



# FINAL REPORT

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## **The Impact of COVID-19 on Childcare Access, Maternal Health and Wellbeing, and Labor Force Participation**

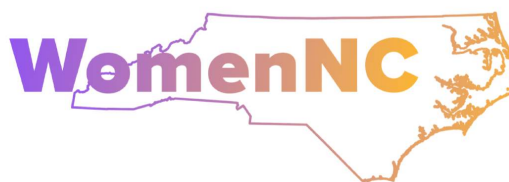
### *A Mecklenburg County Case Study*

May 5th, 2021

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The University of North Carolina at Chapel Hill

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# Executive Summary



COLLEGE OF ARTS AND SCIENCES  
Public Policy

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## THE IMPACT OF COVID-19 ON CHILDCARE ACCESS, MATERNAL WELLBEING, AND LABOR FORCE PARTICIPATION *A Mecklenburg County Case Study*

### THE IMPACT ON MOTHERS AND PRIMARY CAREGIVERS

42%

42.4% of respondents reported working from home as a result of COVID-19

The median income for our respondents was **\$100,001 – \$125,000**

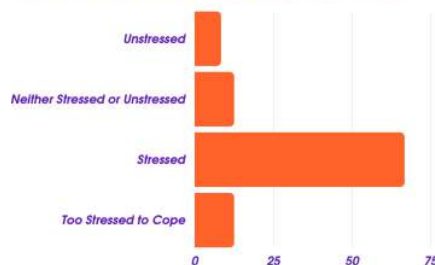
22%

22% of respondents reported that they do not have access to child care (3.7% of respondents are currently on a waitlist for child care)

21%

However, 21.05% of respondents reported price rates as a barrier to their accessing childcare

#### Self-Reported Stress Levels:



#### Some words from our respondents:

One child is in remote school and the other is in part-time daycare. It is quite impossible to manage the children while fulfilling my employment obligations, even though I am able to work from home.

My husband gets to work from home and I'm a stay at home parent to be the primary caretaker of our son. Being "stuck" at home near constantly has definitely put pressure on our relationship, our individual mental health, and even our relationship with our son. He's spent his entire life "in quarantine" and he's extremely attached to me. I do not get breaks.

### THE IMPACT ON CHILDCARE PROVIDERS

8%

OF CHILDCARE PROVIDERS COMPLETED THE SURVEY



"Staffing. We cannot find teachers who are willing to work during the pandemic"

"Will your business be shut down if a child has COVID-19? Will you have enough funds saved to offset the cost of being closed?"

75%

75% of facilities reported offering subsidized spots

29%

29.55% of respondents reported that implementing social distancing was challenging

56%

56.25% of respondