide publicly funded supportive services to disabled Americans in the community instead of large state-run institutions. This scattered site approach to providing services to vulnerable populations was reinforced by the promise and proliferation of programs such as Housing First (Gulcur et al., 2007; Koenig, 2015), Housing Opportunities for Persons with AIDS (Terzian et al., 2015), and self-directed funding programs designed to provide individualized services and supports to people with intellectual and developmental disabilities through Medicaid waivers (Cherry et al., 2021). Together, these statutes and policies have provided a framework for state and local governments seeking to end chronic homelessness through a more community-based approach (United States Interagency Council on Homelessness, 2016).

Some states have struggled to comply with Olmstead Decision (Christensen & Byrne, 2014). For example, in North Carolina, the Department of Justice reached a settlement with the state to improve the way mental health services were being provided (UNC School of

Government, 2018). This agreement was a response to charges that the state was violating both the Americans with Disabilities Act and the Olmstead Decision by failing to provide people with mental illnesses the opportunity to live in integrated settings (Bazelon Center for Mental Health Law, 2016, para. 2). In response, North Carolina agreed to provide more community-based treatment for people with mental illness including: 3,000 new scattered-site, supported housing units over 7 years, as well as state-provided supportive services to accommodate their residents (Bazelon Center for Mental Health Law, 2016, para. 3-5). Yet, North Carolina municipalities, especially Charlotte, have continued to struggle to provide community-based housing and supportive services (Christensen & Byrne, 2014) prompting local stakeholder groups to organize and press for better solutions (Listwan et al., 2018; Morris, 2000; Newton, 2016; Rosenheck & Dennis, 2001).

The purpose of this mixed-methods study was to assess the extent to which the neighborhoods where formerly homeless individuals were housed also provided a range of services that support housing stability and recovery. To address the overarching question, the following research questions were considered:

1) Geographically speaking, where were the formerly homeless housed in Charlotte-Mecklenburg?
2) Where were supportive services located?
3) Was there access to transit?
4) Were there socioeconomic or demographic differences between areas where housing placements were compared to where they were not?
5) What, if any, local government policies as evidenced by zoning criteria, political pressures, and current legislation, influenced the location of housing and services?

This study addresses these questions working on the underlying assumption that people—children, men, and women--are inherently entitled to basic necessities, like food and shelter, for the simple fact that they exist. Moreover, ensuring that where this vulnerable population is placed can either assist or inhibit their recovery and housing stability. In addition to a contended moral or ethical obligation to ensure a minimum standard of living for others, there are social and economic impacts of housing, or not housing, individuals experiencing homelessness. Parsell et al., (2017) found that individuals experiencing homelessness used an average of $48,217 of government services per year, whereas in supportive housing, the cost of services was $35,117—a 27% decrease in total cost. It is more cost-effective to house.

The study setting was Charlotte, North Carolina, one of the largest and fastest growing cities in America (World Population Review, 2022). The study makes three contributions. First, the study provides a description of the accessibility barriers from the viewpoints of local service providers. Second, the locations of housing and services were mapped and reviewed to determine if the current locations are close to public transit and other neighborhood amenities. Third, This study complements the recent evaluations of the Housing First Charlotte Mecklenburg Initiative (Thomas et al., 2020) by adding a spatial analysis of housing placements and supportive services and conducting a survey of local service providers. The findings from this study have important implications for public policy, as they relate to housing, transportation, and government and nonprofit services.

1.2 Context of the Study

Charlotte is the largest municipality in the state of North Carolina, with a population of more than 925,000 residing in 307 square miles (World Population Review, 2022). The city is diverse demographically, just over half (52%) of the population is female and 58% identifies as

Black, Indigenous, People of Color (BIPOC). With respect to housing, the owner-occupancy rate is 53% with the median value of housing of $187,300. The median gross rent in 2019 was $1,135, the median household income was $58,202 and the city reported a 12.8% poverty rate overall. With respect to transportation, the mean travel time to commute to work was 25 minutes (U.S. Census Bureau, 2019).

Although Charlotte is a growing city, experiencing nearly 20% growth in population from 2010 to 2020 (Chemtob & Off, 2020), it continues to wrestle with the growing issue of homelessness (Lindstrom, 2021; Newton, 2016). In April 2021, Mecklenburg County announced the Charlotte Mecklenburg Housing & Homelessness Strategy (CMHHS), a cross sector initiative branded as "the first comprehensive effort to address housing instability and homelessness in our community involving the public, private and non-profit sectors" (Mecklenburg County-Housing & Homelessness Dashboard, n.d., para. 1). Yet, this new effort builds on previous efforts to address homelessness implemented by the city, county, and local nonprofit service providers.

For example, the city has a history of investing in affordable housing through the Community Investment Plan, Housing Diversity program, and Housing Trust Fund (Charlotte Housing and Neighborhood Services, 2019b; City of Charlotte, 2021). In addition, the Housing First Charlotte Mecklenburg was a five-year initiative designed to provide services to those who were chronically homeless in Charlotte-Mecklenburg and to end chronic homelessness by scaling up the Housing First approach Since there were not many new units constructed, housing was largely done through scattered site where affordable housing was available. In contrast to programs with mandatory treatment protocols for individuals with mental illness and/or substance/alcohol abuse issues, Housing First provided low barriers to entry and allowing

participants to choose where they live (Malone et al., 2015; Padgett et al., 2006; Tsemberis et al., 2004). By making permanent housing its top priority, the program was intended to increase efficiency and save expenditures on emergency and other services (Housing First Charlotte-Mecklenburg, 2018). Previous researchers have examined the implementation and effectiveness of Housing First in Charlotte, Thomas et al., (2020) notably found that food security worsened when individuals were housed, indicating that they were likely housed in food deserts. Other studies were done elsewhere (Gilmer et al., 2014; Kertesz & Johnson, 2014), and this study complements those research efforts by looking at the patterns and placement of supportive services for people who are no longer homeless.

At the start of this study, according to the 2017 Point-in-Time (PIT) count conducted in Charlotte-Mecklenburg, 1,476 individuals were experiencing homelessness. Of that number, 991 were in emergency shelters, 270 in transitional housing, and 215 completely unsheltered. The overwhelming majority of people identified as Black (79%), whereas only a small fraction (4%) identified as Latino. Additionally, just under half of those counted were women (44%) and about one-fifth of this population was children (21%). There were 137 veterans and 147 individuals who were considered chronically homeless (National Homeless Information Project, 2017). By the end of this study, the most recently available PIT[1] data from 2020 showed that there were 1,604 people experiencing homelessness, or a rate per capita was 1.42 per 1000. Fifty-five percent cited their income as a primary reason for not being able to access housing (Charlotte-Mecklenburg Housing and Homelessness Data Fact Sheet, 2020).

Compared to peers, Charlotte had the highest median gross rent. Additionally, when looking at demographic information and using socioeconomic status to compare peer cities,

[1] https://www.hudexchange.info/resource/3031/pit-and-hic-data-since-2007/

Charlotte had a higher-than-average median gross rent and the largest increase in population percentage change (See Table 1: Peer Cities Based on Demographic and Socioeconomic Status). Even based on different sets of comparable factors, Charlotte's median gross rent is more expensive than most of its peer cities (See Table 2: Peer Cities Based on Housing Similarities). According to HUD, the monthly Fair Market Rent (FMR) for fiscal year 2016 in Charlotte was as follows: efficiency-$653, one bedroom-$745, two bedroom-$864, three bedroom-$1,173, four bedroom-$1,469 (HUD Fair Market Rent, 2016). By 2020, the prices in Charlotte were the following: efficiency-$907, one bedroom-$934, two bedroom-$1,063, three bedroom-$1,423, four bedroom-$1,828 (HUD Fair Market Rent, 2020). If Hanratty's (2017) $100 rent burden holds true, an increase in homelessness would be expected from 2016 to 2018.

Table 1

Peer Cities Based on Demographic and Socioeconomic Status[2]

City	Median household income 2019	Percent persons in poverty	Median gross rent	Percent change in population, 2000-2019
Richmond, Virginia	$47,250	23.2	$1,025	14.6
Columbia, South Carolina	$47,286	21.8	$933	14.6
Little Rock, Arkansas	$51,485	16.6	$872	8.1
Tyler, Texas	$52,932	17.5	$923	25.3
Tuscaloosa, Alabama	$53,326	16.2	$846	27.6
Huntsville, Alabama	$55,305	16.8	$827	24.0
Nashville, Tennessee	$59,828	15.1	$1,100	21.7
Charlotte, North Carolina	$62,817	12.8	$1,135	58.5
St. Louis, Missouri	$67,420	9.3	$983	-11.5
Boston, Massachusetts	$71,115	18.9	$1,620	16.2
Baltimore, Maryland	$76,866	8.9	$1,302	-6.5

[2] Federal Reserve Bank of Chicago, 2021

Table 2

Peer Cities Based on Housing Similarities[3]

City	Median household income 2019	Percent persons in poverty	Median gross rent	Percent change in population, 2000-2019
Jonesboro, Arkansas	$45,931	18.1	$764	37.0
San Antonio, Texas	$52,455	17.8	$992	31.8
Albuquerque, New Mexico	$52,911	16.9	$873	24.7
Huntsville, Alabama	$55,305	16.8	$827	24.0
Lexington, Kentucky	$57,291	16.8	$896	23.1
Phoenix, Arizona	$57,459	18.0	$1,053	23.6
Nashville, Tennessee	$59,828	15.1	$1,100	21.7
Durham, North Carolina	$60,958	14.0	$1,067	44.2
Charlotte, North Carolina	$62,817	12.8	$1,135	58.5
Raleigh, North Carolina	$67,266	12.6	$1,121	68.2

1.3 Charlotte Housing Programs and Services

Local news articles suggested that the Charlotte housing market lacks affordable housing (Clasen-Kelly et al., 2018; Guion, 2013). In 2013, one reporter cited a shortage of 15,000 units (Guion, 2013). As of 2018, that number more than doubled, to an estimated deficit of 34,000 affordable housing units (Clasen-Kelly et al., 2018). As of 2022, the city of Charlotte lacked 38,000 units, and including the area surrounding city limits, the deficit was estimated at over 45,000 (Rose, 2022).Acknowledging the growing issue, the city and county came together to form a Housing Advisory Board (currently inactive), with the mission to “educate, advocate, engage, and partner with community stakeholders to prevent and end homelessness and ensure a sufficient supply of affordable housing throughout Charlotte-Mecklenburg” (Charlotte Housing and Neighborhood Services, 2019a, p. 1). Their (2017-2020) stated goals included (a) develop community awareness for the proposed 5,000 affordable housing units; (b) ensure best practices

[3] Federal Reserve Bank of Chicago, 2021

in conjunction with the Continuum of Care Committee; (c) maximize funding for CoC activities; and (d) data and research in support of housing instability and ending homelessness. The data were provided by the Charlotte-Mecklenburg Continuum of Care (CoC), which is a partnership between the city, County, and local nonprofit organizations that coordinate housing (emergency, transitional, and permanent) and additional supportive services for those experiencing homelessness (Appendix B: Data Use Agreement).

The Housing Diversity Program is part of the City Investment Plan, which aims to "create mixed-income communities by providing a continuum of housing needs from supportive housing to maintaining homeownership" (Charlotte Housing Diversity Program, 2019, p. 1). The city plans to achieve this in the following ways: (a) Housing Locational Policy Acquisition, develop new assisted multi-family housing units; (b) Tax Credit Set Aside, funding for North Carolina Low-Income Tax Credit for households earning 60% of below median income; (c) Supportive Services Housing, funding for Ten-Year Plan to End and Prevent Homelessness (prior to the implementation of the current Housing First Charlotte-Mecklenburg Partnership); (d) Incentive-based Inclusionary Housing Program, private sector affordable housing; (e) Single-family Foreclosure/Blighted Acquisition and Rehabilitation, expand affordable housing through homeowners and nonprofit developers; and (f) Multi-family Rehabilitation an Acquisition, acquire and renovate units in distressed areas (Charlotte Housing Diversity Program, 2019, p. 3). In 2018, $50 million in proposed housing bonds were passed, with an additional $25 million designated in 2020. The city and its residents are definitively saying that affordable housing is an issue and are attempting to address it.

The Charlotte Housing Authority in 2009 received almost $21 million as a HOPE VI Revitalization grants. This amount was the Housing Authority's fifth grant award directed at

invigorating the Boulevard Homes development, which entailed demolishing 301 units and replacing them with 902 units consisting of public housing, low-income housing tax credit rentals, additional voucher-subsidized units, and market rate rentals (U.S. Department of Housing and Urban Development, 2010). In the early years of the 21st century, the state was less successful in some areas regarding populations who had previously been marginalized, for instance, with mental health support services, yet more successful in other areas like with public and low-income housing.

The city of Charlotte has been consistently ranked lower than its peer cities in terms of public transportation. According to a report by the Centralina Economic Development District (2019), Charlotte ranked 97 out of 100 in terms of accessibility and convenience, safety and reliability, and public transit resources. The low ranking of Charlotte in terms of public transportation can have significant consequences for residents, particularly those who rely on public transportation as their primary mode of transportation. Thus, the low ranking can limit their access to employment opportunities, educational institutions, and other essential services. This is poignantly summarized in the Charlotte Strategic Mobility Plan (2020) which states:

> "Charlotte is a car-dependent city. 76.6% of Charlotte workers drive alone to work. 23.4% travel by some other mode (e.g., walk, bike, transit, carpool, or telework). That imbalance is a direct result of 1.) Charlotte's sprawling pattern of growth and development after World War II, and 2.) Charlotte's historic underinvestment in infrastructure for walking, biking, and riding transit."

The city had a Walk Score of 26 out of 100, meaning that a car was needed in order to complete most errands (Palmisano, 2023) . In addition to needing access to a personal vehicle,

transportation costs are relatively high. According to the Charlotte Strategic Mobility Plan (2020), the average household spends almost a quarter (22%) of their income on transportation.

Although Charlotte has been expanding its light rail over the past two decades, it has seemed to benefit selective populations. Li and Fan (2020) found that there was higher service coverage around downtown Charlotte and continually decreased service coverage further outside the city. This may be problematic for public-transit dependent populations (like the formerly homeless), who have fewer alternative options. Similarly, Canales et al., (2019) found that although the light rail contributed to greater accessibility to higher-skilled jobs, it did not achieve those same results for lower-wage workers.

CHAPTER 2: LITERATURE REVIEW

The purpose of this literature review is to describe how homelessness in America is the product of both structural-level and individual-level factors. Lee et al. (2021) maintain that it is actually individual, structural, in combination with a shock (like Covid-19) that puts people most at risk for experiencing homelessness. This chapter also includes an examination of how homelessness in America has been shaped by historical events and various public policies, and it describes how different theories can contribute to our understanding of the spatial patterns of housing and supportive services to people who are homeless.

2.1 Structural Factors

Multiple structural factors also affect people experiencing homelessness. These include the lack of affordable housing, the lack of supportive services, and the criminalization of homelessness.

2.1.1 Lack of Affordable Housing

The lack of affordable housing is arguably one of the largest institutional barriers for Americans, particularly for those with low-income and those experiencing homelessness (Anacker, 2019; Bradford, 2002; Carter, 2011; Freeman, 2002; Martens, 2009; Martin, 2015; Ryan et al., 2014; Shinn & Gillespie, 1994). According to the U.S. Department of Housing and Urban Development (2019), housing is considered affordable if 30% or less of household income is spent on rent/mortgage. Yet, HUD estimates that 12 million households spend more than 50% of their income on housing (roughly 10% of all households), which makes it harder to afford basic needs such as food, clothing, and medical care. Not surprisingly, homelessness becomes more prevalent in areas where household incomes are comparably low, the cost of housing and rent burdens are higher, and affordable housing is scarce (Fargo et al., 2013; Hanratty, 2017).

Furthermore, Colburn (2021) found that subsidized housing had statistically different areas within the United States than areas without subsidized housing. For instance, subsidized households were more likely to live in neighborhoods that had abandoned buildings and trash in yards. Additional studies contend that the market conditions for cities and counties, for instance cost and availability account for the homelessness variance across the United States (Colburn, 2019; Colburn & Aldern, 2022). A lack of affordable housing compounds homelessness because there is the absence of physical structures or vacancies, and when it exists, housing placements tend to be in areas already struggling.

2.1.2 Lack of Access to Services

The lack of access to basic and supportive services is also a structural problem for people who are homeless or at risk of being homeless (Dawkins, 2017). In describing the variation in the health and life expectancy among Americans, Tehrani et al. (2019) observed that "in the United States, access and availability of goods and services fluctuate widely along racial, ethnic, and income lines" (p. 1). Although nonprofit organizations often supplement government safety net programs or provide services where the private sector or market cannot, people who are homeless or at risk of being homeless face considerable challenges in accessing basic goods and supportive services they need to achieve a basic quality of life and have some semblance of environmental justice (Berman & West, 1995; Boucher et al., 2021; Dunkenberger et al., 2019; Eschenfelder, 2010; Rajasooriar & Soma, 2022; Young, 1998).

Many nonprofit organizations, specifically those classified as 501c (3) "charitable" organizations are often the main service providers for low-income individuals and families and people who are homeless. However, according to Siliunas et al. (2019), providing services can come at a cost to those being served. For example, to be considered eligible for services, people

are often required to disclose sensitive and private information about themselves. Additionally, to receive services, people must adhere to the schedule offered by the organizations, not their schedule.

Moreover, AbouAssi et al. (2019) suggested that the availability of nonprofits, or at least the perceived availability, to low-income individuals and families plays a major role in the decision to apply for and/or obtain services. Their study showed that nearly one-third of low-income families in urban neighborhoods receive services from nonprofit organizations at least several times a month (e.g., education, childcare, sports, recreation, arts, religious, health, transportation, or social services) (AbouAssi et al., 2019). Yet, structural issues inhibit access to health and medical care, food, and education for many people with low-income and those experiencing homelessness, with access to other community amenities often being out of reach (Anderson et al., 2016).

Health Care. Chronic and preventable health conditions are more prevalent among the homeless and formerly homeless because of barriers to receiving and maintaining medical treatment, such as getting to medical appointments, paying for services, and maintaining prescriptions for chronic illnesses (Elwell-Sutton et al., 2017; Hwang et al., 2010; Klop et al., 2018; Quintyne & Harpin, 2020). This trend is evident even in countries that offer universal health care, such as Canada, where 17% of one study's participants still have major/severe unmet health needs (Hwang et al., 2010). Klop et al. (2018) found that homeless people had difficulty navigating through the complex medical system in Europe and often individuals felt they were treated worse because of their homelessness condition. On the other hand, Parker (2010) found that chronically homeless persons in Columbia, South Carolina, who were housed for at least six months, had fewer emergency room visits and less overall hospitalizations than those who were

not housed. This researcher found a combined annual estimated medical savings of $250,208 for those participants who were housed. In an evaluation study of formerly homeless persons who were housed for two years, Thomas et al. (2015) found a 76% decrease in number of medic calls and transports. Additionally, the average annual medical bill decreased 75% upon moving into Moore Place (permanent supportive housing) in Charlotte, North Carolina, and continued to decrease two years after being housed (Thomas et al., 2015).

Pharmacies. In addition to the lack of access to primary and emergency care, access to pharmacies is a challenge (Chisholm-Burns et al., 2017; Di Novi et al., 2020; Erickson et al., 2020; Mondesir et al., 2019). This accessibility challenge relates to geography and location (e.g., the physical distance from an individual's residence to their pharmacy), a lack of transportation (e.g., not being able to get to the pharmacy), and a lack of service (e.g., pharmacies not offering delivery service; Chisholm-Burns et al., 2017; Di Novi et al., 2020; Erickson et al., 2020). These issues are exacerbated by out-of-pocket expenses for prescriptions and the costs of long-term or maintenance prescription drugs (Chisholm-Burns et al., 2017; Erickson et al., 2020; Mondesir et al., 2019).

Grocery Stores. The availability and proximity of grocery stores is another potential access concern, one that affects daily life and overall health. Some of the most cited barriers are limited public and private transportation and being on a fixed income (Christian, 2010; Fitzpatrick et al., 2016). One of the more significant effects of limited access to grocery stores and healthy foods is increased health risks such as diabetes, high blood pressure, and obesity (Christian, 2010; Fitzpatrick et al., 2016; Hallum et al., 2020; Liese et al., 2017)

Daycare and School. Affordable and reliable daycare is also a challenge for many Americans, because this much needed service allows low-income families to actively participate

in the workforce and therefore, potentially improve their economic circumstances, specifically for women (Nandi et al., 2016, 2020). In addition to the benefits for the parents, children in daycare receive academic instruction, socializing, and meals (Busse & Gathmann, 2020; Kuchler et al., 2021; Nandi et al., 2016). Similarly, access to schools has an impact on the lives of both parents and children. Transportation is one of the main factors influencing parents' work schedules (Pogodzinski et al., 2021; Rubio et al., 2019). In addition, publicly funded schools provide education, free or reduced meals based on income, and after-school activities, which can help address socio-geographic inequalities (Dhaliwal et al., 2021; Lee & Lubienski, 2017). Thus, families experiencing homelessness may have challenges accessing these valuable place-based services.

Colleges and Universities. Postsecondary education is not accessible for some largely due to enrollment requirements and cost of attendance. This disparity mostly affects youth who have experienced homelessness or have been in foster care (Crutchfield et al., 2016; Skobba et al., 2018). Although attending college can have positive effects for low-income students such as living in a permanent residence (campus housing), positive social interactions, steady meals, and higher education (Klitzman, 2018; Skobba et al., 2018), young people and others experiencing homelessness are unable to access these benefits.

Recreation Amenities. Access to other public amenities, such as parks and libraries, is also problematic for people who are from low-income groups, living in poverty, or homeless. Public parks offer open outdoor space to all residents, in theory. Studies have shown that regularly visiting public parks has a positive impact on both mental and physical health (Besenyi et al., 2014; Hazelhurst et al., 2022; Williams et al., 2020). However, geographic proximity and a lack of transportation can negatively impact public parks utilization by low-income residents

(Besenyi et al., 2014; Wang, Brown, Liu et al., 2015; Wang, Brown, Zhong et al., 2015; Williams et al., 2020).

Likewise public libraries are government institutions that offer a variety of free services to the public, including a temperature/weather-controlled space, free internet, free materials to read, and free computer access (Audunson et al., 2019; Ball, 2009; Bilson et al., 2017; Jaeger & Fleischmann, 2007; Mugwisi et al., 2018). In general, libraries also have a positive public image and general support (Audunson et al., 2019; Bilson et al., 2017; Jaeger & Fleischmann, 2007). In one study, Ho (2019) found that the largest predictor of number of library visits was income level. Those with less personal resources will use library resources as long as they are able to get there physically. In addition to the lack of affordable housing, a lack of access to employment, transportation, and other social services are additional hurdles that the homeless face (Allard et al., 2003; Clark, 2016; Quirós & Mehndiratta, 2015; Tanekenov et al., 2018). However, studies have shown that better planning and using needs assessment data can help ensure more equitable access to public transit, shorter commute times, and better access to services (Anderson et al., 2016; El-Geneidy et al., 2015).

2.1.3. Criminalization of Homelessness

Since the 1980s, researchers have described a revolving door of incarceration and ever-increasing contacts between the criminal justice system and people who are homeless (Berti, 2010; Dum et al., 2017; Judy & Aulette, 1987; Robinson, 2019). Policies banning panhandling, sleeping in public places, loitering, and storing personal property on sidewalks, parks, and public spaces have become the norm in many jurisdictions (Brown, 2020; Clifford & Piston, 2016; Cooper, 2017; Covin, 2012; Darrah-Okike et al., 2018; Heap & Dickinson, 2018; Perlmutt, 2012; Price, 2014; Walters, 1995; Wootson, 2012). As a result, researchers have found that people who

are homeless comprise a disproportionate percentage of the jailed population (Covin, 2012; Greenberg & Rosenheck, 2008).

These policies are controversial, with some scholars suggesting these "quality of life" ordinances violate the Constitution, as related to the First Amendment protections relating to the freedom of movement and expression and due process and search and seizure and Eighth Amendment prohibiting cruel and unusual punishment. (Darrah-Okike et al., 2018; Mitchell, 1998; Walters, 1995). Other scholars describe how these policies serve to perpetuate the inequality related to homelessness, by making it harder for people who are homeless to find employment and housing following arrest, detention, or incarceration (Brown, 2020; Cooper, 2017; Herring et al., 2020; Stuart, 2015).

2.2 Individual-Level Risk Factors

The literature on homelessness is exceptionally rich with studies showing that people who are homeless have significantly higher rates of mental health issues and disorders and poorer physical health than the general population, and they struggle with substance use issues and food insecurity (Badland et al., 2016; Ferguson et al., 2011; Kushel et al., 2005; Parpouchi & Somers, 2019; Rossi et al., 1987; Sullivan et al., 2000). The individual-level risk factors include mental health, physical health, substance abuse, and food insecurity. This study does not make the claim that these factors are what cause homelessness, but they may be either a result of or exacerbated by experiencing homelessness. These factors are discussed below.

2.2.1 Mental Health

Mental health disorders and issues are more prevalent among people who are homeless compared to the general population (Greenberg & Rosenheck, 2008; Scallet, 1989). Although the directionality of the relationship between mental health issues and homelessness is less clear

(e.g., is it endogenous or exogenous?), there is a large body of evidence, which demonstrates that the two often coincide with one another (Bhugra, 1996; Hwang & Burns, 2014; Narendrof et al., 2017; Oh & Devylder, 2014; Okkels et al., 2017; Patten, 2017; Shinn et al., 2007). Moreover, the increasing need to provide more community-based mental health services for people who are homeless has coincided with deinstitutionalization of psychiatric care, which began in 1950s and 1960s (Davis et al., 2012; Dear & Wolch, 1987; Frank & Glied, 2006; Ventriglio et al., 2015). It also coincides with the proliferation of specialized health care for homeless services in the 1980s and 1990s (Zlotnick et al., 2013). In addition, mental health needs are often greater for the homeless as result of childhood trauma, adult victimization, substance use, and suicidal tendencies (Balasuriya & Dixon, 2021; Eyrich-Garg et al., 2008; Fazel et al., 2014; Waters, 2020).

2.2.2 Physical Health

Similar to the research about mental health, studies show that the physical health of those who are homeless is often worse compared to those who are stably housed (Baggett et al., 2010; Hwang & Burns, 2014; Jaworsky et al., 2016; Schanzer et al., 2007; Weisz & Quinn, 2018). The reason for this disparity is that being unsheltered, living in unsanitary conditions, or living in unsafe conditions leaves a person more vulnerable to weather related illnesses, infectious diseases, and trauma. Acute and chronic health issues are also exacerbated due to the lack of access to regular primary care (Fazel et al., 2014; Karaca et al., 2013; Zlotnick et al., 2013). Moreover, people who are homeless are also more likely to lack health care insurance and use the emergency department for medical care and psychiatric services, which is more expensive (Baggett et al., 2010; Hwang et al., 2011; Karaca et al., 2013; Kushel et al., 2001; Morrison, 2009; Padgett et al., 1995; Schanzer et al., 2007; Wadhera et al., 2019).

2.2.3 Substance Use

Studies also show a positive relationship between homelessness and substance use (Bassuk et al., 1998; Doran et al., 2018; Early, 2005; Green et al., 2020; Greene et al., 1997; Kemp et al., 2006; McVicar et al., 2015; Upshur et al., 2018). Notably, disproportionately higher rates of drug and alcohol abuse have been reported among people who are homeless compared to others (Booth et al., 2002; Eyrich-Garg et al., 2008; Hwang & Burns, 2014; North et al., 1997). Drug and alcohol abuse rates are particularly higher among the chronically homeless (Lincoln et al., 2019).

2.2.4 Food Insecurity

Another area where the homeless fare worse is food insecurity, which refers to the limited or uncertain availability of nutritionally adequate food (Algert et al., 2006; Baggett et al., 2011; Crawford et al., 2014; Dachner et al., 2009; Li et al., 2009; Palar et al., 2014). Researchers describe how people who are homeless often do not have enough money to buy food, eat less food that is less nutritious, go without eating for one or more days, and scavenge for food from trash cans and dumpsters (Bowen & Irish, 2018; Hamelin & Hamel, 2009; Holland et al., 2011; Lee & Grief, 2008; Rajasooriar & Soma, 2022). These behaviors can negatively affect their overall health (Parpouchi et al., 2016; Smith et al., 2010).

2.3 Homelessness and Housing Policies

In addition to the individual and structural determinants, current and previous public programs and policies have shaped homelessness in America (Appendix A: US Policies Affecting Homelessness). What and how the government does policy-wise relating to homelessness and housing has both direct and indirect impacts especially for this population, but also for other low-income households. Currently, housing for people who are homeless is

provided through local continuums of care, which provide transitional housing, rapid rehousing, and permanent supportive housing (Gulcur et al., 2003). The continuums of care embrace a communitywide approach to coordinate housing and supportive services for anyone experiencing homelessness in a specific geographical area (e.g., in a city or county). According to HUD (2023), a Continuum of Care (CoC):

- "is designed to promote a community-wide commitment to the goal of ending homelessness;
- to provide funding for efforts by nonprofit providers, states, Indian Tribes or tribally designated housing entities…and local governments to quickly rehouse homeless individuals, families, persons fleeing domestic violence, dating violence, sexual assault, and stalking, and youth while minimizing the trauma and dislocation caused by homelessness;
- to promote access to and effective utilization of mainstream programs by homeless individuals and families, and to optimize self-sufficiency among those experiencing homelessness."

There are five programs that can be funded through the CoC: 1) permanent housing, 2) transitional housing, 3) supportive services only, 4) Homeless Management Information System (HMIS), and 5) homelessness prevention (HUD Exchange, 2019). In addition to these programs, some of the other requirements communities receiving federal funding must do are conduct Point-in-Time (PIT) counts and Housing Inventory counts (Bogard, 2001; Cousineau & Ward, 1992; Metraux et al., 2001; Williams, 2011).

Federal programs have supported two main types of housing for people who are homeless: permanent housing and transitional housing (Beck & Twiss, 2018). Permanent

housing is “community-based housing without a designated length of stay in which formerly homeless individuals and families live as independently as possible … as the tenant on a lease for an initial term of at least one year” (HUD Exchange, 2019, para. 4). There are two types of permanent housing: (a) permanent supportive housing, which is aimed at persons with a disability, and (b) rapid rehousing, which is aimed at the search and relocation for more short-term assistance. In contrast, transitional housing is for “homeless individuals and families with the interim stability and support to successfully move to and maintain permanent housing … up to 24 months of housing with supportive services…” (HUD Exchange, 2019, para. 5). Because the types of housing are geared towards different populations, there are advantages and disadvantages to each.

2.3.1 Transitional Housing

Transitional housing is short-term housing that is generally paired with targeted supportive services for populations with specific needs, such as veterans, domestic violence survivors, youth, and LGBTQ. It previously was assumed as a necessary step from homelessness toward permanent housing (Fotheringham et al., 2014; Pierce et al., 2018; Prock & Kennedy, 2017; Wallace et al., 2019; Williams, 2020). A trauma-informed care approach is often used with these programs, and they include substance abuse treatment programs, affordable housing assistance, employment training, and mental health (Marrone, 2005; Pierce et al., 2018; Prock & Kennedy, 2017).

2.3.2 Rapid Rehousing

Rapid re-housing programs are time-limited programs (generally 6 to 24 months) designed to move families and adults out of shelters and into permanent housing. Although services may be offered, they are less intensive than Permanent Supportive Housing because of a

slightly different priority of focusing on stably housing more than addressing potential severe service needs (Brown et al., 2018; Rodriguez & Eidelman, 2017; Towe et al., 2019; Vaclavik et al., 2018). For example, Hignite and Haff (2017) found that rehousing newly released offenders who had a history of homelessness decreased negative behaviors such as substance use and employment problems when housing was stable, and they were connected to supportive services. Increased social support, via government and nonprofit services, as well as family and friends, for an often-marginalized population has also been found to be one of the more important aspects of housing stability (Bassuk & Geller, 2006; Fisher et al., 2014; Hignite & Haff, 2017; Towe et al., 2019).

2.3.3 Permanent Supportive Housing

HUD defines Permanent Supportive Housing (PSH) as: "permanent housing in which housing assistance and supportive services are provided to assist households with at least one member (adult or child) with a disability in achieving housing stability[4]." It allows for unlimited time assistance for housing in addition to wrap around services.

Before the COVID-19 pandemic, over the last decade, the United States has seen a decrease in the national homeless population as the number of permanent supportive housing programs has increased by more than 50% (Corinth, 2017; Dickson-Gomez et al., 2017; Henry et al., 2020; Pilla & Park-Taylor, 2022). Part of this sudden increase is in the federal government's decision to use the Housing First approach to permanent supportive housing. Among the largest impacts from Housing First programs has been their claim to reduce overall costs for public services, specifically for people experiencing chronic homelessness who are service-dependent (Kertesz et al., 2016; Kuehn, 2012; Somers et al., 2015).

[4] https://www.hudexchange.info/homelessness-assistance/coc-esg-virtual-binders/coc-program-components/permanent-housing/permanent-supportive-housing/

Although much research surrounding permanent supportive housing (PSH) focuses on housing stability, an increasing number of scholars have examined the physical and mental health of the formerly homeless, and its associated costs with government services. For instance, some studies suggest that housing reduces the severity and frequency of health care interventions and criminal justice contacts for the formerly homeless (Henwood et al., 2013; Kuehn, 2012; Parsell et al., 2017; Wright et al., 2016). More concretely, Wright et al. (2016) found an average Medicaid savings of $8,724 per person per year after being housed for one year, whereas Parsell et al. (2017) found a cumulative savings of $13,100 of government services after placement in supportive housing. In addition to the economic cost-savings associated with PSH, the contextual factors, like social integration and case management, were linked to success in housing stability (Collins et al., 2016; Henwood et al., 2013; Tsai et al., 2012). Similarly, studies have shown that social integration along with meaningful activities outside of the home helped the formerly homeless improve their mental health and sense of belonging (Gabrielian et al., 2022; Gurdak et al., 2020; La Motte-Kerr et al., 2020; Pilla & Park-Taylor, 2022). This demonstrates that PSH can be advantageous from both cost-savings and individual well-being perspectives.

2.4 Housing First

The growing concern for the need for affordable housing became even more recognizable as the number of individuals experiencing homelessness increased. One way that housing the homeless was addressed uniquely under the Bush Administration, and continued through the Obama Administration, was through the implementation of Housing First (Mitchell, 2011). This initiative takes a vastly different approach to ending homelessness and it has been associated with varying, yet promising, results. Housing First, which emerged from Pathways to Housing in the early 1990s, involves a different approach to ending homelessness than traditional methods.

Most traditional services were offered in a linear fashion, with housing being at the end of the continuum of care (Padgett et al., 2015).

Conversely, in Housing First, finding and maintaining a residence has the highest priority followed by offering secondary supportive services. The explanatory framework for managing homelessness in this method is based on micro- and macro-level institutional change. Borrowing theory from DiMaggio and Powell (1983), Housing First is built on the premise that institutions can be "regulative, normative, or cultural-cognitive" (Scott, 2014). Therefore, institutions have supervisory, standardizing, and belief-confirming roles. Institutions can play all of these roles simultaneously. Therefore, implementing change in these institutions can be "coercive, normative, or mimetic." Depending on which role an institution plays, more specifically which role is undergoing transformation, change may be forced, socialized, or emulative (Scott & Meyer, 1991).

In addition to Charlotte, multiple cities across the United States and Canada, including Salt Lake City, Lexington, Honolulu, and Medicine Hat, all endorse and apply the Housing First approach to eradicating chronic homelessness, though research currently presents mixed results in effectiveness (Padgett et al., 2015). Some studies have shown that providing housing for this population serves as a public health intervention and helps assuage some of the physical and mental health issues faced by this group (Culhane et al., 2013; Evans et al., 2016; Palepu et al., 2013). Conversely, some studies have not found significant differences in outcomes related to health between traditional homeless services and Housing First, regarding daily substance use even in the long-term (Somers et al., 2015; Volk et al., 2016).

The type of housing that is offered to homeless individuals is also important to consider as each type of housing offers different short-and long-term benefits. One study showed that the

effect of scattered-site housing increased housing stability but not the overall quality of life compared to single-site options, yet costs for the supportive housing with intensive case management were still 30% less than the standard treatment approach (Stergiopoulos et al., 2015). The costs associated with scattered-site housing and supportive housing are significant and should be considered when discussing public programs and services. Budgeting for public programs and social services is one issue that can be easily measured and compared, especially for housing. Rodriguez and Eidelman (2017) found that the average cost for transitional housing in Georgia was $2,706 per month and rapid rehousing cost was $878 per month. What may be equally important to clarify is that each type of housing serves a different subpopulation because different sub-populations have different needs (Burt, 2001; Tsai et al., 2012; Tsemberis et al., 2004). Housing and services are ultimately delivered at the local level, even if funding for them starts at the federal level. Therefore, it is so important to take a closer look at the community itself—context matters. Doing so supports the decisions and policies that affect individuals are reflective and appropriate of their surrounding environment.

2.5 Policy and Legislative Efforts

Policies at the national level have attempted to address several issues surrounding homelessness, evolving over time from the simple acknowledgment that homelessness is a public issue to creating agencies to tackle associated problems and funding state and local level programs (Blau, 2013; Heathcott, 2012; Kondratas, 1991). Beginning with the Housing Act of 1937, a federal public housing authority was created to make loans and grants to public housing agencies (Biles, 1998; Harner, 1987; von Hoffman, 2000). Just over a decade later, the Housing Act of 1949 was enacted to revitalize American cities and provide a “decent home and suitable living environment for every American family” (Pub L., 81-171).

Later, President Johnson, with his War on Poverty in the 1960s, addressed part of this issue by creating the Department of Housing and Urban Development, and the Housing Act of 1965 authorized the creation of 60,000 units of public housing. One contention facing cities was deciding where to build these new units (Baranski, 2007; Reynolds, 1965; Rouse & Wehbring, 1971; von Hoffman, 2000). If new buildings were built next to existing buildings, then this would continue to concentrate poverty, largely in the urban cores. Additionally, there were growing concerns about the racial segregation practices that plagued many policies during the Civil Rights era (Boyd, 2010; Carter et al., 1998; Massey & Eggers, 1990; Nightingale, 2012; Taeuber & Taeuber, 1965). Galster (2019) contends that these federal housing policies resulted in affordable and public housing being located in communities that were historically disinvested in.

Another legislative effort to ensure that adequate housing was available to those with marginal earnings was the Housing and Community Development Act of 1974. This Act created what used to be commonly referred to as Section 8, which provided for rental subsidies that could be used by individuals to pay for rent in privately owned buildings. Moreover, the federal approach to funding housing at the state and local levels was redistributed as Community Development Block Grants (Dommel, 1986; Tortola, 2015; von Hoffman, 2000; Williamson, 1982).

The first federal comprehensive legislation to address homelessness was the Stewart B. McKinney Homeless Assistance Act of 1987 (Library of Congress, 1987). More recently, Congress passed the Homeless Emergency Assistance and Rapid Transition to Housing Act (HEARTH) in 2009. This Act, which amended and reauthorized the McKinney-Vento Homeless Assistance Act, had several substantial changes. It largely expanded the scope of the original

Act, combined HUD's grant programs, increased prevention resources, and highlighted the importance of performance of Continuums of Care (U.S. Department of Housing and Urban Development, 2015).

Additionally, involvement in foreign wars or wars/conflicts abroad, has both a domestic and international impact on homelessness (Harding, 2020; Jawad et al., 2020). For example, veterans have higher risks of mental health issues, suicide, substance abuse, and homelessness (Macia et al., 2020; Metraux et al., 2017; Tsai & Byrne, 2019; Weiner et al., 2021). Moreover, the policies happening abroad can cause budget cuts in some domestic programs, especially for certain populations, such as the homeless. On the other hand, some policies that guide federal funding of homelessness, for instance Emergency Rental Assistance, were reauthorized during the COVID-19 pandemic.

2.6 Using Theory to Understand the Spatial Patterns of Homelessness

Different theories were used to inform this study's research questions because they contribute to our understanding of the spatial patterns of housing and supportive services to people who are homeless, including new institutionalism (DiMaggio & Powell, 1991), "not in my back yard" (NIMBY) phenomenon (Smith & Marquez, 2000), and spatial mismatch (Hanson, 2009). These three theories, in particular, fit well with the context of the present study (Charlotte, North Carolina). They also highlight the need to examine the spatial distribution of poverty and housing the formerly homeless.

2.6.1 Institutionalism

Although some theories of decision-making are based on the assumption that actors make choices, which are rational, calculated, and self-interested, March and Olsen (1984) introduced the notion that institutions affect and are a product of behavioral actions and normative ideas.

This definition of institutionalism expands to include the beliefs, rules, and norms, both formal and informal, which promote legitimacy (Bakir & Jarvis, 2018; Berthod, 2018; de Oliveira & Calmon, 2018; Galanti, 2018; Scott & Meyer, 1991). This "new" institutionalism adds the sociological principles that actors and their interests are constructed and maintained within the institutions while transmitting real and symbolic meanings within and across actors and institutions (Abrutyn & Turner, 2011; DiMaggio & Powell, 1991; Zucker, 1987). Institutionalism is a perspective that includes stakeholders, rules, and regulations, and the interactions within and among them to produce some political result (Abrutyn & Turner, 2011). The current study, specifically, addressed how local government can be a powerful institution, which contributes to the creation and enactment of public policies.

Council-Manager Governments. The City of Charlotte has a council-manager form of government. This structure means that they elect a mayor and 11 city council members every 2 years. They also have a professional city manager who runs the day-to-day operations. In Charlotte, the mayor and four council members are elected at-large by a citywide vote. Additionally, there are seven council members—one elected in each district that they represent. The mayor and city council are responsible for the following: establishing policies, approving the financing of all city operations, and enacting ordinances, resolutions, and orders. Part of these responsibilities also includes preparing the annual budget, setting tax rates, and authorizing contracts for the city (City Council, 2022).

Each council member represents their district, and as such, may have complimentary or competing goals with other council members and their respective districts. One example of this is in affordable housing planning and zoning. According to White (2018), Justin Harlow representing District 2 explained,

> "A lot of our neighborhoods have failed and it's particularly in black and brown communities, mainly because of poor public planning. We have had no instance of a comprehensive plan. We have zoning ordinances, but those ordinances have not really lined up with those plans and they've certainly been done on the backs of lower-income and lower socioeconomic communities that just happen to be majority minority." (p. 1A)

What may be beneficial in zoning ordinances for one district may be detrimental to another district.

Similarly, as Portillo (2018) wrote, there was a push from some residents to prevent tiny homes from being built by setting minimum lot size standards. Tiny homes are offered as one permanent option for individuals who are not stably housed because they allow more homes to be built on smaller lot spaces. However, as Portillo (2018) reported, Greg Phipps of District 4 said, "he and other council members worry about the potential for strong 'not-in-my-backyard' (or NIMBY) backlash, especially because some developments, such as apartments, denser townhouse communities or affordable housing already tend to draw strong opposition." A concession to this would be to offer character overlay districts, which would allow property owners to specify areas to designate as neighborhood character districts. This zoning designation helps "reduce conflicts between new construction and existing development" by regulating certain characteristics, for example lot size or building height (Charlotte Place Types and Unified Development Ordinance, 2018, para. 7). Some North Carolina cities that already have this process in place are Greensboro, Durham, and Raleigh.

County Commissions. Mecklenburg County has a seven-person county commissioner board. Some of their major responsibilities are "setting the annual County budget, setting the County property tax rate, and assessing and establishing priorities on the many community needs, especially those related to health, education, welfare, mental health and the environment" (Board of County Commissioners, 2023, p. 3)

In reporting on affordable housing in Mecklenburg County, reporters for *The Charlotte Observer* have highlighted how county commissioners have described "challenges" to building or repurposing low-income housing in south Charlotte. One example is a proposal by the Charlotte Housing Authority to locate an apartment complex in Ballantyne in 2010, which required rezoning. The proposal was described as causing "an uproar" (Harrison, 2015b, p. 4), and the rezoning vote never took place.

Other times, county commissioners might agree on housing developments. For example, as Portillo (2019) reported that the county has acknowledged the need more for tens of thousands of affordable housing units, writing, "the county is preparing to take a more active role in an area that's traditionally been the purview of city, state and federal governments" (p. 1A). Portillo goes on to write that that the "Commissioners said their constituents bring the issue up frequently" (Portillo, 2019, p. 1A). Moreover, in 2015, the county commissioners approved eight proposed low-income housing developments to receive money from the city's Housing Trust Fund.

2.6.2 Not-In-My-Backyard

One of the most well publicized barriers to constructing affordable housing and other human service organizations is known as the not-in-my-backyard (NIMBY) phenomenon. Smith and Marquez (2000) defined NIMBY as the "extreme opposition to local projects characterized by: localized attitudes toward the problem, distrust of project sponsors, limited information about siting, risks, and benefits, and a highly emotional response to conflict" (p. 273). Research shows that often there are stigmas related to the following populations like the impoverished/homeless, prisoners/ex-offenders, and people with mental illness (Piat, 2000; Scally, 2012; Scally & Tighe, 2015; Staff, 2012). The concern of some residents is that individuals will be unproductive and dangerous, in addition to the potential economic issues (Gibson, 2005; Takahashi, 1997). One

potential economic issue is that these types of human services facilities tend to be accompanied by a preconception that these facilities would turn the surrounding areas into a zone of dependence. Additionally, these facilities don't generally generate revenue to contribute to the tax base, whereas other types of buildings that could generate revenue, like restaurants or boutique shops, would not be built.

Another motivating factor behind NIMBY is to keep development, even in the general sense, out. The purpose is that by limiting the development in neighborhoods with established amenities, it helps to preserve property values and maintain a presumed high "quality of life" for current residents (Ellickson, 2021; Hills & Schleicher, 2015; Scally, 2012; Scally & Tighe, 2015). The housing squeeze in Charlotte had been further entrenched since the COVID-19 pandemic, as evident in the continuous increase in the median sale prices of homes since then (DePietro, 2023). However, since people will have to live somewhere, one effect of NIMBY is that it pushes the development of affordable housing disproportionately to neighborhoods with less amenities because they are more likely to be less expensive.

For example, The Charlotte Observer (2010), in reporting on a community meeting regarding the building of subsidized apartments, described how one man stated, "my house is over a million, and I don't want the crap next to me" (p. 25A). Similarly, some residents prefer single-family construction and want traffic to stay at a minimum (Newsom, 2010; Portillo, 2018). The long-held argument is that individuals want the housing and services provided, but not where *they* live.

Overcoming the NIMBY syndrome is possible but requires coordination by multiple stakeholders at multiple levels. For example, legislation occurs at the federal, state, and municipal levels, but is largely implemented and the effects felt, at the local level and in specific

neighborhoods (Javanparast et al., 2018; McCabe & Feiock, 2005). Having a comprehensive approach to coordinate with residents, nonprofit organizations, and local government has been shown to be effective in overcoming NIMBY and improved service provision (Hills & Schleicher, 2015; Jennings & Zank, 1993; Lee & McGuire, 2017).

Another example of NIMBY in action was proposed by the Belmont Community Association (located just outside the I-277 loop), which opposed an affordable housing development citing that it was not appropriate because of an existing "surplus of low-income housing in the area" (Harrison, 2015a, p. 4A). Similarly, residents in Elizabeth also voiced concerns about their neighborhood becoming a place where people who are homeless prefer to go, as there were three nonprofit projects addressing this population (Price, 2012). The most voiced parental concern was the potential for declining safety. Sometimes, commissioners who serve on boards make a larger impact than anticipated. For example, in 2013, the longest-serving commissioner in the Charlotte Housing Authority resigned because more emphasis was placed on urban renewal projects instead of providing housing for the needy (Off, 2013).

2.6.3 Spatial Mismatch

In addition to new institutionalism and NIMBY, there has been growing interest and use of spatial analysis in the sciences such as criminology, public policy, economics, and political science (Wilson & Renner, 2015). The origins of the spatial mismatch hypothesis (or theory) can be traced back to the 1960s, when urban economist John Kain described the residential segregation and discrimination in the housing and job markets against BIPOC in the cities of Chicago and Detroit (Hanson, 2009). Kain noted that policy constraints were placed on BIPOC, which prevented them from accessing employment from their established residence. The constraints included both codified and informal discrimination policies, such as redlining, a form

of mortgage discrimination, which systematically prevented BIPOC from obtaining housing in certain parts of cities (Briggs, 2005; Ezeala-Harrison et al., 2008; Hernandez, 2009; Hillier, 2003; Holmes et al., 1994; Rothstein, 2017; Silverman, 2005). Various governmental entities implemented redlining, including the federal mortgage programs, municipal zoning commissions, and local public housing authorities. Briggs (2005) further argued that even after racial discrimination policies were deemed constitutionally illegal, many city and government officials deliberately or otherwise did not enforce them (Baptiste, 1976; Bettauer, 1980; Crossney & Bartelt, 2005). At this time, it meant that BIPOC who were confined to the inner cities could not get housing and jobs in the growing suburbs. In turn, this led to a "mismatch" of workers and job opportunities, exacerbated by the lack of transportation (Hanson, 2009). Kain (2004) extended this mismatch to highlight the negative effects not only on housing and employment, but also on public services such as education. Because education funding is linked to local tax revenues, public school financing is largely a reflection of their property tax base. Briggs (2005) furthered this argument with his claim that racial segregation and poverty concentration deepened income segregation and school segregation, leading to additional spatial barriers for African Americans.

The spatial mismatch hypothesis addresses the concentration of BIPOC within the inner city and how the restriction of housing opportunities would lead to the restriction of job opportunities, specifically by race. One result was higher unemployment and lower wages among BIPOC in the inner city (Arnott & McMillen, 2006; Houston, 2005; Partridge & Rickman, 2006). Traditionally, studies testing a spatial mismatch focused on characteristics such as neighborhood segregation, commuting times, earned income differences, and job proximity to residence (Arnott & McMillen, 2006; Bobo, 2000; Gordon et al., 1989; Guest & Cluett, 1976;

Houston, 2005; Kain, 2004; McLafferty & Preston, 1996). These researchers found that housing was a "bundle of attributes" and that mobility, which varied by race, gender, and job type, was a significant predictor of where people live and work. Galster (2017) extended this point by arguing, "human-built environments … serve as crucibles for human development, achievement, and fulfillment … and have been distributed unfairly based on race, ethnicity, and class" (p. 941).

Since Kain's initial observations, scholars have applied the spatial mismatch hypothesis to analyze the concentration of poverty in cities and have further applied it to the homeless population. One of the most notable experiments was the "Moving to Opportunity" program implemented by the U.S. Department of Housing and Urban Development (Hanson, 2009). Based in part on the spatial mismatch hypothesis, the aim of this program was to offer assistance to relocate families from low-income high-poverty neighborhoods to more low-poverty suburban areas. This scattered-site approach was an effort to deconcentrate poverty. Additional efforts to deconcentrate poverty have been through government-sponsored programs such as HOPE VI and Housing Choice Vouchers (Kochinsky, 2009). In its final report, the HUD suggested that the mobility programs yielded mixed results. On the one hand, the program helped reduce poverty, increased safety, and improved health outcomes, in general. On the other hand, there were no improvements in educational, employment, or income outcomes (Sanbonmatsu et al., 2011).

Specifically, looking at what might be considered extreme cases of poverty, people who are homeless and with perhaps a high mobility challenge, there tends to be mixed results in their concentration as a population. For example, Mast (2014) found that states generally experienced a spatial mismatch between their homeless resources and their actual homeless population, meaning that there was a shortage of shelter beds in areas with a higher homeless population.

Conversely, there was an overage of beds with a lower homeless population. Additionally, Simon et al. (2019) found that the mobility of homeless persons was correlated with their "housing" accommodations. As a result, those who were staying in shelters were less mobile, whereas those who were "rough sleepers" tended to be more mobile. Rough sleepers were the literal homeless and consisted of individuals who slept outside or in buildings and places not originally designed for habitation, for example, parks, barns, and alleyways. Part of this problem may be because rough sleepers would need to travel to more locations to earn money or receive services. This finding is consistent with Abrams and Freisthler's (2010) findings that high-risk populations, in their study, the formerly incarcerated, have lower rates of access to services, which perpetuates reoffending.

Researchers have found that push and pull factors disincentivize where people reside — for example, housing type and condition, neighborhood, transportation, and job accessibility (Barak, 1991). Arnott and McMillen (2006) argued that overcoming spatial mismatch is essential for cities and suburbs for several reasons. For instance, if low-skilled workers do not have access to jobs, then a surplus of workers emerges, which results in lower wages. At the same time, the employers in the suburbs are under-staffed and consequently under-producing. In the long-term both cities and suburbs suffer economically where spatial mismatch occurs. However, recent studies have suggested that the creation or expansion of specific policies increasing the affordable housing supply and/or improving mobility would likely decrease the effects of spatial mismatch (Hui et al., 2015; Li et al., 2009; Zhou et al., 2013).

2.6.4 Spatial Analysis of Housing and Services for the Formerly Homeless

The formerly homeless are typically a service-dependent group, at least initially. Due to their lack of housing and access to services, they often have specific attributes regarding their

health, food consumption, and criminal justice interactions, which consequently necessitate an increased use of specialized services (Mosley, 2021). Only recently have scholars begun to study the spatial distribution of subsidized housing vouchers, and even fewer researchers have studied the proximity of social services to these recipients. A large gap exists in the literature regarding the spatial proximity of the formerly homeless to specialized services. To address this gap studies of subsidized housing are the most suitable proxy. However, using policy criteria such as subsidized housing, in a spatial analysis, may offer a more comprehensive view (Desai et al., 2009).

Most often known as Section 8, currently Housing Choice, government-funded voucher programs have been developed to disperse affordable housing in an attempt to create more integrated areas both racially and socioeconomically (Allard et al., 2003; Hartung & Henig, 1997). Case studies conducted in Florida, Texas, and Arizona have shown that although subsidized housing programs tend to redistribute housing options outside of the central city, voucher use becomes concentrated either due to competing voucher programs (Guhathakurta & Mushkatel, 2000) or because housing quality and neighborhood quality trade-offs are made (Wang, 2018; Wang et al., 2017). Through survey and interview data, these studies show that personal preferences for housing are not generally met for a variety of reasons, including barriers such as a lack of available units in a desired neighborhood, affordability constraints, and property owner discrimination (Wang, 2018).

2.6.5 Suburbanization of Poverty

In addition to these theories, there have been sharp changes in the structure of many American cities. Most notable has been the suburbanization of poverty, caused, in part, by decentralization and urban sprawl (Cooke & Denton, 2015; Covington, 2015; Gale et al., 2001;

Pugh, 1998; Raphael & Stoll, 2010). One factor affecting this trend has been the housing market. Land-rent prices tend to decline further away from the central city, ultimately making housing costs less expensive. Moreover, zoning ordinances can promote or impede certain types of housing, such as single-family housing vs. multi-family complexes, consequently affecting housing costs (Covington, 2015; Ellickson, 2021; Hochstenbach & Musterd, 2018; Raphael & Stoll, 2010). Ordinances are one option for either promoting or restricting the type of housing that can be built, which could largely be beneficial or detrimental for the formerly homeless. However, there are additional ways that governments can influence how funding can be locally appropriated. For example, the COVID-19 pandemic increased the need and usage of nonprofit and government social service programs. Riegel and Mumford (2022) noted the complexity and intertwining of government and nonprofit programs when it comes to legislative advocacy, which made it more difficult for nonprofits to request and receive additional funding in "politically conservative" areas. Lower housing costs are an enticement to "move out" to suburbs, in addition to the increase of employment opportunities that are also "moving out" (Howell & Timberlake, 2014). At the same time, as housing costs are decreasing, the cost to commute significantly increases. Studies show that living in the suburbs greatly necessitates the need for a personal automobile, whereas living in the city leads to the use of more public transportation options (Gale et al., 2001; Pugh, 1998; Raphael & Stoll, 2010; Wang, 2003). With fewer options of transportation, coupled with longer commute distances and times, the cost of transportation may not outweigh the savings in housing costs by living in the suburbs. This also pushes service organizations further outside of the city center having implications for those who live out there and for those who will need to travel.

2.6.6 Poverty Concentration

The concentration of poverty has different subfields of study, which focus on different aspects of the intensity of poverty, for instance, based on race (white and BIPOC) or geographic location (suburbs and cities). Racial residential segregation has long been established as one of the causes of poverty concentration (Foulkes & Schafft, 2010; Quillian, 2012). One way that policies help de-concentrate poverty is through housing voucher programs (Section 8/Housing Choice) and other governmental incentives, such as the Low-Income Housing Tax Credit (LIHTC), which is intended to incentivize the building and rehabilitating of housing in low-income areas. However, recent studies have suggested that these governmental interventions have had negligible impacts on deconcentrating poverty (Ellen et al., 2016; Freedman & McGavock, 2015; Kim et al., 2022; Thomas & Alozie, 2019). Moreover, Kucheva (2013) found that census tracts with more subsidized housing had higher poverty rates. Historically, the HUD-designated Qualified Census Tracts (QCTs) were eligible to participate in the LIHTC Program, which was part of the Tax Relief Act of 1986. LIHTC projects that are situated in QCTs can receive up to 30% more tax credits (Hollar & Usowski, 2007). This program was designed to help more equitable access to housing for populations that have been systematically marginalized, for example, people of color. However, these units are "disproportionately concentrated in poorer, racially concentrated neighborhoods" (Fischer, 2018, p. 3).

2.6.7 Summary

This review of the literature highlights how homelessness in America is a complex public policy problem, which is the product of the interplay between structural-level factors (e.g., lack of affordable housing, the lack of supportive services, and the criminalization of homelessness) (Anacker, 2019; Robinson, 2019; Tehrani et al., 2019) and individual-level factors (e.g., mental

health issues and disorders, poor physical health, and substance abuse (Badland et al., 2016; Ferguson et al., 2011; Kushel et al., 2005; Parpouchi & Somers, 2019; Rossi et al., 1987; Sullivan et al., 2000). Homelessness in America has also been shaped by changes starting at the federal level in public policies and program interventions, which have historically emphasized different approaches and target populations. Yet, providing housing and services for those who are homeless at this time is inherently place-based, given the current emphasis on permanent supportive housing and Housing First. Thus, it is important understand the spatial patterns of providing housing and supportive services, particularly in a place like Charlotte-Mecklenburg, which has historically been plagued by a lack of affordable housing and lack of public transportation. In doing so, this research uses the lenses of institutionalism and NIMBY, along with mapping and spatial analysis.

CHAPTER 3: DATA AND METHODS

The research design for this study was a mixed-methods approach, which included an online survey and spatial analyses. This mixed methods approach (using both quantitative and qualitative data) is well-suited for trying to understand complex interventions (Clark, 2006; Fielding, 2012). Because one of the aims was to develop a better understanding of potential barriers that the formerly homeless face when they seek government and/or nonprofit services, primary data were collected via an online survey. Additionally, the aim of this study was to explore the under-researched topic of whether physical locational choices of service providers act as barriers to consumers (AbouAssi et al., 2019). For this information, the secondary data used in this study originated from the Charlotte-Mecklenburg Continuum of Care organizations, the City of Charlotte, and the County of Mecklenburg.

3.1 Research Questions

Specifically, the purpose of this study was to understand and map where people who were formerly homeless (as designated through Charlotte-Mecklenburg's Coordinated Entry) were being housed and to what extent they were close to the supportive services they need. To that end, this study addressed the following research questions:

RQ1. Geographically speaking, where were the formerly homeless housed in Charlotte-Mecklenburg?

   i. Was this clustered, dispersed, random?

   ii. What did these neighborhoods look like?

   iii. Did these neighborhoods differ from those without housing placements?

RQ2. Where were supportive services located?

   i. Including primary services like emergency shelters and soup kitchens.

ii. Including secondary services and amenities, like grocery stores, educational/technical training sites, and health care facilities.

RQ3. Was there access to transit? How far away (distance and/or timewise) were services from housing?

RQ4. Were there socioeconomic or demographic differences between areas where formerly homeless are and where services are located?

i. If so, what were they?

RQ5. What, if any, local government policies as evidenced by zoning criteria, political pressures, and current legislation, influenced the location of housing and supportive services?

3.2 Secondary Data–Geocoded Locations

Secondary data compiled from the three sources were geocoded to produce maps for spatial analyses. Geocoding takes the description of a location, for example a street address, and attaches it to the earth's surface (Matci & Aydan, 2018). The newly geocoded information for this study was mapped and used in spatial analysis. First, the Charlotte-Mecklenburg Continuum of Care (CoC) and their nonprofit partners shared the data they collected about housing placements in 2018-2019. These data contained the street address for each housing placement, as well as the type of housing that was provided (transitional, permanent supportive, other).

Second, data about the location of services and sociodemographic information were from Open Mapping for Mecklenburg County and the Charlotte Open Data Portal (e.g., grocery stores, pharmacies, etc.). Assessing the proximity of housing to services and amenities is critical to this vulnerable population because 1) they likely do not own a personal vehicle so being a walkable

distance from services and amenities is essential, and 2) public transportation in Charlotte as a whole is inadequate. This data was supplemented with data provided by Candid/GuideStar, which maintains a repository of information about federally recognized nonprofit organizations. The researcher identified these additional organizations by searching for organizations, which had the key word "homeless" in their name, mission, or values. The initial search resulted in 218 nonprofit organizations. A review of these organizations showed that many of them did not have a street address (e.g., listed a P.O. Box for the address) and the primary mission of the organization was not related to homelessness (e.g., schools or animal shelters). The final sample for these data contained the locations for 123 service providers.

3.3 Primary Data - Online Survey

3.3.1 Data Collection

The purpose of this survey was to collect valuable information about the location of housing placements and supportive services. The source of primary data was an online survey involving government and nonprofit service providers in Mecklenburg County. The aim of this survey was to explore the accessibility of services, including motivating factors and barriers, to this population as seen from an administrator's viewpoint. The University of North Carolina at Charlotte's Institutional Review Board (IRB) approved this survey (IRBIS-19-0025, May 27, 2019).

3.3.2 Sampling Frame

The sampling frame for the survey was created by merging information from Mecklenburg County's Community Resource Guide and nonprofit profile information maintained by Candid (a 501c charitable organization created when the Foundation Center and GuideStar merged in 2019) (Candid, n.d.). This list first comprised 115 organizations listed on

the Mecklenburg County Community Resource Guide. From there, a search was done through GuideStar to identify additional nonprofit organizations providing homeless-related services in Charlotte, which resulted in an additional 218 organizations. Organizations without a physical address, website, or phone number, and had not filed an IRS 990-form within the past 3 years were eliminated, which left 166 organizations. To create an exhaustive list and map of nonprofit service providers, organizations, which had "homeless" in their name, mission, or values were also included in the search. This survey was sent to government and nonprofit organizations around Charlotte that had previously been identified as providing homeless-related services.

3.3.3 Recruitment

The recruitment period for the survey lasted from April 13, 2020 to June 15, 2020. A contact person was identified for each of 166 organizations based on information provided on the organization's website or Form 990. The initial recruitment email with the survey link was sent to each of 166 organizations on April 13, 2020 (Appendix C: Recruitment Email), inviting them to participate and offering a $10 Amazon gift card as an incentive to each participant (Subject: Charlotte Local Service Provider Survey). Twelve of the emails were returned as undeliverable.

After two weeks, to increase the response rate to the survey, follow up emails were sent to those who had not responded followed by phone calls to the 104 organizations with a valid phone number, which had not yet responded (Appendix D: Recruitment Script). This resulted in conversations with 26 potential respondents (25%), while messages were left for the remaining 78 potential respondents (75%). On June 1, 2020, a final reminder email was sent with a new subject heading emphasizing that respondents would receive a gift card if the survey was completed (Subject: Respond by June 5th for a $10 Amazon Gift Card!) These recruitment

efforts resulted in 24 completed surveys, yielding a response rate of 15.6% (24/154 = 0.156). In general, response rates for surveys tended to decrease during the Covid-19 pandemic (Krieger et al., 2023; Rothbaum, 2021; Rothbaum & Bee, 2022).

3.3.4 Instrumentation

The survey began with a consent screen (Appendix E: Consent Screen). This was followed by the survey instrument, which contained 24 closed-ended questions and three open-ended questions (Appendix F: Local Service Provider Survey). The closed-ended survey questions were designed to solicit information about (a) descriptive information about the survey respondent (Question 1, 2); (b) the location and types of services offered by the organization (Questions 3, 4, 5, 12); to whom (Questions 6, 7); (c) the organization's size (Questions 8, 9); capacity (Questions 10, 11); (d) proximity to where the clients live (Question 13); and (e) proximity to transportation (Questions 14, 15). The survey also included questions about barriers to accessing services (Questions 16,17, 18, 19, 20), praise or criticism about the services (Questions 21, 22, 23, 24), and any additional comments the respondent wanted to offer (Question 25). The three open-ended survey questions were about describing any plans for how or where services are delivered, recommendations for improving coverage and access to services at the organization, and any additional thoughts or comments.

3.4 Data Analysis

Data analysis for the survey data consisted of running frequencies and cross-tabulations and reviewing the open-ended data for common elements and themes. For the analysis of geocoded location data, spatial autocorrelation was used. Spatial autocorrelation measures how a variable (in this case, the number of housing units for formerly homeless) is distributed geographically. One common measurement is Moran's Index, or Moran's I, which is the spatial

autocorrelation coefficient used to determine if the geographic patterns of a variable is clustered, dispersed, or random (Chen, 2021; Koo et al., 2021). The Moran's I statistic[5] is given by:

$$I = \frac{n}{S_0} \frac{\sum_{i=1}^{n} \sum_{j=1}^{n} w_{i\ \ j} z_i z_j}{\sum_{i=1}^{n} z_i^2}$$

Where z_i is the deviation of an attribute for feature i from its mean $(x_i - X)$, $w_{i,j}$ is the spatial weight matrix which states whether feature $i$and j are neighbors, n is the total number of features, and S_0 is the sum of the spatial weights:

$$S_0 = \sum_{i=1}^{n} \sum_{j=1}^{n} w_{i,j}$$

The z_I score for the statistic is computed as:

$$z_I = \frac{I - E[I]}{\sqrt{V[I]}}$$

Where:

$$E[I] = -\frac{1}{(n-1)}$$

$$V[I] = E[I^2] - E[I]^2$$

The null hypothesis states that feature values *x* are randomly distributed. A significant p-value and positive z-score indicates that feature values are clustered. Conversely, a significant p-value and negative z-score indicates that feature values are dispersed (Chen, 2021; Koo et. al., 2021). The Local Moran's I is a further analysis of clusters and outliers. This type of analysis evaluates if there are spatial clusters with low or high values. The Local Moran's I statistic[6] is given by:

[5] Calculation retrieved from: https://pro.arcgis.com/en/pro-app/latest/tool-reference/spatial-statistics/h-how-spatial-autocorrelation-moran-s-i-spatial-st.htm

[6] https://pro.arcgis.com/en/pro-app/latest/tool-reference/spatial-statistics/h-how-cluster-and-outlier-analysis-anselin-local-m.htm

$$I_i = \frac{x_i - \bar{X}}{S_i^2} \sum_{j=1, j \neq i}^{n} w_{i,j} (x_j - \bar{X})$$

Where x_i is an attribute for feature i, $\bar{X}$ is the mean of the corresponding attribute, $w_{i,j}$ is the spatial weight between feature i and j, and:

$$S_i^2 = \frac{\sum_{j=1, j \neq i}^{n} (x_j - \bar{X})^2}{n - 1}$$

With n being the total number of features.

The z_{Ii} score for the statistics are computed as:

$$E[I_i] = -\frac{\sum_{j=1, j \neq i}^{n} w_{ij}}{n - 1}$$

$$V[I_i] = E[I_i^2] - E[I_i]^2$$

Positive *I* values show that neighboring features have similar values—either high-high or low-low. On the other hand, a negative value shows different values indicating an outlier.

Determining if certain data are spatially related can be used in addressing various policy issues. This index is often used in studies on policies to evaluate transit accessibility, combating poverty, municipal parks and greenspace (Builes-Jaramillo & Lotero, 2020; Conway et al., 2008; Diao, 2015). However, there does not seem to be much of a spillover from the aforementioned subjects and homelessness. One systematic review found that over the period of a decade (2010-2021) only nineteen articles had been published which used GIS analyses and included issues of homelessness (Sembroski et. al., 2022). This study aims to help fill that gap by leveraging Moran's I analyses in GIS for Research Questions 1 and 2, which will show if housing placements and supportive services were randomly distributed throughout the city.

Chapter 4: Findings

The purpose of this study was to examine where the formerly homeless were housed in Charlotte-Mecklenburg. Additionally, the study sought to determine whether those residences had access to supportive services that this population consistently utilizes. This chapter includes the findings of the study, which includes the maps with the results of the spatial analysis and the findings from the online provider survey. This chapter is organized according to each of the research questions.

4.1 Housing Placements by Type and Zip Code

RQ1 explored the spatial locations of where the formerly homeless (who were referred into housing through the Continuum of Care) were placed from 2018-2019. During the time of this study, there were 1,517 housing placements in the city of Charlotte (See: Figure 1: Housing Placements per Block Group). There were nine additional housing placements during this time, but those placements were in zip codes outside of the city limits, in Huntersville, Pineville, Gastonia, and Matthews. Due to limited data availability, zip codes were used as the unit of analysis for comparison purposes. Although some data is presented at the census block group and census tract level which is where the analyses were done, all data were able to be grouped by zip code. Furthermore, a zip code is a well-known unit of reference for a location in practical terms, more than a census block group or tract.

Figure 1

Housing Placements per Block Group (n = 1,517)

4.2 Housing Placements Dispersion

The findings from the analysis and mapping of the data show that the housing placements were clearly concentrated in certain parts of the city. Even if the housing placements were distributed evenly among just these 22 zip codes, it would translate to roughly 69 per zip code (1,517/22 = 69). The Moran's I was evaluated on the count of housing placements per block group with contiguity edges corners and row standardization. The test was statistically significant with a positive z-score ($p < 0.00z = 3.84$,), revealing that the housing placements were indeed clustered as opposed to occurring in spatial randomness

Almost two thirds (n = 1,014 or 66.8%) of the housing placements were in permanent supportive housing, which suggests chronic homelessness and/or a household with a qualifying disability. Twenty percent (n = 304) of the housing placements were in rapid rehousing, for single adults or families. Thirteen percent (n= 200) of the housing placements were in other types of supportive housing (e.g., transitional housing) which similarly serve single adults or families (see Table 3).

Table 3

Type of Housing Placements (n = 1,517)

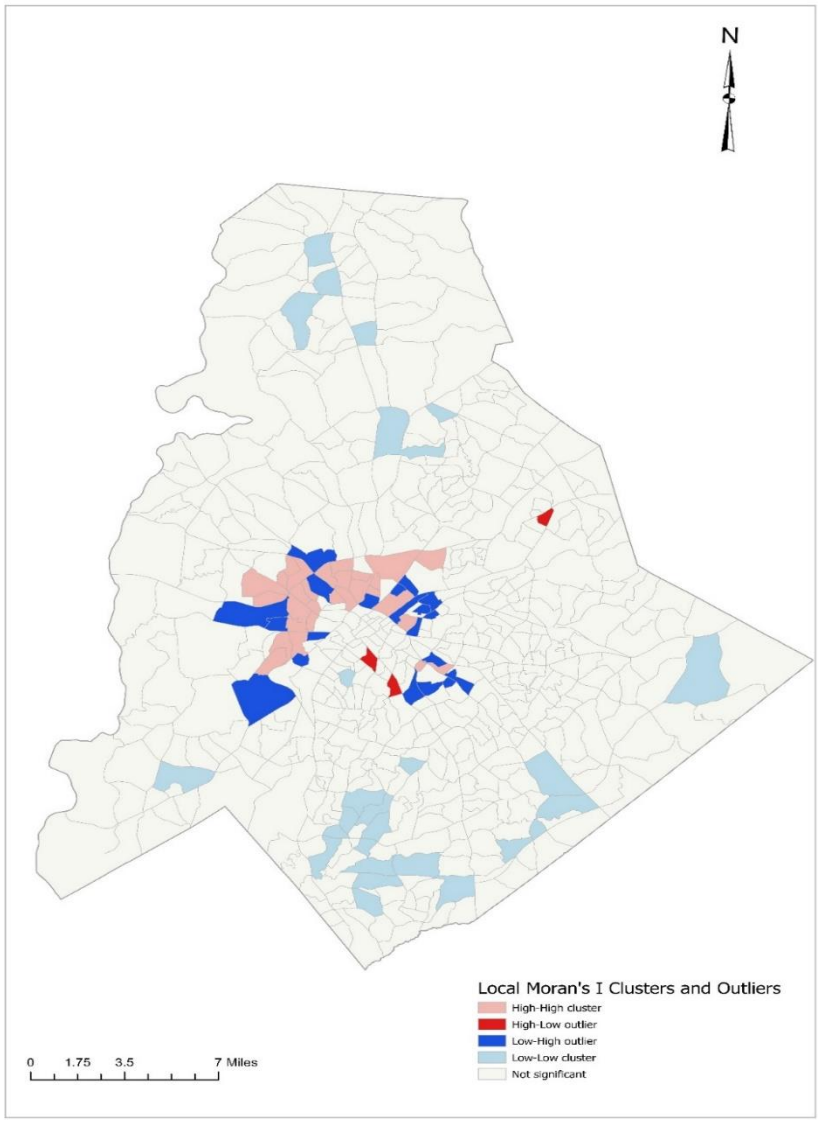
	(n)	%
Permanent Supportive Housing	1014	66.8
Rapid Re-Housing	304	20.0
Other Supportive Housing	200	13.2
Total	1,517	100.0

A review of the distribution of the zip codes associated with street addresses of the housing placements revealed that the housing placements were in 22 of the 33 standard zip codes in the city of Charlotte (i.e., in 66.7% of zip codes). More than three quarters of the housing placements (77.8%) were located in just six of the 33 zip codes in Charlotte (6/33 = 18.2%). These zip codes

were 28208, 28205, 28211, 28206, 28216, and 28217. Taking the analysis one step further, the Local Moran's I[7] was run in GIS to determine where the clusters were located (see Figure 2). The output shows high-high clusters in the crescent demonstrated that block groups with high values of housing placements were clustered near other block groups with high values of housing placements.

Figure 2

Local Moran's I for Housing Placements



[7] https://pro.arcgis.com/en/pro-app/latest/tool-reference/spatial-statistics/h-how-cluster-and-outlier-analysis-anselin-local-m.htm

A review of the map of these zip codes shows that the vast majority of the housing placements (77.8%) are located within the “crescent,” which is the area surrounding uptown and within the I-485 loop. According to the Charlotte Strategic Mobility Plan (2020), the wedge (south of uptown) has the highest income areas. Additionally, the wedge has predominantly white households. Simultaneously, the area surrounding uptown in the other directions, has below average income households and has majority BIPOC households. This racial and economic segregation has an impact on services and accessibility.

Housing placements can be divided into three categories: Permanent supportive housing, rapid re-housing, and other permanent housing (See Figure 3: Residence Type by Zip Code). The three zip codes with the most permanent supportive housing placements were 28208, 28205, and 28206, located north of Center City. The three zip codes with the most rapid rehousing placements were 28208, 28216, and 28217, located west of Center City. One zip code had 83.5% of the other types of supportive housing placements: 28211 with parts of South Park including the neighborhoods of Barclay Downs and Closeburn-Glenkirk. (See Table 4: Distribution of Housing Placements by Zip Code and Type)

Figure 3

Residence Type by Zip Code

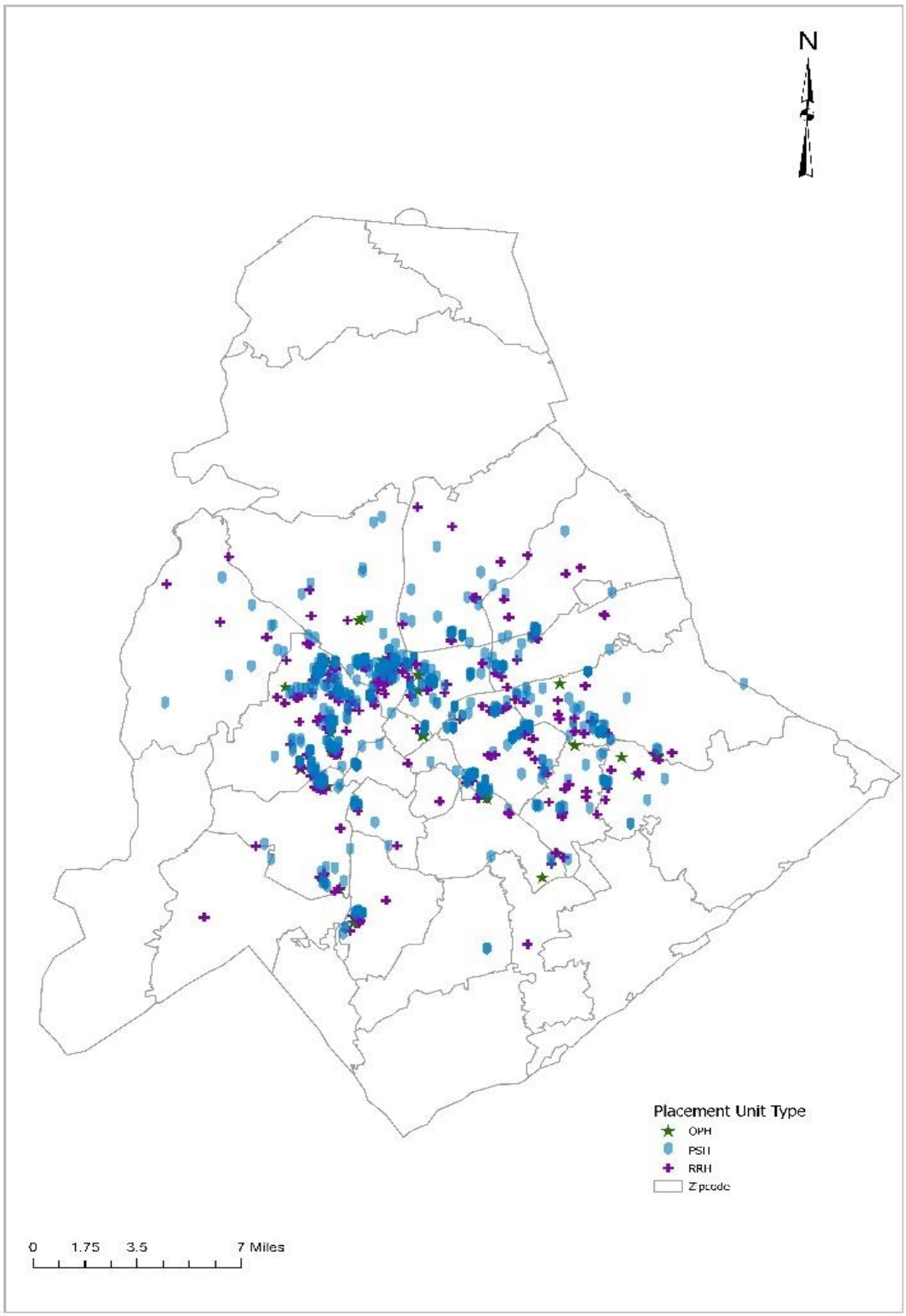


Table 4

Distribution of Housing Placements by Zip Code and Type (n = 22)

Zip code	Permanent supportive housing		Rapid re-housing		Other supportive housing		Total	
28208	265	26.1%	71	23.4%	10	5.0%	346	22.8%
28205	204	20.1%	24	7.9%	1	0.5%	229	15.1%
28211	21	2.1%	10	3.3%	167	83.5%	198	13.0%
28206	174	17.2%	12	3.9%	3	1.5%	189	12.5%
28216	95	9.4%	49	16.1%	3	1.5%	147	9.7%
28217	34	3.4%	35	11.5%	3	1.5%	72	4.7%
28215	48	4.7%	21	6.9%	0	0.0%	69	4.5%
28213	38	3.7%	15	4.9%	5	2.5%	58	3.8%
28269	31	3.1%	10	3.3%	0	0.0%	41	2.7%
28212	17	1.7%	14	4.6%	2	1.0%	33	2.2%
28210	20	2.0%	10	3.3%	1	0.5%	31	2.0%
28227	17	1.7%	6	2.0%	2	1.0%	25	1.6%
28209	16	1.6%	6	2.0%	0	0.0%	22	1.4%
28203	10	1.0%	3	1.0%	1	0.5%	14	0.9%
28214	8	0.8%	3	1.0%	0	0.0%	11	0.7%
28202	6	0.6%	2	0.7%	2	1.0%	10	0.7%
28262	4	0.4%	5	1.6%	0	0.0%	9	0.6%
28207	1	0.1%	4	1.3%	0	0.0%	5	0.3%
28226	2	0.2%	0	0.0%	0	0.0%	2	0.1%
28270	1	0.1%	1	0.3%	0	0.0%	2	0.1%
28273	0	0.0%	2	0.7%	0	0.0%	2	0.1%
28204	1	0.1%	0	0.0%	0	0.0%	1	0.1%
Total	1,014	100.0%	304	1,00.0 %	200	100.0%	1,517	100.0%

Selected sociodemographic characteristics for Charlotte from the 2020 census show that the median household income was $63,000 and the poverty rate was 13%. In addition, the

median rent in Charlotte was $1,135 and the population was 59% BIPOC. Because scattered site housing is foundational to the Housing First model that Charlotte uses, the model assumes that housing placements were randomly and evenly distributed. This means that each zip code would have roughly 4% of the housing placements.

Zip code 28208, east of uptown and considered part of the crescent had the greatest number of housing placements with more than one-fifth of all placements (n = 346 or 22.8%). A deeper look into the socioeconomic characteristics showed that it was drastically different than the Charlotte average. For instance, the median rent there was $814, 28% below the city average, and the median household income was $33,000, 48% less than the city average. Consequently, the poverty rate in this zip code was 23%, which is 75% higher than the city average. Demographically, the population of households that identified as BIPOC was 82%, which is 39% higher than the city average.

4.3 Spatial Location of Nonprofit Organizations

RQ2 explored the spatial location recommended for nonprofits and organizations by the local government through their Resource Guide. Because this group of individuals tends to be service-dependent, it was important to determine where the location of supportive services is in relation to their residences. Figure 4 (Nonprofit and Housing Placement Locations) shows those organizations relative to the housing placements. Additionally, Table 5 (Population, Supportive Services, and Housing Placements by Zip Code) provides a further breakdown to include the number and percent within each zip code of how many people live there, how many services there are, as well as the amount of housing placements.

Figure 4

Nonprofit and Government Service Locations

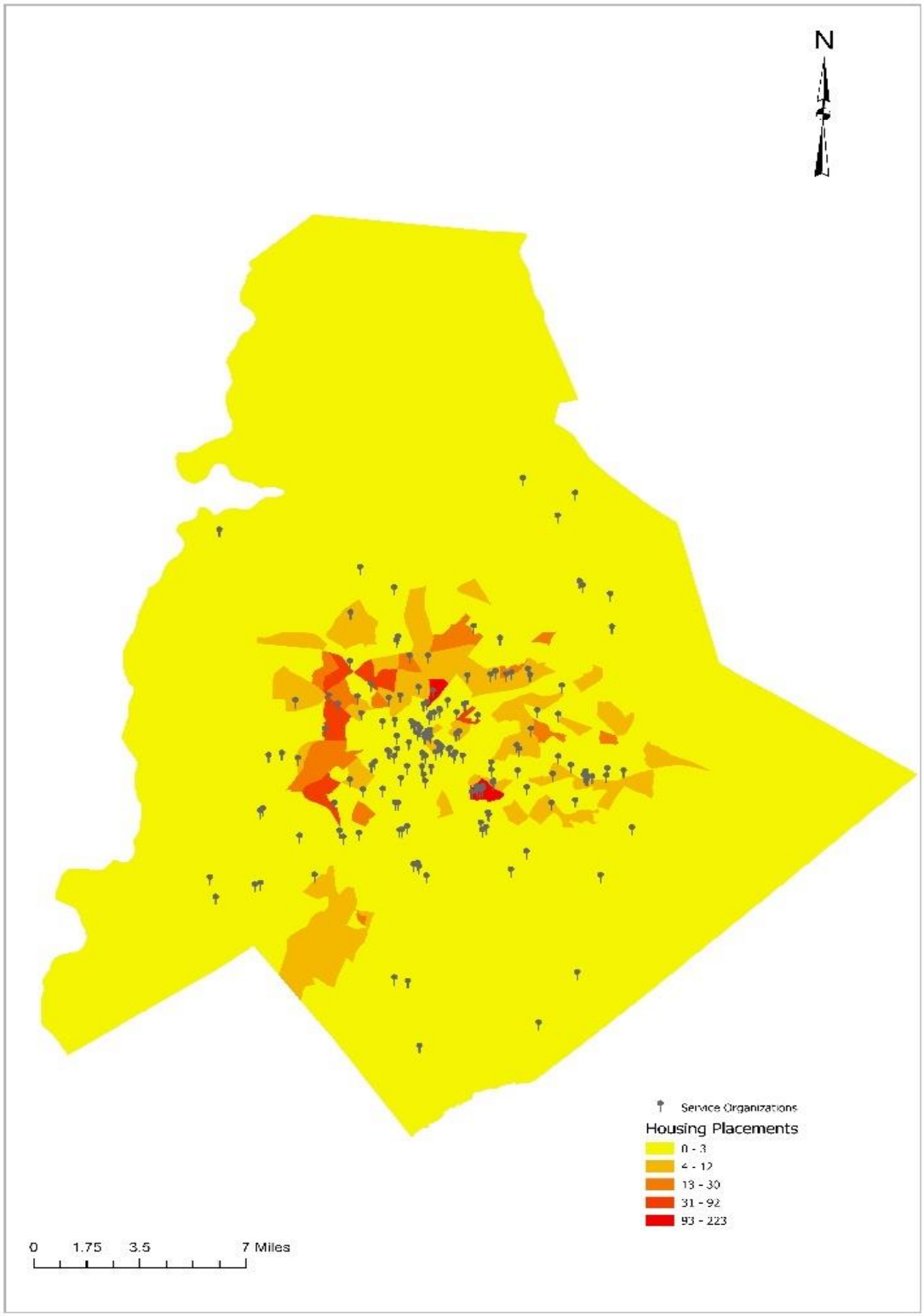


Table 5

Population, Supportive Services, and Housing Placements by Zip Code (n = 22)

Zip code	Population		Supportive services		Housing placements	
Charlotte Average	31,252		10		69	
28208	34,167	4.8%	14	6.1%	346	22.8%
28205	43,931	6.2%	15	6.5%	229	15.1%
28211	28,523	4.0%	17	7.4%	198	13.0%
28206	11,898	1.7%	19	8.3%	189	12.5%
28216	47,208	6.6%	10	4.3%	147	9.7%
28217	24,204	3.4%	10	4.3%	72	4.7%
28215	53,629	7.5%	2	0.9%	69	4.5%
28213	37,309	5.2%	5	2.2%	58	3.8%
28269	71,048	10.0%	4	1.7%	41	2.7%
28212	38,457	5.4%	20	8.7%	33	2.2%
28210	42,263	5.9%	4	1.7%	31	2.0%
28227	49,635	7.0%	4	1.7%	25	1.6%
28209	20,317	2.9%	11	4.8%	22	1.4%
28203	11,315	1.6%	14	6.1%	14	0.9%
28214	34,721	4.9%	15	6.5%	11	0.7%
28202	11,195	1.6%	34	14.8%	11	0.7%
28262	37,547	5.3%	3	1.3%	9	0.6%
28207	9,280	1.3%	5	2.2%	5	0.3%
28226	37,286	5.2%	3	1.3%	2	0.1%
28270	31,525	4.4%	2	0.9%	2	0.1%
28273	31,478	4.4%	4	1.7%	2	0.1%
28204	4,796	0.7%	15	6.5%	1	0.1%
Total	687,552	100%	230	99.9%	1,517	100%

According to Moran's I which was estimated on the number of service locations by census block group, service locations are clustered together. The Moran's I produced a statistically significant p-value of 0.00 and a positive z-score of 8.32. This meant that the service locations are clustered as opposed to being located randomly throughout the study area. This is important to note because clustered services may be beneficial if they were located in the same area as clustered housing placements—thereby potentially making them more easily accessible. On the other hand, if services were clustered but not near housing placements, this would be an additional barrier for accessing services for the formerly homeless.

A closer look at the data shows that in uptown Charlotte (zip code 28202) there were 19 nonprofit organizations. For a low-income and more service-dependent population, being fairly close to a variety of services may be beneficial. Some of the organizations located here are Charlotte Transportation Center, A Child's Place of Charlotte, Inc., Grace-Mar Services, and the Parole/Probation offices. Because owning a personal vehicle is expensive, residing near the public transit system at the Charlotte Transportation Center is necessary. Proximity to these organizations also has potential benefits; for example, A Child's Place of Charlotte offers case management services for families with children. Somewhat similarly, Grace-Mar Services offers training, education, and employment services to low-income individuals. Mecklenburg County's Probation offices are also in this zip code, which is where some court-mandated appointments occur for those individuals who are involved in the criminal justice system. Zip code 28202 has multiple nonprofit and government organizations, which cover a variety of services like transportation, counseling, education/professional networking, and the criminal justice system.

On the other hand, there were some nonprofit organizations, which were the only ones situated in their entire zip code. This could be problematic for the formerly homeless population,

as their access to transportation, as well as organizations, was limited. One example of this was Early Beginnings, a child development center, in the zip code 28214, the northwestern part of the city. Although this may be convenient for someone looking for childcare, a person who is seeking substance abuse treatment would not be well served. Another example is the Foundation for the Development of Rural Communities, which works to strengthen rural communities, and was the only NPO in zip code 28277, in the southern part of the city. Although this may be beneficial for individuals looking to live in more rural areas, this organization does not offer counseling, for example, which is a service often utilized by individuals transitioning to permanent placement.

In order to account for some of the variation of nonprofit service types and locations, this study surveyed local service providers to get their opinions on what they observed as barriers to accessing services from their program participants. Before jumping into their responses, knowing the descriptive characteristics of who responded to the survey was important because it offered some additional insight as to the role of that individual in service provision, as well as the average length of time at that organization. For instance, a front-line staff person who had been at the organization for one year may have a different perspective than an executive director who had been at the organization for ten years—but both perspectives provide context and meaning (See Table 6: Survey Respondents).

Table 6

Survey Respondents (n = 24)

Length of Time Working (in years)	(n)	%
Title		
Executive Director	8	33
Director	6	25
Administrative	3	13
Other Staff	7	29
Average Number of Years:	6	25

Similarly, knowing the characteristics of the responding organizations was beneficial because it showed that the survey was inclusive of a variety of organizational types, sizes, and funding capacity. The organizations who responded represent small, medium, and large organizations regarding the daily number of clients served, as well as the amount of annual revenue (See Table 7: Descriptive Characteristics of Organizations).

Table 7

Descriptive Characteristics of the Organizations (n = 24)

	(n)	%
Services Offered		
Mental Health	15	63
Food	12	50
Education	12	50
Financial Management	12	50
Jobs	11	46
Physical Health	10	42
Housing	10	42
Parenting	10	42
Legal	6	25
Shelter	5	21
Other	6	25
Population Served		
Low-income	21	88
Women	16	67
Families	16	67
Children	14	58
Men	14	58
Homeless	13	54
Veterans	11	46
Other	9	38
Daily Number of Clients		
Under 100	13	54
100-999	6	25
1000+	5	21
Annual Revenue		

Under $1 million	9	38
$1 million - under $5 million	8	33
$5 million - under $10 million	3	13
More than $10 million	4	17

When asked about where in relation to the organization clients lived (n = 24), the most frequent response (n=12, 50%) was fairly proximate, meaning between 15-30 minutes travel time and none of the respondents indicated that it took very long to commute (more than 30 minutes). This amount of commute time seemed reasonable. At the same time, when asked where the organization's clients lived (n = 24), the most frequent response was from all over the city (n = 8, 33%) and none of the respondents stated their clients live in the northern part of the city. This response seemed to support that services are clustered, largely in the city center, but that it allowed for program participants to access their services from different parts around the city and county.

When asked about the different types of barriers clients may face in receiving services, service providers first chose all the of the barriers their participants faced. The cost of commuting (n = 9, 38%) and the need for staffing (n = 9, 38%) were the most frequent responses. Time to commute was the least frequent response, which is consistent with the provider's previous answers regarding commuting. Providers then chose which barrier they thought was the most common from their previous selection. The most frequent response when ranked was the "other" category which included responses like there was a "stigma to receiving services" or that a "person had to qualify for services." (Table 8: Barriers to Service)

.**Table 8**

Barriers to Service (n=24)

Barrier type	**Number of respondents (n=24)**	**%**	**Most common barrier type**	**Number of respondents (n=22)**	**%**
Cost to commute	9	37.5%	Other	7	31.8%
Need more staff	9	37.5%	Need more staff	6	27.3%
Hours of operation	8	33.3%	Cost to commute	4	18.2%
Other	8	33.3%	Cost of services	2	9.1%
Distance to commute	6	25.0%	Distance to commute	1	4.5%
Multiple transit changes	6	25.0%	Time to commute	1	4.5%
Cost of services	6	25.0%	Hours of operation	1	4.5%
Time to commute	4	16.7%	Multiple transit changes	0	0.0%

In response to ranking what would be most helpful in overcoming these barriers, the most frequent response (n = 14, 64%) was that additional funding would be their first choice. Additional funding could cover an array of issues related to delivering services directly (for example, offering more free meals), increased staff capacity (hiring more case managers), or improving technology (better/newer software). On the other hand, reducing the cost of services was seen as the least helpful solution (n=6, 27%) (See: Table 9: Ways to Overcome Barriers Ranked).

Table 9

Ways to Overcome Barriers Ranked (1=most helpful, 6=least helpful) (n=22)

Barrier Type	1	2	3	4	5	6
Obtain more funding	64%	14%	14%	5%	--	5%
Hire more staff	9%	27%	23%	14%	5%	5%
Open additional locations	9%	14%	18%	5%	14%	9%
Extend program hours	9%	5%	5%	9%	18%	18%
Provide public transit passes	5%	5%	9%	27%	5%	14%
Reduce cost of services	--	5%	5%	14%	18%	27%

Next, when asked who was responsible for overcoming these barriers the most frequent response (n=20, 83%) was that it was primarily the organization's job to tackle these obstacles to service provision. Although respondents did not have a general agreement about what was the most common barrier for program participants to receive services from them, they were fairly consistent with agreeing that obtaining additional funding was necessary to achieve that goal, and that the onus fell on them as service providers to do so.

4.4 Spatial Location of Amenities

Although nonprofit and government organizations offer a variety of services, there are still other types of services and amenities which were needed and wanted on a regular basis. These additional resources may be considered necessities in their own right. To establish how close these services were to housing placements and bus stops, near tables were generated in ArcPro GIS using the 1,517 housing placements and 3,030 bus stops at the time of this study.

Since the formerly homeless often have increased physical and mental health needs, being close to health care facilities (hospitals and pharmacies) is desirable. A review of the locations of the housing placements with respect to the proximity to 39 hospitals showed that only three (.2%) were located within a quarter mile of a hospital and there were 35 (1.1%) bus stops within a quarter mile of a hospital (See Figure 5: Hospital Locations). Regarding pharmacies, 33 (2.2%) of housing placements were nearby, and there were 172 (5.7%) bus stops near pharmacies (See Figure 6: Pharmacy Locations). These findings suggest that close proximity and convenient public transportation to hospital care is quite rare, which could be problematic for those with acute and chronic health conditions. Similarly, close proximity and convenient public transportation to a pharmacy was unlikely, which might be challenging for individuals who need prescription medications.

Figure 5

Hospital Locations

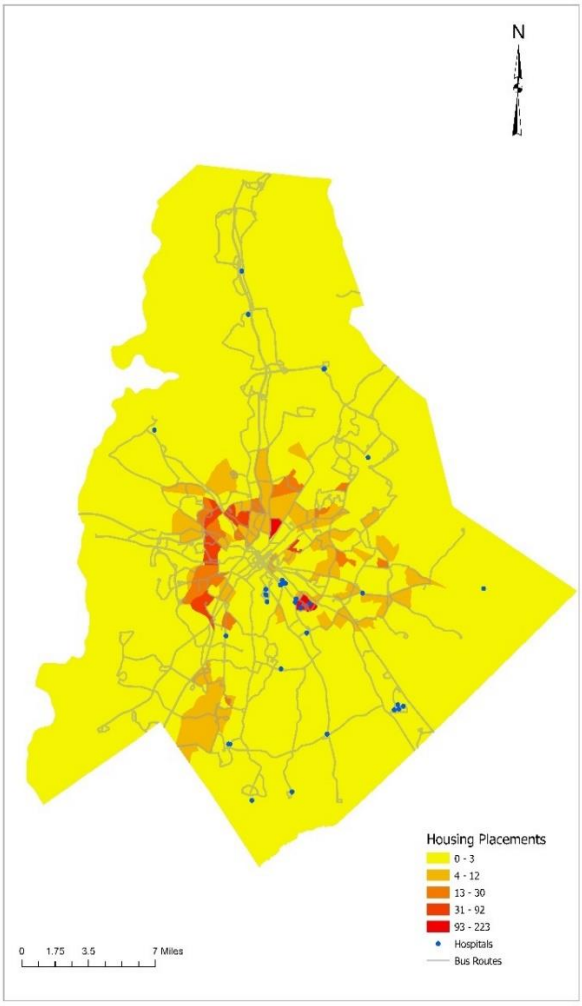
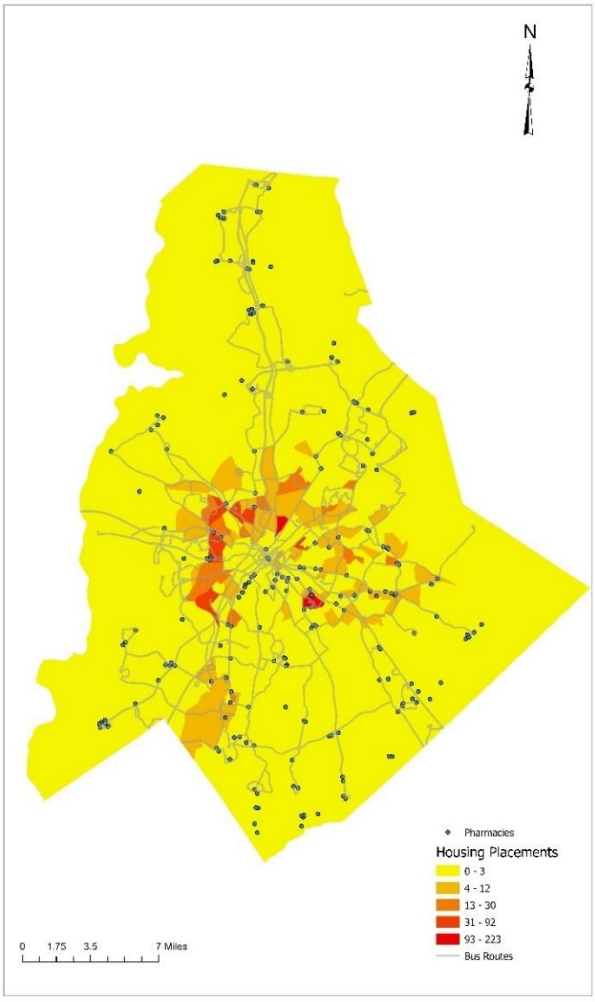


Figure 6

Pharmacy Locations



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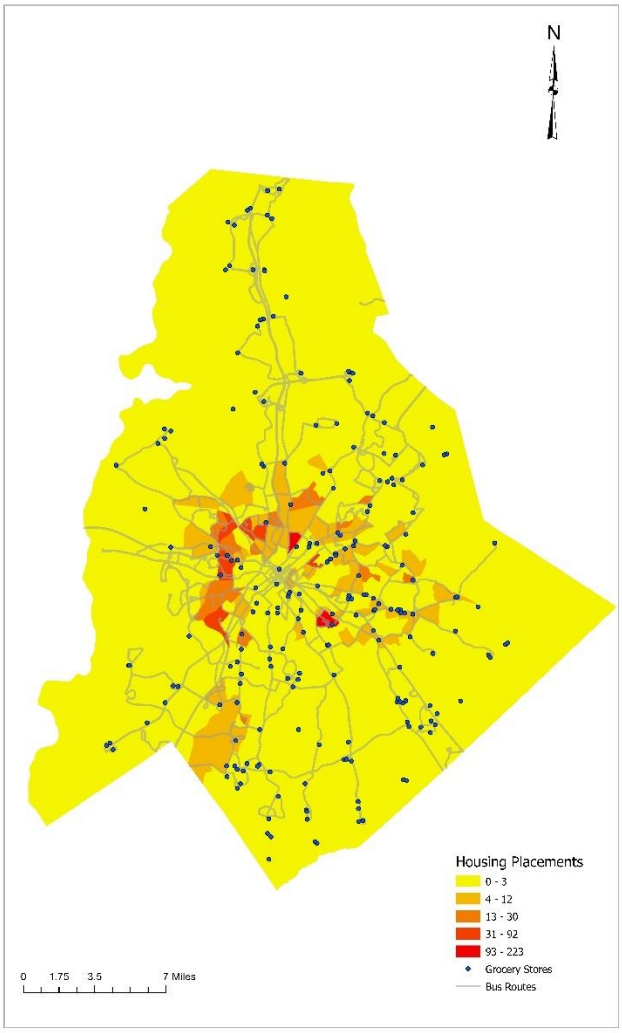
Grocery stores tended to be more convenient. A review of the locations of the housing placements regarding proximity was that 44 (2.9%) were located within a quarter mile of a grocery store (see Figure 7). Additional analysis revealed that 179 (5.9%) were within a quarter mile of a grocery store. Being within walking distance to a grocery store is important for two reasons—1) being able to buy fresh/healthy foods is necessary for their overall health and wellness, and 2) since most grocery stores have a pharmacy, it also accounts for some health care needs.

Figure 7

Grocery Store Locations



The next set of maps show the organizations that are centered on children and learning. These include daycares, public schools (grades K-12), and colleges/universities. Licensed daycares had the highest number (n=158, 10.4%) of housing placements near them, as well as daycares had the highest number of bus stops (n=367, 12.1%) near them (See Figure 8: Daycare Locations). This finding suggests that families with children may have reasonable access to a facility, or at least to a bus stop near one. However, for school-aged children enrolled in public schools, there were less housing placements near schools (n=44, 2.9%) and less bus stops near

schools (n=99, 3.2%) (See: Figure 9 Public School Locations). These findings suggest that living near a school is unlikely; however, public school transportation may be an option throughout the school year and while school is in session.

Figure 8

Daycare Locations

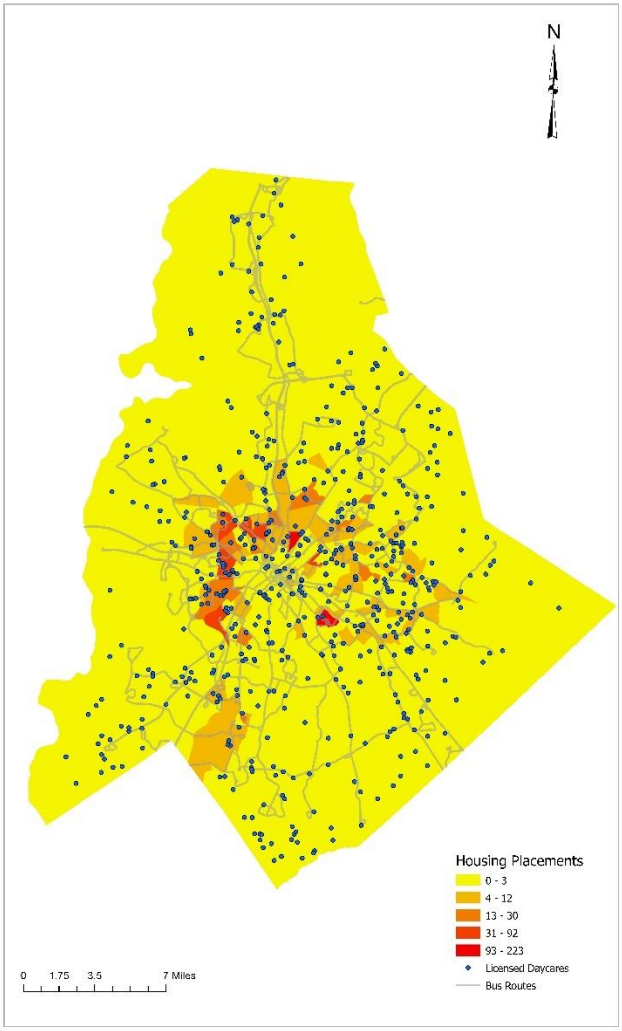
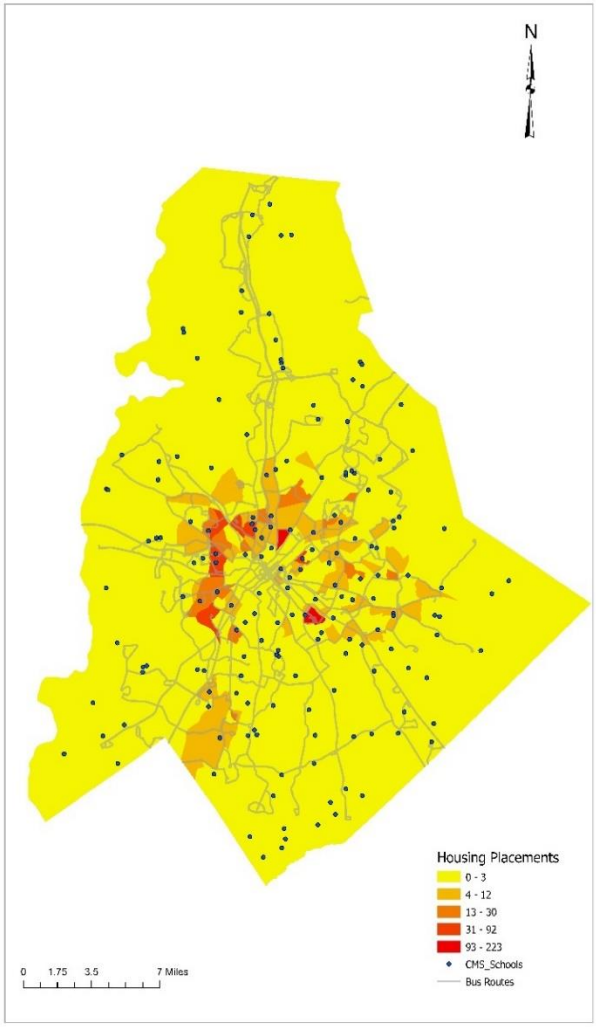


Figure 9

Public School Locations

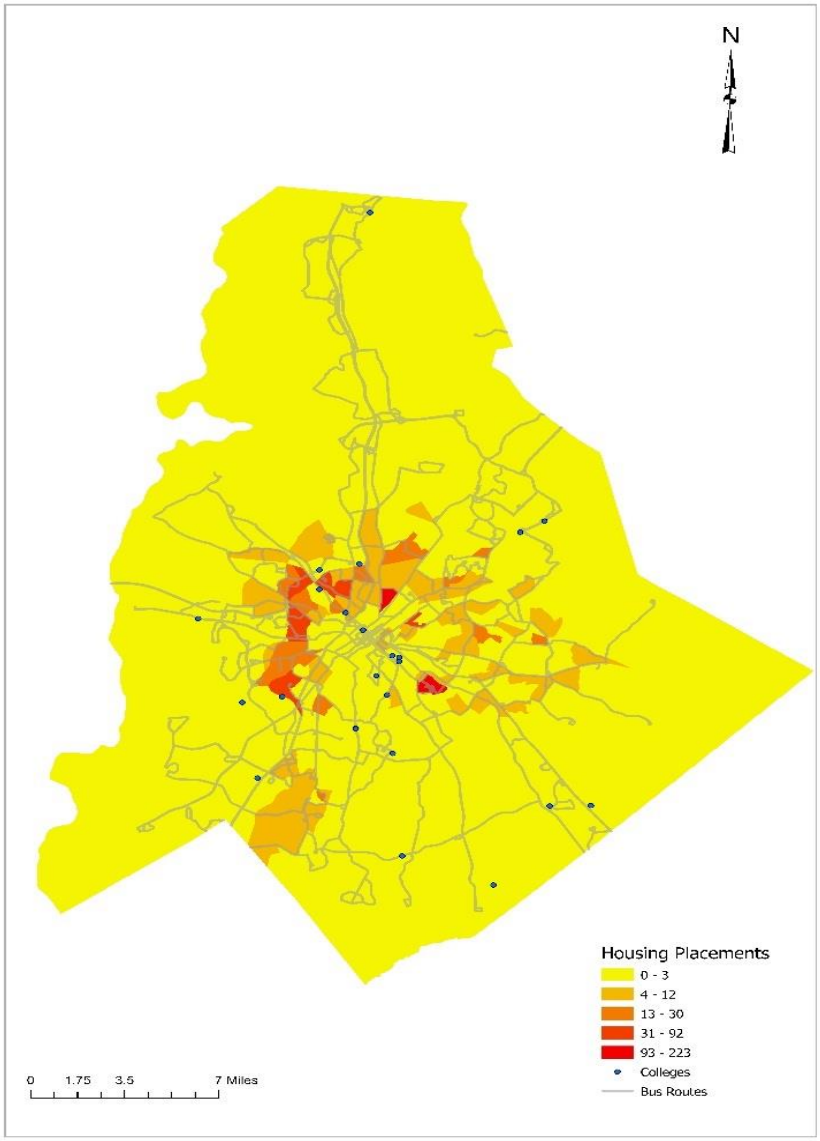


On the other hand, the analysis of housing placements with respect to the proximity to the 26 colleges and universities in Charlotte-Mecklenburg region, showed that only six (.4%) of housing placements were located within a quarter mile of a post-secondary education campus

(See: Figure 10 College and University Locations). Moreover, additional analysis revealed that only 18 of the 3,030 bus stops (0.6%) are within a quarter mile of a college. These findings suggest that close proximity is scarce and convenient public transportation to a university is rare (the lowest number of stops in this study), which could be problematic for those pursuing a college degree.

Figure 10

College and University Locations



The next set of figures map locations where there are free recreation areas which include parks and libraries. There were a fair number of housing placements near park entrances (n=69, 4.5%) and a similar amount of bus stops near parks (n=167, 5.5%) (See Figure 11: Public Park Locations). These findings suggest that living in close proximity to a park entrance has a similar likelihood of having convenient transportation to one. However, this is another instance where location may pose an issue, as studies have shown more positive health outcomes for individuals who visit parks (Besenyi et al., 2014; Hazelhurst et al., 2022; Williams et al., 2020). Additionally, since this study focused on a low-income population, it was important to note that the parks are free to exercise in, as opposed to having to pay a membership fee for a gym. One would also had hoped for convenient access to a public library since they offer free workshops, trainings, computer use, and internet. However, only five (.3%) of housing placements were located within a quarter mile of a library (See Figure 12: Public Library Locations). Moreover, there were only 25 (0.8%) near a library. These findings suggest that living near a library or being able to conveniently take a bus to one is unlikely.

Figure 11

Public Park Locations

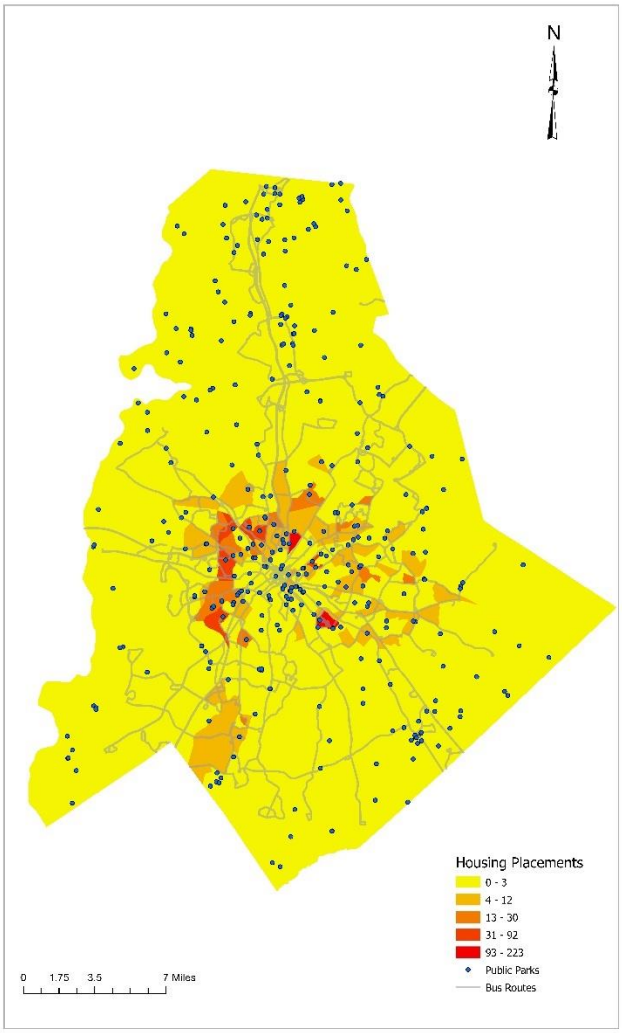
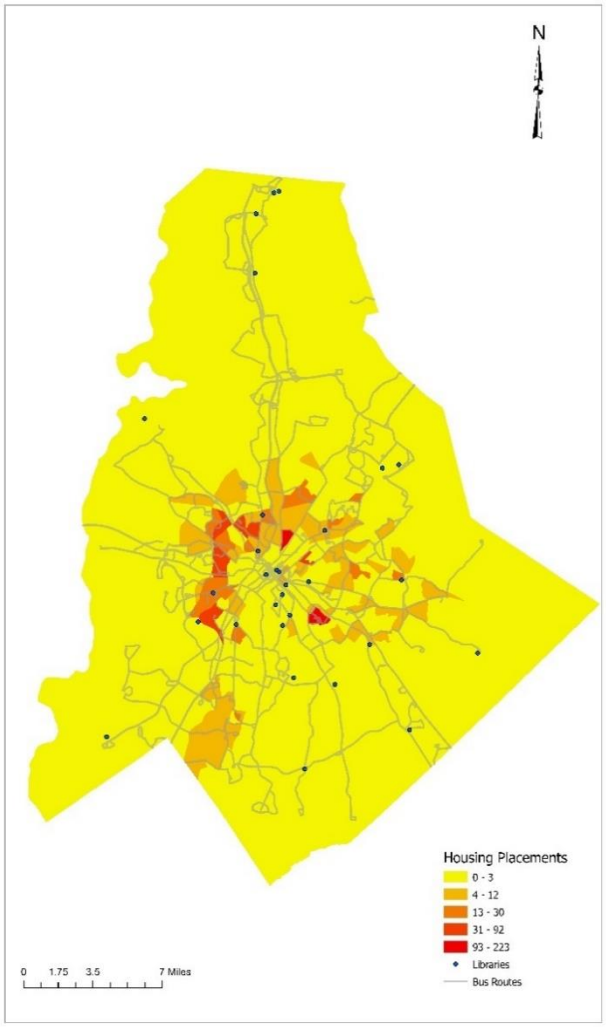


Figure 12

Public Library Locations



RQ3 explored how near, or how far, the formerly homeless residences are from public transportation. Because this population is extremely low-income, it is highly likely that they rely on public transportation. This is because owning a personal vehicle or using ride share options are much more expensive than public transit. The results of the data collection revealed that 1,302 formerly homeless residences were within a ¼ mile of a bus stop and if the distance was expanded to ½ mile, then more than 98% would be near at least one bus stop (see Figure 13). It was also found that 189 formerly homeless residences were within ¼ mile of a light rail station

and if the distance is expanded by ½ mile then 26% would be near a light rail station (See Figure 14: LYNX Light Rail Routes). Note that the analysis was performed on the bus and light rail stations and not the route, however, for visualization purposes, only the routes are shown in the maps.

Figure 13

CATS Bus Routes

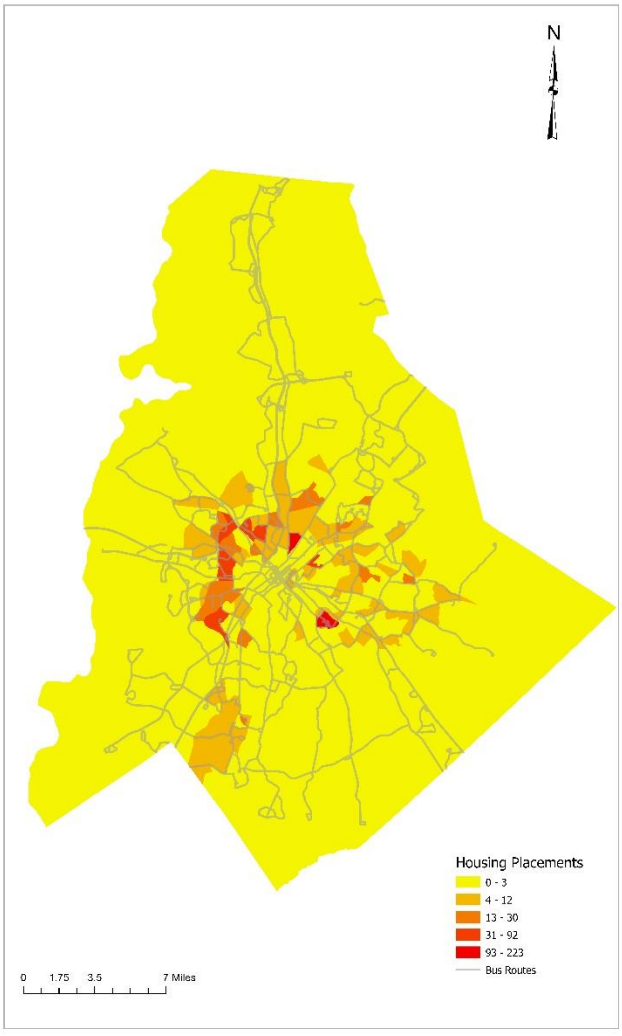
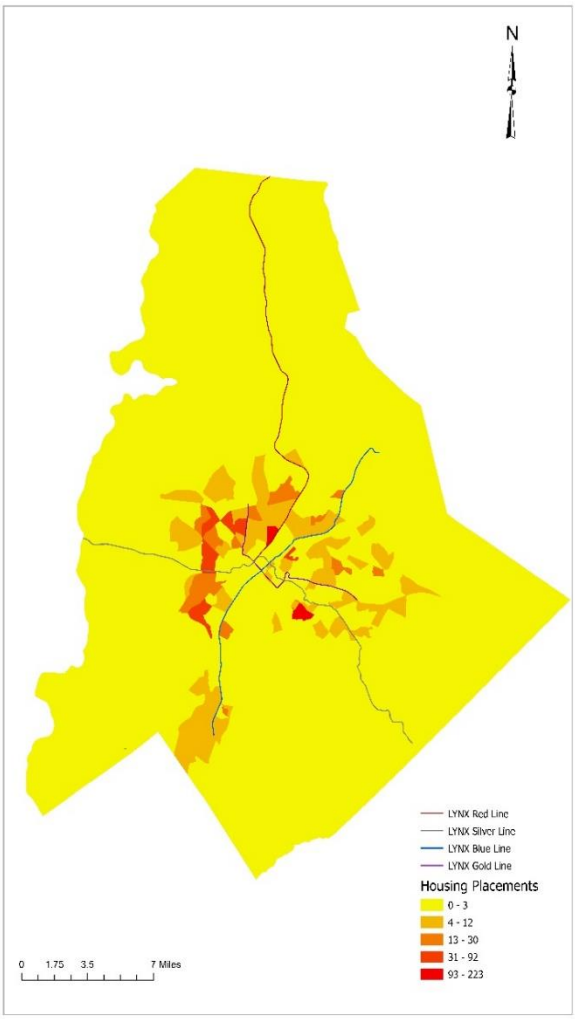


Figure 14

LYNX Light Rail Routes



The most frequent way that clients commute is shown in Table 10 (Client Commute Preferences). Taking the bus was noted as the most frequent form of transportation, which aligns with expectations. However, the second most frequent response of commuting was Uber and ride

share services. This was somewhat surprising since ride share services are considerably more expensive, however, it may point to the fact that the current public transportation routes were inadequate for program participant needs.

Table 10

Client Commute Preferences (n=24)

Commute type	Number of respondents	%
Bus	24	39.3%
Uber/ride share	12	19.7%
Walking	10	16.4%
Living on site	7	11.5%
Light Rail	5	8.2%
Other	3	4.9%
Total	61	100.0%

RQ4 explored if there are socioeconomic or demographic differences between areas with formerly homeless residences and those without (See Table 11: Census Demographics by Zip Code). The data collected for this study showed that the majority of housing placements were in predominantly BIPOC neighborhoods with below average median rents, and where the median income was about one-third less than the Charlotte average. Housing placements were also predominantly located in the crescent where the poverty rate was highest.

Table 11

Census Demographics by Zip Code (n = 27)

Zip code	Median rent	Median income	Poverty rate	BIPOC	Housing placements
Average	$1135	$63,000	13%	59%	4.0%
28208	$814	$33,000	23.0%	82%	22.8%
28205	$812	$36,000	32.0%	72%	15.1%
28211	$814	$48,000	16.0%	41%	13.0%
28206	$673	$32,000	29.0%	98%	12.5%
28216	$905	$49,000	17.0%	92%	9.7%
28217	$1100	$73,000	17.0%	71%	4.7%
28215	$828	$36,000	17.0%	93%	4.5%
28213	$945	$31,000	35.0%	63%	3.8%

28269	$1000	$59,000	7.1%	72%	2.7%
28212	$826	$40,000	22.0%	74%	2.2%
28210	$858	$40,000	14.0%	54%	2.0%
28227	$838	$34,000	30.0%	73%	1.6%
28209	$1100	$72,000	13.0%	25%	1.4%
28203	$1200	$110,000	5.0%	9%	0.9%
28214	$811	$41,000	23.0%	44%	0.7%
28202	$1500	$100,000	9.2%	23%	0.7%
28262	$964	$30,000	59.0%	38%	0.6%
28207	$1100	$72,000	13.0%	13%	0.3%
28226	$1100	$88,000	5.5%	23%	0.1%
28270	$1500	$87,000	1.9%	24%	0.1%
28273	$1500	$92,000	4.6%	30%	0.1%
28204	$1300	$69,000	8.4%	17%	0.1%
28244	$1,500	$100,000	9.2%	23%	0.0%
28277	$1,300	$100,000	4.7%	25%	0.0%
28278	$1,200	$79,000	14.0%	60%	0.0%
28280	$1,500	$100,000	9.2%	23%	0.0%
28282	$1,500	$100,000	9.2%	23%	0.0%

Figure 15 (Unemployment Rate per Block Group) shows the unemployment rate by census block group. The darker areas have higher unemployment rates, which are mostly just outside of the city center, except for just south of the city and are close to formerly homeless residences. Block groups may overlap into zip code areas. Figure 16 (Median Household Income per Block Group) shows the median household income by census block. This map shows that the northern and southern parts of the city have the highest median income levels. It also shows that the housing placements are largely in areas where the median household income is $46,023 or less. Figure 17 (African American Households per Block Group) shows the number of the households that were African American. It shows that there are distinct areas of the city that have predominantly African American households. It also shows that the areas with the highest number of African American households are also the areas with the highest number of housing placements. The north and south are largely non-Black areas while at the same time have much

fewer housing placements. Meanwhile, Figure 18 (Hispanic Households per Block Group) shows the number of households who identified as Hispanic. This map shows that there are areas in the east and southwest that have predominantly Hispanic households. There appears to be some segregation of households by race and ethnicity.

Figure 15

Unemployment Rate per Block Group

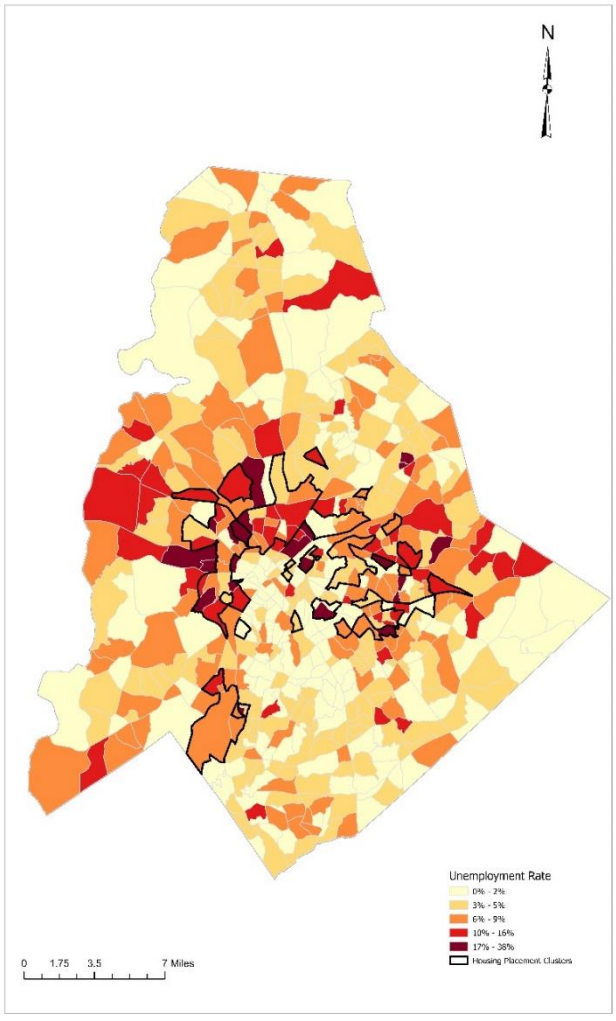


Figure 16

Median Household Income per Block Group

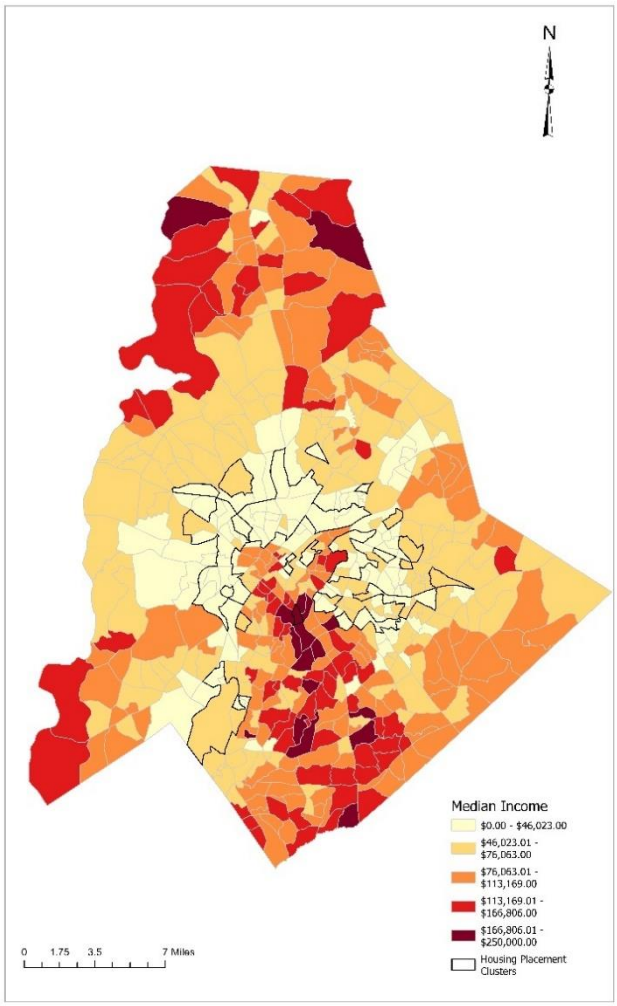


Figure 17

African American Households per Block Group

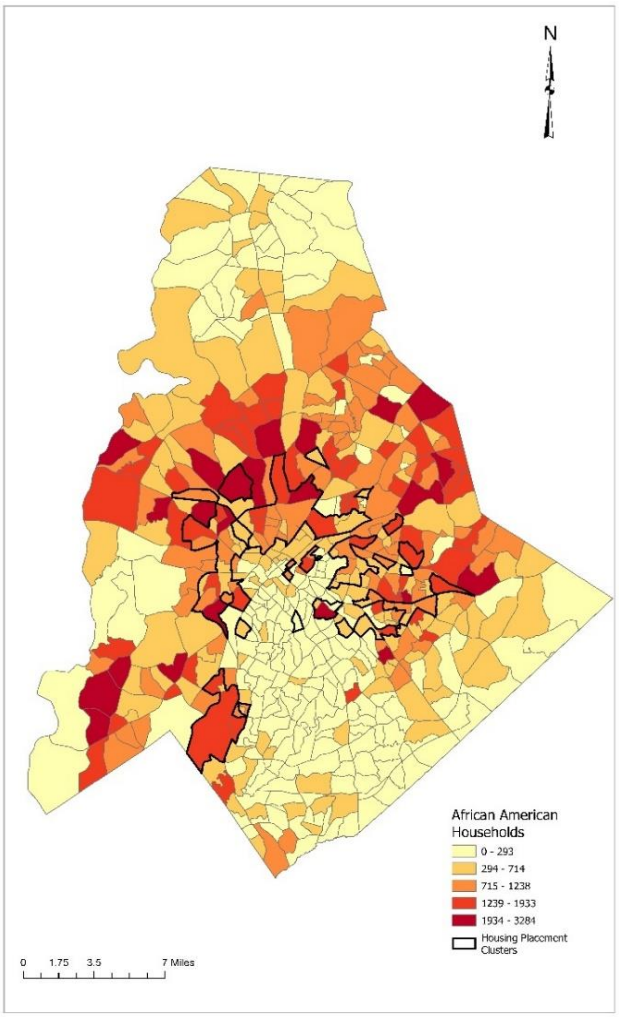


Figure 18

Hispanic Households per Block Group

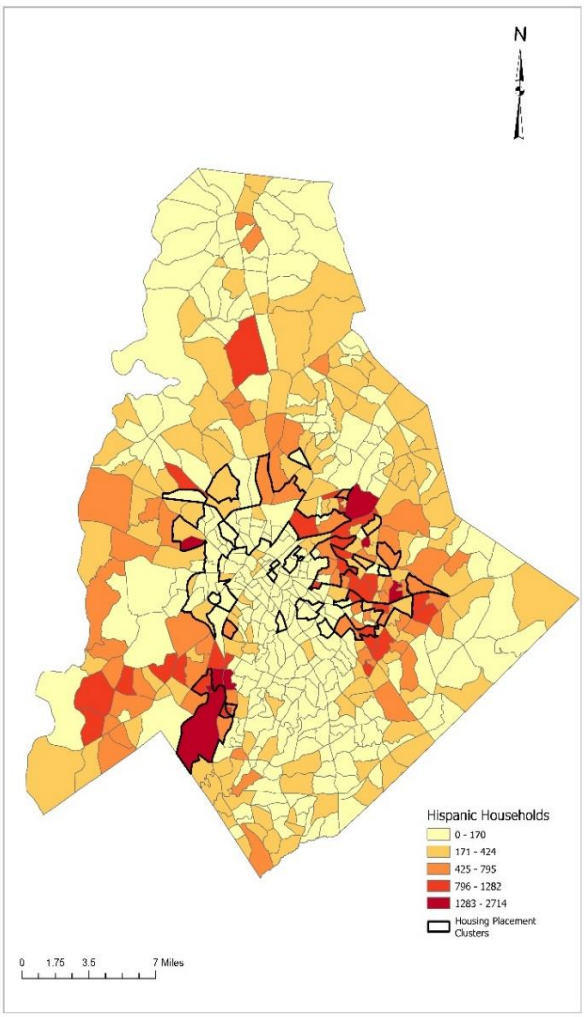
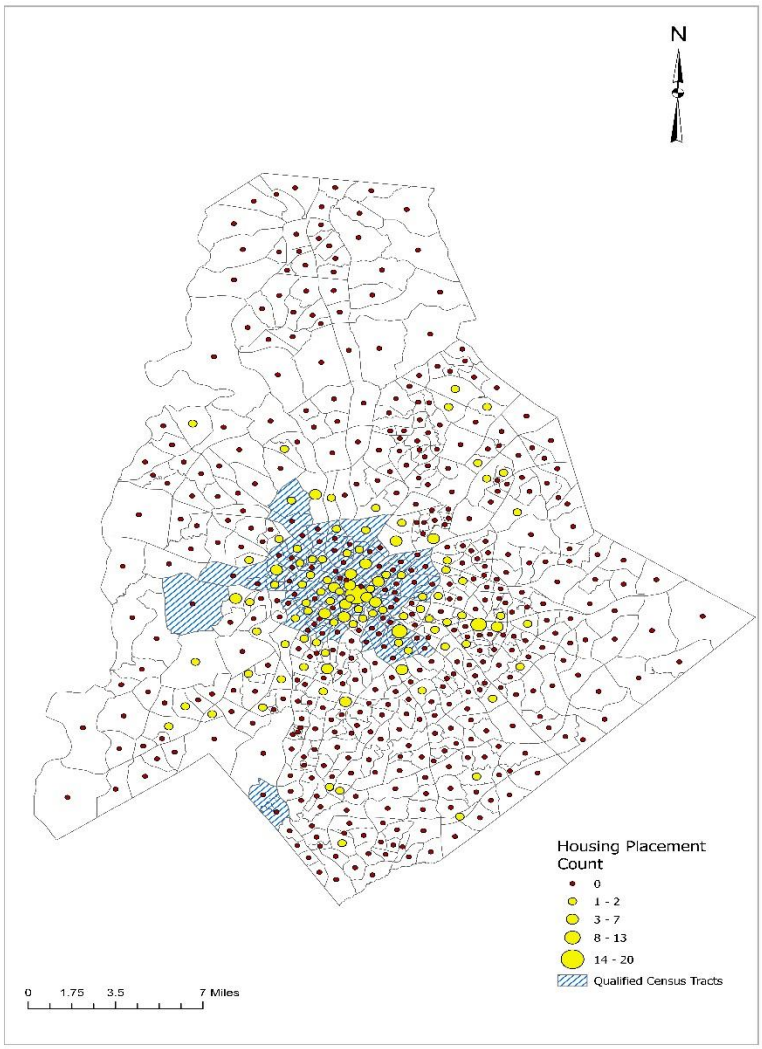


Figure 19 shows the qualified census tracts. Defined by HUD, a Qualified Census Tract (QCT) has at least 50% of households with an income of less than 60% of the area median gross income. There were 555 census tracts in total, and only 100 of those had at least one housing placement. Regarding specifically QCTS, there were 39 QCTs in Charlotte and of those three QCTs did not have any housing placements. The one to the west, had 4.9% Black and .2% Hispanic households. Another one just outside of the city center had10.6% Black and 2.6%

Hispanic households. Finally, the one further south along the South Carolina border had 4.4% Black and 2.0% Hispanic households.

Figure 19

Qualified Census Tracts



RQ5 contained four questions that pertained to whether the organization had faced criticism, and if so by whom. This question was used as a proxy to gain insight as to whether or not an organization has faced NIMBY pushback, as well as what they could do to lessen it. The image and reputation of a nonprofit organization can affect the public's trust in that organization, which goes hand in hand with the amount of donations they receive (Becker, 2018; de Menezes

& Peci, 2023; Grant & Potoski, 2015; Schultz et al., 2019; Shahid et al., 2022; Ueda et al., 2017). To clarify, an organization with higher trust or public confidence is likely to receive more donations in actual numbers and amount, whereas the opposite is also expected—lower trust and confidence would lead to less donations. In addition to funding being impacted, the organization's image, if positive, may make it easier to advocate for their mission (e.g. building affordable housing units) or if negative, harder to accomplish those goals. The results revealed that the majority had not received criticism but did receive praise (See Table 12: Criticism and Praise Received).

Table 12

Criticism and Praise Received (n=24)

Criticism received by whom	Number of respondents (n=8)	Percentage of criticism received	Praise received by whom	Number of respondents (n=24)	Percentage of praise received
Local residents	4	17%	Clients	23	93%
Businesses	4	17%	Local residents	20	83%
Clients	3	12%	Government	20	83%
Nonprofit organizations	2	8%	Nonprofit organizations	19	79%
Government	0	0%	Businesses	15	63%
Other	0	0%	Other	3	13%

The information presented in this section includes the results of the spatial distribution of housing placements and supportive services for formerly homeless individuals. These results showed that the housing placements were clustered in certain areas of the city rather than distributed randomly. Supportive services were also clustered together in specific areas. Additionally, survey responses provided some context from nonprofit administrators.

4.5 Governmental Representation in Housing Placement

One part of Research Question 5 explored whether there were political pressures with housing placements, this was operationalized based on political party affiliation exploring if there were differences between Democrat or Republican districts. Although this study will not be able to determine causality, and may only be a correlation, it is worth noting if a pattern exists. To explore this further, the data below provide a summary of the City Council Districts that held those seats and how many placements were in each of those districts.

In total there are seven City Council Districts (See Figure 20: City Council Districts). Four at-large seats that were held by Dimple Ajmera (Democrat), Julie Eiselt (Democrat), James Mitchell (Democrat), and Braxton Winston II (Democrat). In 2019, District 1 was represented by Larken Egleston (Democrat) had 694 housing placements (46%). District 2's representative was Malcolm Graham (Democrat) and it had 413 housing placements (27%). District 3's representative was Victoria Watlington (Democrat) and it had 182 housing placements (12%). District 4's representative was Renee Perkins Johnson (Democrat) and it had 16 housing placements (1%). District 5's representative was Matt Newton (Democrat) and it had 153 housing placements (10%). District 6's representative was Tariq Bokhari (Republican) and it had 47 housing placements (3%). District 7's representative was Edmund Driggs (Republican)[8] and it had three housing placements (0.2%). Almost half of all housing placements were in District 1, and when combined with District 2, they contained 73% of all city housing placements. In contrast, District 4 to the north and District 7 to the south, when combined, had 1.3% of city housing placements.

[8] Election results and political affiliation retrieved from BallotPedia, https://ballotpedia.org/City_elections_in_Charlotte,_North_Carolina_(2019).

Figure 20

Housing Placements within City Council Districts

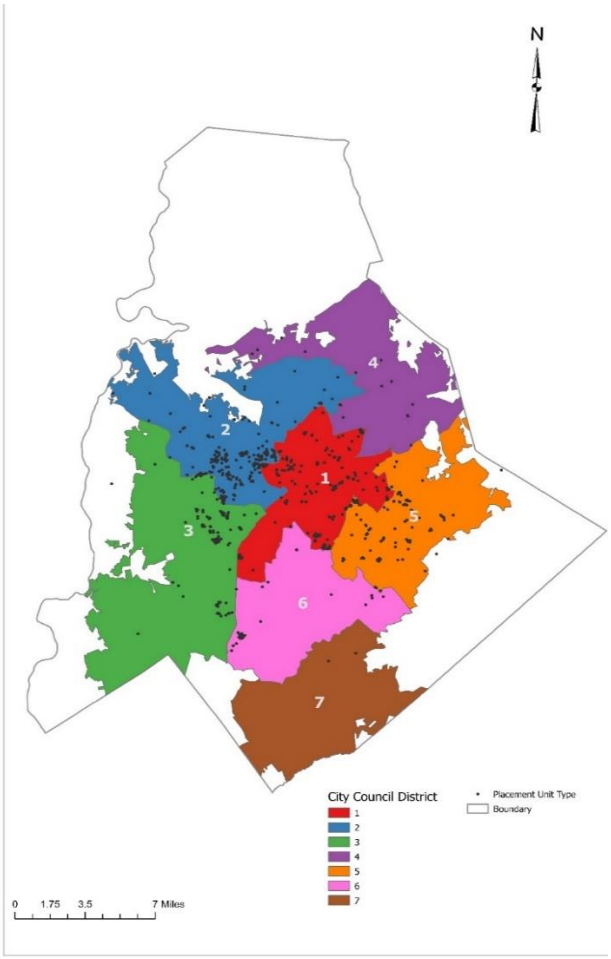
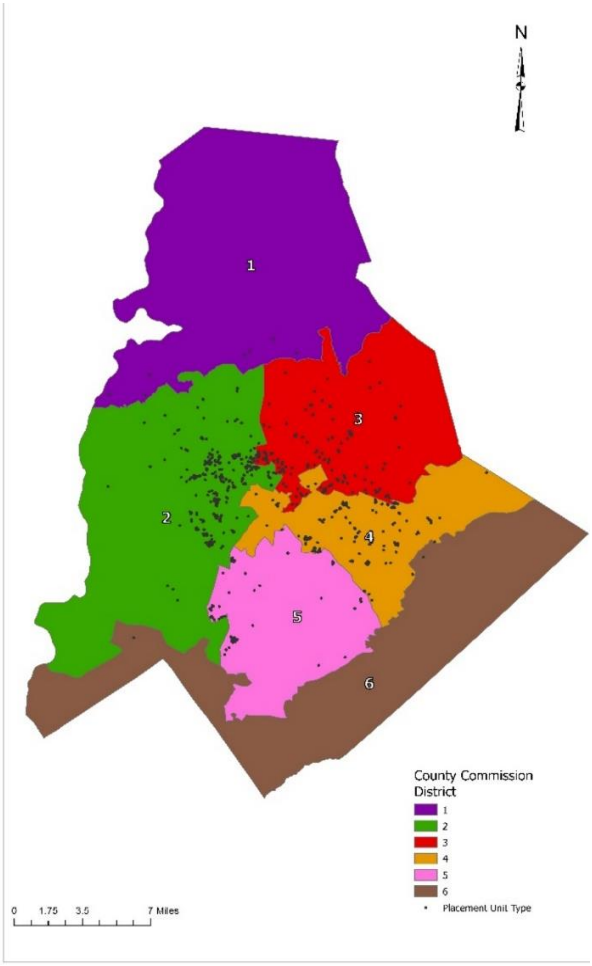


Figure 21

Housing Placements within County Commissioner Districts



There are six total County Commissioner Districts, there are three at-large seats which were held by: Pat Cotham (Democrat), Trevor Fuller (Democrat), and Ella Scarborough (Democrat) (See Figure 21: County Commissioner Districts). In 2019, District 1 was represented by Elaine Powell (Democrat) and it had nine housing placements, 0.6%. District 2's representative was Vilma D. Leake (Democrat) and it had 541 housing placements, 36%. District 3's representative was George Dunlap (Democrat) and it had 478 housing placements, 32%. District 4's representative was Mark Jerrell (Democrat) and it had 406 housing placements, 27%.

District 5's representative was Susan Harden (Democrat), and it had 81 housing placements, 5%. District 6's representative was Susan Rodriguez-McDowell (Democrat)[9] and it had two housing placements, 0.1%. Districts 2 and 3 had 67% of all the housing placements and make up the majority of what is considered the crescent. Districts 1 and 6, which are the northern and southern most districts, respectively, had 0.7%, which is the fewest housing placements. Because the majority of both city council districts and county commissioner district seats were held by Democrats, it would be difficult to make the argument that party affiliation played a major role in housing placements, without any additional support or context. However, the district maps do show that there are specific districts with the majority of the housing placements, as well as districts, namely further away from the city center, that had very few housing placements.

[9] Election results and political affiliation retrieved from BallotPedia, https://ballotpedia.org/Municipal_elections_in_Mecklenburg_County,_North_Carolina_(2018).

CHAPTER 5: DISCUSSION

This mixed methods study used spatial analyses and an online local service provider survey to gain an understanding of where the housing placements for the formerly homeless were, where services and amenities were located, and whether public transportation was nearby. It was purposefully grounded in theoretical frameworks which offer insight surrounding why we have historically placed people in certain neighborhoods and the effects of those placements. The findings from this study suggest several areas where this research was congruent with existing research for this understudied population, and yet still adds to existing literature for growing metropolitan areas.

The findings from this study revealed that housing placements were clustered in six zip codes around uptown Charlotte, referred to as the crescent. In this area the median rents were typically well below the average for the city and the poverty rates were higher. Households were also disproportionately Black or Hispanic. Although most housing placements were ¼ mile and therefore within walking distance from a bus stop, they were not close to other much needed services, such as grocery stores, hospitals, schools, or recreation areas. Moreover, nonprofit service providers recognize that transportation, staffing, and funding for their services could be better.

To that end, this chapter contains a discussion about the implications of these findings for stakeholders in the Charlotte-Mecklenburg region, including those who participate in the homeless services sector (e.g., nonprofit organizations and philanthropic funders), key departments within the city and the county government, and elected officials. The discussion highlights opportunities to adopt and/or learn from creative and innovative policies and programs being implemented elsewhere aimed at deconcentrating poverty, increasing affordable housing

options, and improving the accessibility to transit and services. The chapter concludes with the strengths, limitations, and delimitations of the study.

5.1 Poverty Concentration

Racial residential segregation has long been established as one of the causes of poverty concentration (Foulkes & Schafft, 2010; Quillian, 2012). Consistently, the poverty rate has been shown to correlate with homelessness. According to Muniz (2021), a one-standard deviation increase in poverty concentration correlates with over a 30% increase in the local Continuum of Care's homelessness rate and a 32% increase in its sheltered rate. In this study, Muniz (2021) used data from 43 states and the District of Columbia, and the findings revealed that poverty segregation was associated with the expected homelessness rate of a Continuum of Care. This increase can have both direct and indirect consequences for the current and formerly homeless. First, this segregation can make resources less accessible, which this study's findings support. Second, by physically separating this population, these individuals can be ignored (un)intentionally by those with political power since they are "hidden away." This then makes addressing the issue of homelessness even more difficult, because those individuals who are experiencing homelessness are not visible to local governments.

Acknowledgeing that housing stability is not always a linear process, RQ1 explored where housing placements for the formerly homeless were located. According to the map analysis, the majority of placements (78%) were within six zip codes in a part of the city known as the crescent that surrounds uptown Charlotte and is within the I-485 loop. From the map analysis, the placements mean these low-income individuals and families were being housed in the same area, which results in poverty concentration. The test for spatial autocorrelation also confirmed that housing placements were indeed statistically clustered. These findings are

congruent with the Spatial Mismatch Hypothesis, in that the housing placements seem to be intentional in some areas—lower economic and higher BIPOC—than in other parts of the city and county—higher economic and whiter. These findings are consistent with those reported by previous researchers who used spatial analysis to examine the impacts of race and poverty on educational outcomes (Garo et al., 2018). On the other hand, this study's findings could not support the suburbanization of poverty, at least with respect to housing placements for the formerly homeless, given that the northern and southern parts of Charlotte-Mecklenburg have the fewest number of housing placements. Part of this is due to the fact that this was not a longitudinal study and so tracking data over time did not occur.

Some states are working to overcome this poverty concentration issue via housing shortages through government intervention at the state and local levels. For example, in California, there are recommendations aimed at reforming land-use regulations by ending exclusionary zoning to make subsidized housing a more attractive option for both the public and private sectors (Tanner, 2021). California passed Senate Bill 9 (effective January 1, 2022), which allowed property owners to split their lots into two parcels, as well as permitted the construction of duplexes.

Charlotte also adopted a similar position in 2021 by approving the Charlotte Future 2040 Comprehensive Plan Policy which moves in the direction of ending exclusionary zoning, as stated in Goal 2 (Neighborhood Diversity & Inclusion) and Goal 3 (Housing Access for All). The Charlotte Future 2040 Neighborhood Diversity and Inclusion goal refers to Charlotte striving to have a diversity of housing options in all neighborhoods by increasing the presence of middle density and small lot housing types and ensuring land use regulations allow for creation of housing in neighborhoods. Specifically, the plan aims to add new affordable housing, as well as

workforce housing (defined as housing for households that earn too much to qualify for other subsidies; Ford & Schuetz, 2019). The Housing Access for All goal is intended to ensure that residents of all income have access to affordable housing.

The findings of this also study have important implications for policies intended to de-concentrate poverty. For example, the housing supply is affected by different zoning techniques. Some zoning ordinances (e.g., setback rules; minimum lot sizes; and restrictions on the types of housing that can be built, such as smaller sized structures) create and impose limitations to the housing supply. By intentionally updating and changing these zoning regulations, affordable housing can be built on smaller lots and without additional amenities, which are often required (e.g., parking). One example of updating zoning ordinances to increase housing supply is being implemented in Miami. The city eliminated parking requirements for buildings under 10,000 square feet (Tanner, 2021). This move makes the required land purchase for not only the structures, but also surrounding areas, less restrictive in cost and builds intent. For instance, multi-family and multi-unit buildings, as long as they are under the size requirements, would not have to build a parking garage or lot. This lowers the total cost of building and allows for more homes to be built, as the land that would have once been used as a parking lot can now be used for residential buildings. However, although the housing supply may increase, including affordable housing, it is important to realize that affordable housing may still be out of reach for the formerly homeless. So that increasing the housing supply for those who often live under 30% AMI, making that affordable, would need to be intentional.

Reforming zoning policies to increase the availability of affordable housing is another way that California is implementing strategies to reduce the concentration of poverty (Calder, 2022). Rice et al. (2016) suggested that this can be achieved through increasing the housing

supply through tax credits, such as Low-Income Housing Tax Credits (LIHTC), and through vouchers which subsidize rental costs. Galster (2019) also suggested LIHTC should be reformed to allow for more socially desirable outcomes in neighborhoods. In their study from 2009-2012, Rice et al. (2016) concluded that 660,000 Californians were lifted out of poverty due to the implementation of tax credits and vouchers. Moreover, because rental costs were subsidized and decreased, it meant that households could spend money in other ways (e.g., on health care, transportation, and food).

Two examples of programs that have been successful using these vouchers and tax credits are Home for Good and Orange Grove Gardens. Home for Good is an initiative launched by United Way of Greater Los Angeles. One of their programs uses rental subsidies for veterans who do not qualify for Veterans Affairs Supportive Housing (VASH; Home for Good, 2021). VASH is a U.S. Department of Housing and Urban Development program that provides rental assistance for homeless veterans (HUD-VASH Vouchers, n.d.). In Pasadena, Orange Grove Gardens is an affordable housing community comprised of 38 two- and three-bedroom apartment units, managed by Abode Communities (a nonprofit organization). The project was built in 2006 by private investors through project-based incentives and the Low-Income Housing Tax Credit. The property has received several awards, including the Award for Excellence in Multifamily Housing from the California Redevelopment Association and Project of the Year from the southern California Association of Nonprofit Housing. The property features “craftsman-inspired porches, patios, balconies and terraces” and it has “a community room where residents can participate in adult education activities and youth programming services” (Adobe Communities, n.d. p. 5).

5.2 Access to Services and Amenities

The majority of housing placements were in permanent supportive housing (PSH), which indicated that a member of the household was chronically homeless and/or had a disability. One characteristic of PSH is the offering of wrap around services, which have been shown to improve the physical and mental health of individuals, social integration, and also increase the likelihood of housing stability (Collins et al., 2016; Gabrielian et al., 2022; La Motte-Kerr et al., 2020; Parsell et al., 2017). Because of this increased need of an already service-reliant population, RQ2 explored where supportive services were located, such as grocery stores, pharmacies, and health care. The information provided by this analysis can help to inform how effective the Continuum of Care is able to be in connecting individuals to the resources they need. It is a key component for evaluating the success of the implementation of Housing First, given that two of the core principles of the Housing First model are to provide access to supportive services and create opportunities for social and community integration (Thomas et al., 2020).

Similar to housing placements, the spatial analysis found that supportive services were also clustered (RQ2). This finding, however, could be considered to be advantageous, in that a person who is seeking assistance from one organization may be able to easily access or request additional assistance from a "neighboring" organization (Semborski et al., 2022). These patterns in proximity could (intentionally or not) create "one-stop assistance-shopping" for individuals needing services. These patterns in proximity can also be advantageous for those who rely on public transportation, helping to reduce the time and cost of getting around and improving the ease of access. Conversely, very few housing placements were located near services and amenities, indicating that public transportation use would likely be essential for households.

5.3 Public Transportation Concerns

Charlotte had, and arguably still has, inadequate public transportation infrastructures for a large, growing city. Both the Centralina Economic Development District (2019) and the Charlotte Strategic Mobility Plan (2020) contend that public transportation lacks "accessibility and convenience", and "safety and reliability" largely in part to the continued underinvestment in infrastructure. So, in addition to the location of services and amenities, it was important to assess the proximity to transit. RQ3 explored if the locations of housing placements were close to public transit and if services and amenities were near bus and light rail stops. Commute ease and time was specifically chosen because, according to Chetty et al. (2014), short commute times show an important likelihood of upward economic mobility. That study revealed that segregation reduces upward mobility through the spatial mismatch in access to employment. Consequently, areas that had shorter commutes had significantly higher rates of upward mobility.

Although respondents to the local provider survey stated that the time to commute was not a significant barrier for them, the cost to commute was one the largest barriers to receiving services for their program participants. This study revealed mixed results regarding ease of accessibility to public transportation based on transit type. For instance, the overwhelming majority (86%) of housing placements were within ¼ mile of a bus stop. This finding aligns with the survey feedback, which showed that 75% of program participants took a bus to get to their location. Conversely, only 12% were within ¼ of a light rail station.

Possible explanations for this large variation could be attributed to the difference in the number and length of bus routes compared to light rail routes. According to the Charlotte Area Transit System (n.d.), the number of bus stops vastly exceeds the number of light rail stations. Additionally, the clustering of housing placements seems to have a dual impact on this scenario.

On one hand, residential areas are advantageous for accessing buses, whereas on the other hand, it poses more of a disadvantage for accessing the light rail system. The fewer housing placements in more suburban areas may in part have to do with less public transit options and longer commute times, which would make living in the suburbs less desirable for a person or family which is service-dependent.

An increasing number of cities and counties are making transportation more accessible through subsidizing transit fares to address access to public transit in housing placements. Big cities, such as Los Angeles, New York City, and Ottawa, currently offer reduced monthly transit fares based on income (Carino, 2020; CBC News, 2017; Eden, 2016). Other places are taking it one step further by making public transit free. For example, in King County, Washington, public transit is free for income-eligible people. In Kansas City, Missouri, the city council voted in 2019 to make all public transit free (Hess, 2020). Columbus, Ohio has also taken this initiative and created an income assistance program where customers can receive discounted fares who receive income assistance (Central Ohio Transit Authority, n.d.).

Another way that transportation has been subsidized is through state and local governments. The Vermont Public Transportation Association in collaboration with the Vermont Department of Health provided free rides during the pandemic to vaccine appointments. Additionally, they jointly offered limited mobile appointments to individuals who were unable to go to a hospital/pharmacy (Graham, 2022). This approach seems like it could be a potentially reasonable option for Charlotte, as this study revealed that there are 35 bus stops within .25 miles from hospitals and 172 bus stops within the same distance from pharmacies. Although it would require a fare subsidy, the transportation system already has existing routes that pass by these medical provider service locations.

Charlotte can learn from what other city's hospitals and public/nonprofit programs are extending access to medical services through collaborative ventures and personalize those policies for their specific population's needs. For example, in Long Beach, SCAN Health Plan, which is a not-for-profit Medicare Advantage Plan, has mobile clinics, which go to encampments or transitional housing—basically wherever the individual needing medical attention lives. They assist in alleviating the transportation barrier to receiving services for some people. Another innovative idea is that health care facilities are investing in housing properties. In Stockton, STAND was able to purchase homes for the formerly homeless who had expansive medical issues. STAND is a group of residents in the area who strive to make the neighborhood safer and more desirable to live in. The group also created an Affordable Housing Program where they buy dilapidated homes in need of renovations, rehabilitate them, and then sell them to low-income families. Similarly, the University of Illinois Hospital & Health Sciences System's Better Health Through Housing Program has access to 4,000 units around Chicago where they can move patients from an emergency room to supportive housing, implementing a Housing First model (Vaidya, 2021). In this program, individuals who use hospital resources frequently or are living with chronic health conditions are identified and referred to the Center for Housing and Health for assistance in moving to temporary housing. These programs are critical because they help to house individuals who may otherwise become homeless.

Public-private partnerships have also been piloted along with governmental partnerships. For example, Lyft Partners teamed up with Los Angeles and the city of Portland to provide rides for 6 months to jobs for the formerly homeless at a flat rate of $1.50. They also offered no-cost rides to and from job interviews (Peel, 2019). Harbor Care enacted a smaller initiative in New Hampshire where 120 Uber cards worth $25 each were given to homeless veterans to help them

get transportation to receive needed services (Harbor Care, 2022). These rides were for various services such as mental and physical health hospital visits, as well as for to and from employment.

5.4 Socioeconomic and Demographic Concerns

The spatial mismatch hypothesis addresses the concentration of BIPOC within the inner city and how the restriction of housing opportunities would lead to the restriction of job opportunities, specifically by race. One result was higher unemployment and lower wages among BIPOC in the inner city (Arnott & McMillen, 2006; Houston, 2005; Partridge & Rickman, 2006). RQ4 explored whether there were socioeconomic or demographic differences between areas with housing placements and those without housing placements. The spatial analyses findings suggest that there are socioeconomic differences, with the location of housing placements (largely clustered in the crescent) compared with the rest of the areas with less, or no housing placements at all. Housing placements tended to be where unemployment rates are higher, median household incomes are lower, and family poverty rates are higher. Additionally, there were demographic differences in these same areas, in that they had comparatively a higher number of BIPOC households. These findings are consistent with the growing concerns about equity, segregation, and the lack of economic mobility for residents living in Charlotte-Mecklenburg (Chetty et al., 2016). For example, census block groups with higher percentages of African American households also have more housing placements. Somewhat similarly, census block groups with a higher percentage of Hispanic households, largely concentrated in the east, have more housing placements compared to tracts in the north and south, which contained more white households. This finding of socioeconomic and demographic differences was also partially

supported by the results of the local provider survey. These disparities seem to have persisted since the segregation era.

In direct response to the Chetty et al.'s (2016) study, the Charlotte-Mecklenburg Opportunity Task Force was created followed by Leading on Opportunity in 2017 (Leading on Opportunity, n.d.). One of their areas of focus is addressing "The Impact of Segregation," which observed the same racial and income disparities as this study did. They offered multiple recommendations including deconcentrating high poverty schools, adopting inclusionary zoning, and providing incentives for mixed-income housing (Leading on Opportunity, 2017). They also created the Opportunity Compass, which measures 33 key indicators of economic mobility using data from 2015-2019. Nonprofit organizations and policymakers can use the data to inform their decision-making.

The United Way of Greater Charlotte is another local organization that is actively working to address racial, social, and economic inequities. Some of efforts include direct contributions such as the $4 million in Cares Act funding that went to Mecklenburg nonprofits affected by COVID-19 in 2020, advocacy and education by hosting The Racial Equity 21-Day Challenge, as well as preparing to launch the implementation of A Home For All initiative (United Way of Greater Charlotte, n.d.).

5.5 Opportunities for Local Government

RQ5 explored whether political pressures or recent legislation may have influenced the location of housing and supportive services. This study was congruent with the framework of new institutionalism as a reason how the current policies are in place which affect the formerly homeless. This includes the coordination and cooperation, or lack thereof, among stakeholders (citizens, developers/landlords, supportive service organizations); local elected officials (city and

county commissioners); and rules and regulations (zoning ordinances, annual budgets). For example, according to local newspapers, the proposal of siting affordable or low-income housing in local residential neighborhoods, and specifically those intended for the homeless or formerly homeless, have been contentious with residents (Harrison, 2015a, p. 4A; Price, 2012). One way that stakeholders actively practice institutionalism is through NIMBY. This study was unable to directly measure this phenomenon, but did include local news articles which cited that NIMBY was actively occurring in some neighborhoods. Though there are people both for and against additional housing placements, these types of projects have historically been blocked. Potential examples of blocked housing placements exist because there are qualified census tracts that do not have any housing placements. These qualified census tracts are in areas where there is less population density yet would still be eligible for additional federal funding (Garo et al., 2018). In Charlotte, these census tracts are further outside of the crescent, and have lower percentages of BIPOC. This seems like a missed opportunity to use federal funding at the local level to create additional housing.

Along similar lines, zoning ordinances, which the city council votes on, also impact if and where the construction of potential housing placements occurs. Zoning ordinances are one aspect of the Unified Development Ordinance (passed in August 2022), which has received both positive and negative attention (Escobar, 2022). Under the ordinance, some single-family-only zoning restrictions were eliminated. This may be beneficial because as of 2020, 84% of residential areas in Charlotte were zoned for single-family homes (Sáenz, 2021). This left very little room for multi-family housing options like duplexes or triplexes, which would be more economically advantageous for builders, but would contribute to increased density. Building multi-family housing options helps to offset some of the rising costs for builders and the lots may

be less costly (Evangelou, 2022). Total multi-family unit costs are distributed across the number of units being built.

Here is an example using local values. According to McShane (2020), it is not uncommon in Charlotte for a block with four houses to be demolished and replaced with 16 townhomes. Additionally, the cost of the land itself has dramatically increased in average price per acre from $195,000 in 2014 to $325,000 in 2018. For instance, if one house is on one acre, one singular household owes the property tax on $325,000. However, if the developer builds four townhomes on that same one acre, the property tax can be spread across each household ($325,000/4 = $81,250). Therefore, the developer can build one house and sell it for $500,000, or they build four townhomes and sell each for $250,000 (4 x $250,000 = $1 million).

Yet another way that local government can help support those experiencing homelessness is through the reduction of policies that criminalize the condition of being homeless. For example, in San Francisco, there are “homeless outreach officers” who respond to service calls pertaining to issues surrounding homelessness (e.g. vagrancy, loitering, public sleeping, etc.) (Cato Institute, 2021). There are two benefits from this specialized program. One is that these officers provide the opportunity for diversion from the criminal justice system. This means that there are less criminal and civil arrests, citations, and ultimately cases. This opens up more time, personnel, and funding within the criminal justice system for more serious felony cases. In addition, for the individual, it may minimize future repercussions from an arrest—like less employment opportunities or reduced housing choices due to a criminal record. A second benefit of a diversion response is that it provides the opportunity for a potential outreach of services. If instead of being arrested, a person can be referred to a more appropriate facility for mental and physical illnesses, substance use, and housing assistance.

5.6 Strengths and Limitations

This study has several strengths and offers some important contributions to scholarly research surrounding homelessness, housing and service provision locational choices, and perceived institutional barriers. First, before this study, analysis of the housing placements and data related to access to transit and services for the formerly homeless were limited for Charlotte, NC. Thus, the descriptive geocoding and mapping of housing and supportive service locations yielded new insights. Second, the survey of service providers also provided new information about their perceptions relating to accessibility and barriers to services. Taken together, the mixed methods approach to the research provided more depth insights into this study and increased its validity and credibility (Denzin, 2012; Fielding, 2012; Fink, 2015; Mathison, 1988; Modell, 2005; Moon, 2019; Patton, 2002). These findings are intended to inform stakeholders across multiple levels of the Continuum of Care process including clients, nonprofit organizations, local government, developers, and residents.

There are, however, some limitations to the study, which need to be considered relating to the online survey, research design, potential generalizability, and unexpectedly, COVID-19. Specifically, with respect to the online survey, although it has the advantages of being cost effective, convenient for respondents, and timely (e.g., they are able to collect data in a short period of time; Boyer et al., 2002; Fisher & Herrick, 2013; Fricker & Schonlau, 2002), online surveys have some disadvantages with respect to response rate and response bias.

For example, there are many factors, which influence an individual's choice to respond to a survey, including the sampling frame (accuracy, relevance), questionnaire design (length, content, format), and delivery (prenotice, cover letter, follow-up, incentives) (Boyer et al., 2002; Fincham, 2008; McPeake et al., 2014; O'Sullivan et al., 2008). Other factors that recipients

consider are the visual design presentation of the survey and the duration it takes to complete. For these reasons, this study's online survey had simple and minimal graphics, and it was intentionally designed to be brief, with respect to the number of questions and the format of the questions (e.g., multiple choice response sets), in an effort to encourage a high response rate.

In addition, response rates can be influenced by how often and the way in which follow-up requests for participation are made (Fincham, 2008). Although this study relied on both email and phone calls as follow-up methods, very few respondents answered the phone calls or returned the voicemails.

Another concern relating to the survey is selection bias. In this study, surveys were sent to organizations that were recommended by and partnered with the local government, as well as nonprofit organizations that are officially recognized by the federal government -- those with 501(c)3 nonprofit tax-exempt status. This means that some organizations, especially religious organizations and more informal groups providing assistance and support, were excluded from the sampling frame.

The study's research design also poses some limitations, particularly with respect to the generalizability and timing of the data collection. For example, the scope of this study was focused specifically on Charlotte-Mecklenburg; Charlotte is a large, urban, southern city. Thus, generalizing and expecting the findings to be similar for cities and counties in other areas and other sizes, such as rural areas or cities located in the Northeast, may not be reasonable (Giezen, 2012; Harrison et al., 2017). Moreover, the data for the spatial analysis were cross-sectional, and focused on structures and institutions that were in place during 2018, providing just a snapshot in time. Another shortcoming of the type of analyses that were run. Determining distance-wise how far housing placements were from transit and services and amenities was an important first step

in assessing potential accessibility. However, an accessibility analysis could be evaluated in future research which would account for transportation network modeling. This type of network analysis would be able to include and evaluate travel distance, time, and cost along current transit routes—which would offer a more comprehensive picture (Deliry & Uygucgil, 2023). Thus, the findings are not able to speak to issues of causality and they are limited in terms of their representativeness (Fink, 2015; Sedgwick, 2014). Nevertheless, the methods used in this study are transferable and could be used to study housing placements and access to services in other cities or areas.

The study was also conducted during COVID-19 pandemic and this, very likely, contributed to the low response to the survey. Specifically, the survey, which was set to launch in early spring, was initially postponed due to the global pandemic. The State of North Carolina declared a State of Emergency on March 10, 2020, in response to the COVID-19 pandemic. Then, Governor Roy Cooper declared a "stay at home order" on March 27, 2020. Because of the uncertain progression of the pandemic, the survey was launched roughly one month later. In addition to the global health pandemic, the city of Charlotte faced civil unrest where some protests over police brutality following the death of George Floyd turned destructive and violent, (Kunitz & Clasen-Kelly, 2020). The mayor, Vi Lyles, then declared Charlotte in a "state of emergency" on May 30, 2020 (WCNC, 2020). During the COVID-19 crisis, studies found an increase in emergency-related services while simultaneously businesses and organizations were furloughing workers (Azevedo et al., 2022; Kuenzi et al., 2021; Pixley et al., 2022; White, 2020). A health crisis, like the pandemic creates increased operational issues specifically on nonprofit organizations which provided emergency services to vulnerable populations (Azevedo et al., 2022; Deitrick et al., 2020; Hu et al., 2014; Johnson et al., 2021; Kim & Mason, 2020).

5.7 Delimitations

Although the subject matter of homelessness is varied and far-reaching across the country and over time, this study took a more thorough examination of housing placements and supportive services for the formerly homeless specifically in Charlotte, North Carolina. As such, there were several limitations imposed on this study to narrow its scope and focus. The first was establishing the boundaries of this topic, meaning that the aim of this study was investigating some of the locational choices of housing and support services for the formerly homeless. However, the reasons or causes of homelessness were not deeply explored in this study; instead, what previous studies revealed regarding the topic were considered. Furthermore, although this study addressed the formerly homeless, it did not directly address poverty. However, the capability of alleviating poverty for at least some through housing and supportive services is a major step in the right direction. (Hanratty, 2017; Vázquez et al., 2017, 2018). Additionally, the geographical boundary considered was that of the City-County of Charlotte-Mecklenburg, North Carolina. This also demarcated the potential number and type of participants included in this study, for instance the housing and support service sites and participants had to be within the City-County limits (Giezen, 2012; Harrison et al., 2017). Moreover, the quantitative section of this study was focused on examining locations of buildings and transit structures, which were in place as of 2017, which provided the most recent data available, but may or may not be different than years before and after 2017 (Modell, 2005; Moon, 2019).

5.8 Future Research

Future studies can expand on the current case study in various ways. For example, future research can expand the local nonprofit service provider survey to include the program participants. In addition, this study was based on housing placement data from government-

funded programs addressing the literal homeless population. This means that precariously housed individuals, for instance those who stay with friends or family for extended periods, fell outside the scope of this study. This could be a similar and understudied population for future studies. Additionally, researchers can look at longitudinal data to determine how permanent the housing placements for the formerly homeless are. This would show whether potential poverty concentration is more permanent or if it varies over the years, which could be a reflection of public policies, housing developers, and/or landlord participation. In addition, researchers can take existing data a step further through spatial optimization analysis. For instance, using a location-allocation model would provide decision makers "optimal" locations for housing and services with respect to access to public transportation. This would provide definitive options for where housing placements should be for them to be efficient, in this example time- and distance-wise from transit.

Because the lack of affordable housing is one of the largest institutional barriers for homeless populations (Anacker, 2019; Brown et al., 2018; Burt, 2001; Carter, 2011; Clark, 2016; Freeman, 2002; Wallace et al., 2019; Williams, 2020), future researchers can explore how some of the homelessness and housing policies are being implemented in cities and how effective these policies are. Programs such as Continuums of Care, which provide transitional housing, rapid rehousing, and permanent supportive housing (Collins et al., 2016; Corinth, 2017; Fotheringham et al., 2014; Gulcur et al., 2003; Henwood et al., 2013; Kertesz et al., 2016) have been discussed in the literature but their effectiveness in reducing homelessness is not as clear.

5.9 Conclusion

The primary goals of this study were developing a more comprehensive picture of where housing placements were for the formerly homeless in Charlotte-Mecklenburg, as well as if they

had accessibility and/or barriers to public transportation and supportive services. Additionally, this research looked at the reasoning behind these locational choices. This study makes three contributions. First, the study provides a description of the accessibility barriers from the viewpoints of local nonprofit service providers. Second, the locations of housing placements and services were mapped and reviewed to determine if the current locations were easily accessible via public transit. Third, this study has implications for public policies specifically at the local level regarding affordable housing, public transportation, and the provision of government and nonprofit services.

5.9.1 Overcoming Barriers

In this study, potential barriers were identified that prevent people who are formerly homeless from accessing public transit and government and nonprofit supportive services to help transition out of homelessness. Some scholars offer solutions such as housing subsidies and vouchers (Hartung & Henig, 1997; Thomas & Alozie, 2019; Wang, 2018; Wang et al., 2017). Other researchers examined subsidized public transit and private ride share vouchers at no cost to the individual or based on their income and found positive results (Carino, 2020; Eden, 2016; Graham, 2022; Harbor Care, 2022, Peel, 2019). Furthermore, some found positive health outcomes after subsidizing food delivery services or food in general to make healthier food from grocery stores more convenient and accessible (Anderson et al., 2016; Christian, 2010; Fitzpatrick et al., 2016; Rajasooriar & Soma, 2022). These studies suggest that local government can help subsidize the actual services or at least transportation to and from those services in an effort to address the current inequities found in this study. The findings from this current study also provide evidence that some of the suggestions made in previous studies are viable solutions and could be implemented in Charlotte. The study could also inform zoning regulations and

land-use policies. For example, because supportive services located near affordable housing has proven to be beneficial for the formerly homeless, policymakers may consider revising zoning regulations to encourage the co-location of these services.

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APPENDIX A: US POLICIES AFFECTING HOMELESSNESS

Federal policy	Year	Goals/Effects
World War I	1914 - 1918	
Housing Act	1937	Government subsidies to be paid to local public housing agencies.
World War II	1939 - 1945	
Housing Act	1949	Slum clearance and urban renewal projects.
Korean War	1950 - 1953	
Vietnam War	1955 - 1975	
Housing Act	1965	Expanded federal funding/ rental subsidies and called for 60,000 new public housing units.
Housing and Community Development Act	1974	Created Section 8 Housing and Community Development Block Grants
Stewart B. McKinney Homeless Assistance Act	1987	Establish Interagency Council on the Homeless and program funding for the homeless.
McKinney-Vento Homeless Assistance Act	Revisions: 1988, 1990, 1992, 1994, 2000	Expands shelter and housing provisions, as well as education/training programs for youth and adults.
Americans with Disabilities Act	1990	Requires government services and public transportation to be accessible to individuals with disabilities.
Persian Gulf War	1990 - 1991	
The Olmstead Decision	1999	Community-based services for individuals with disabilities;
War in Afghanistan	2001 - Present	
Iraq War	2003 - 2011	
Homeless Emergency Assistance and Rapid Transition to House Act (HEARTH)	2009	Established Homeless Management Information System (HMIS) and Emergency Solutions Grant (ESG) incentives for rapid re-housing and permanent supportive housing.

[1] U.S. Department of Veterans Affairs, *Dates and Names of Conflicts* https://www.va.gov/vetsinworkplace/docs/em_datesNames.asp

APPENDIX B: DATA USE AGREEMENT

DATA USE AGREEMENT

This Data Use Agreement is effective on the ____ day of _____, 2019, involving The Data Quality and Research Review Committee of the Charlotte-Mecklenburg Continuum of Care (CoC) and Faith Butta, MPA, University of North Carolina PhD Student (The Partner).

The CoC is providing the Partner an "Original Data Set", consisting of location addresses for housing operated through the Charlotte-Mecklenburg County Contiuum of Care.

The CoC hereby grants to The Partner a limited, non-exclusive, non-transferable, and revocable license to access, copy, and use the data contained in the Original Data Set.

Project Overview

- The purpose of this study is to understand where people are housed in relation to where they receive services. This is empirically understudied, in part because of the potentially sensitive nature of the issue as well as the recent increased interest at the federal and local levels to more comprehensively address homelessness.
    - The Housing Diversity Program of Charlotte is being issued $75 million in housing bonds from 2018-2020, with the stated mission to "create mixed-income communities by providing a continuum of housing needs from supportive housing to maintaining homeownership."
- As part of her dissertation, The Partner is evaluating the infrastructure of Charlotte-Mecklenburg as it relates to housing and supportive services for the formerly homeless.
    - This evaluation includes housing, county service locations, nonprofit organization locations, transit lines and stops, and other local amenities like banks and grocery stores.
    - This research offers a comprehensive geolocational analysis of the current state for some of the most service-reliant individuals, which has not yet been empirically studied.
- The data collected from the CoC will be used in a limited capacity for statistical analysis.
    - Individual housing location information will not be published and used solely to run the analysis. Only the aggregate descriptive statistics will be reported.
    - Upon receipt, each address will be randomly assigned a case number for identification purposes.

Data Sharing Process

- The CoC will provide the data to the Partner on an encrypted thumb drive.
    - The Partner will retrieve the thumb drive at an agreed upon time and location with the CoC.
- The Partner will maintain the data in a secure environment.
    - The encrypted thumb drive will be stored in a locked file cabinet in a locked office (450 E Fretwell) at the University of North Carolina at Charlotte.

    - The computer used to access the information will not be connected to the internet.
- The Partner will provide a summary of the completed data analysis to the CoC.
- Within two years of completion, all data received from the CoC will be wiped using specialized software designed to overwrite information (Active@KillDisk) and the thumb drive destroyed.

Publications and Acknowledgement

- The Partner must submit any products and manuscripts to the DQRRC for approval prior to submission for publication.
    - No personally identifiable information will be published.
    - Individual-level data may be reported in the aggregate at the request of The CoC (minimum cell size =5).
- Published products or manuscripts produced by the Partner will contain an acknowledgement recognizing the CoC's role in providing the data. The specific language and format of the acknowledgement will depend upon the context and/or specifications of the publication outlet.

Signatures

The parties signing below agree to the foregoing Data Use Agreement in Charlotte, North Carolina, as of the Effective Date:

THE COC

Name: _____

Signature: _____ Date: _____

Title: _____

PARTNER:

Name: _____

Signature: _____ Date: _____

Title: _____

APPENDIX C: RECRUITMENT EMAIL

Recruitment Email

Dear _____:

I am a Public Policy PhD student at UNC-Charlotte, and my research is evaluating the accessibility of services for the formerly homeless population here in Charlotte. As part of this evaluation, I am trying to find out about why individuals seek out certain services, and how easy or difficult it is for clients to access services -- along with a number of other things.

As part of the data collection process, I am conducting online surveys with key stakeholders, including nonprofit and government organizations. I would like to ask you some questions about your role (and your organization's role) and get your thoughts and insight.

The survey should take no more than 15 minutes. I would be grateful for any help that you could provide as I move forward in our work.

Sincerely,

Faith Butta

Faith Butta, MPA | Doctoral Student
UNC Charlotte | Public Policy Program
9201 University City Blvd. | Charlotte, NC 28223
Phone: 704-687-4533 | Fax: 704-687-3497
fbutta@uncc.edu | http://www.uncc.edu

APPENDIX D: RECRUITMENT SCRIPT

Recruitment Script

Hello. My name is Faith Butta. I am calling to follow up with you about an email that I sent to you last week, describing some research that I'm doing – conducting an evaluation of housing and support services for the formerly homeless.

Your participation in this study would be completely voluntary. The online survey will only take about 10-15 minutes of your time. Your responses to my questions will help to provide valuable information and insight about the barriers and motivations that consumers face when accessing services.

APPENDIX E: CONSENT TO BE PART OF A RESEARCH STUDY

Public Policy Program
285 F Fretwell Building
9201 University City Boulevard, Charlotte, NC 28223-0001

Consent to be Part of a Research Study

Title of the Project: An Evaluation of Housing and Supportive Service Locations
Principal Investigator: Faith Butta, Public Policy Doctoral Student, UNCC
Faculty Advisor: Joanne Carman, PhD, UNCC

You are invited to participate in a research study. Participation in this research study is voluntary. The information provided is to help you decide whether or not to participate. If you have any questions, please ask.

Important Information You Need to Know

- The purpose of this study is to gather information about how individuals access support services.
- You will take part in a brief online survey.
- If you choose to participate it will require 10-15 minutes of your time.
- There are no foreseeable risks or discomforts from this research.
- There are no direct/immediate benefits, though this research may inform decision makers about accessibility to support services.

Please read this form and ask any questions you may have before you decide whether to participate in this research study.

Why are we doing this study?

The purpose of this study is to evaluate where support services are in relation to housing for the formerly homeless. I am looking at whether services are accessible in proximity and cost to program participants.

Why are you being asked to be in this research study.

You are being asked to be in this study because you currently utilize services offered at this location.

What will happen if I take part in this study?

Taking part in this study will provide insight to organizations about how accessible their services are. There is no guarantee of any changes or direct benefit from the organization to you.

If you choose to participate in this study, you will be asked to answer a brief pen and paper survey about your personal experience of coming to this location to receive services.

Your time commitment will be about 10-15 minutes.

What benefits might I experience?

You will not benefit immediately/directly from being in this study. However, benefits include informing organizations about what is and is not seen as helpful to program participants. They may choose to re-evaluate their own policies to better cater their services to participant demand.

What risks might I experience?

There are no foreseeable risks from participating in this research. To minimize any risk, interviews are anonymous and do not collect identifiable information.

How will my information be protected?

We plan to publish the results of this study. To protect your privacy, we will not include any information that could identify you.

Other people may need to see the information we collect about you. Including people who work for UNC Charlotte, the study sponsor [if applicable], and other agencies as required by law or allowed by federal regulations.

How will my information be used after the study is over?

After this study is complete, study data may be shared with other researchers for use in other studies or as may be needed as part of publishing our results. The data we share will NOT include information that could identify you.

We may share your research data with other investigators in future studies without asking for your consent again. The information we share with these other investigators will not contain information that could directly identify you. There still may be a chance that someone could figure out that the information is about you.

What are my rights if I take part in this study?

It is up to you to decide to be in this research study. Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at any time. You do not have to answer any questions you do not want to answer.

Who can answer my questions about this study and my rights as a participant?

For questions about this research, you may contact Faith Butta, fbutta@uncc.edu, (412) 326-7151 and Joanne Carman, jgcarman@uncc.edu, (704) 687-7208.

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Office of Research Compliance at 704-687-1871 or uncc-irb@uncc.edu.

Consent to Participate

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will receive a copy of this document for your records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I understand what the study is about, and my questions so far have been answered. I agree to take part in this study.

_____

Name (PRINT)

_____

Signature Date

_____

Name and Signature of person obtaining consent Date

APPENDIX F: LOCAL SERVICE PROVIDER SURVEY

1. What is your role/title within the organization?
    a. CEO/ED
    b. Director
    c. Administration
    d. Staff
2. How long have you worked there (in years)?
3. Please provide the street address of your organization, including zip code.
4. Please select the types of services offered:
    a. Emergency shelter
    b. Food/meals
    c. Physical health
    d. Housing
    e. Jobs/skills training
    f. Mental health
    g. Education classes/workshops
    h. Financial literacy
    i. Parenting classes
    j. Legal/law services
    k. Other
5. Are these services offered anywhere else?
    a. Yes/No
6. Does your organization offer services for a specific population? Please select all that apply.
    a. Women
    b. Homeless/formerly homeless
    c. Children
    d. Veterans
    e. Families
    f. Men
    g. Low income
    h. Other
7. How many clients does your organization serve in a typical day?
8. How would you describe your organization's size in terms of annual revenue?
    a. Grassroots (under $1 million)
    b. Small (over $1 million up to $5 million)
    c. Medium (over $5 million up to $10 million)
    d. Large (over $10 million)
9. How many full-time employees work at the organization?
10. Thinking about your organization's ability to provide services, would you say that you are:
    a. Under capacity (could serve more with current resources)
    b. At capacity (serving the right amount)
    c. Over capacity (serving more people with not enough resources)

11. Why do you think people come to your organization for services? Please select all that apply.
    a. Cost
    b. Proximity
    c. Service type
    d. Referral
    e. Location
    f. Public transportation
    g. Mandatory
    h. Organizational reputation
    i. Habit
    j. Other
12. Which part of Charlotte do most of your clients live?
    a. All over the city
    b. West
    c. Uptown
    d. East
    e. South
    f. North
13. In relation to the organization, do clients live:
    a. Close by (within 15 minutes)
    b. In between (15-30 minutes)
    c. Far (more than 30 minutes)
    d. Other
14. How do consumers/clients get to your location? Please select all that apply.
    a. Walk
    b. Bus
    c. Light rail
    d. Ride share
    e. Personal vehicle
    f. Live here
    g. Other
15. Of the commute types selected in the previous question, which is the most common?
    a. Walk
    b. Bus
    c. Light rail
    d. Ride share
    e. Personal vehicle
    f. Live here
    g. Other
16. What, if any, are barriers for your clients/consumers to obtain services from you?
    a. Cost to commute
    b. Cost of service
    c. Hours of operation
    d. Distance to commute
    e. Requires multiple transit changes

f. Time to commute
g. Need more staff
h. Other

17. Of the potential barriers selected in the previous question, which is the most common?
    a. Cost to commute
    b. Cost of services
    c. Hours of operation
    d. Distance to commute
    e. Requires multiple transit changes
    f. Time to commute
    g. Need more staff
    h. Other/Unsure
18. Please rank from 1 to 6 (1= most helpful, 6= least helpful) ways to overcome your organization's potential barriers.
    a. Provide public transit passes
    b. Reduce cost of services
    c. Extend program hours
    d. Open additional locations
    e. Hire more staff
    f. Obtain more funding
19. Who has the responsibility of overcoming these barriers? Please select all that apply.
    a. Clients/Consumers
    b. Organization
    c. Government
    d. Other
20. How likely could these barriers be overcome?
    a. Not at all likely
    b. Somewhat likely
    c. Probably will
    d. Definitely will
21. Do/have you faced criticism for providing services?
    a. If yes, who criticized the organization and/or its services? Please select all that apply.
        i. Local residents
        ii. Business owners
        iii. Clients/Consumers
        iv. Government
        v. Another nonprofit organization
        vi. Other
22. Do/have you received praise for providing services?
    a. If yes, who praised the organization and/or its services? Please select all that apply.
        i. Local residents
        ii. Business owners
        iii. Clients/Consumers
        iv. Government

v. Another nonprofit organization
vi. Other

23. Are there any plans to change how or where services are delivered? If yes, please describe.
    a. Yes/No
24. What recommendations do you have for improving coverage and access to services at your organization?
25. Please share any additional thoughts or comments.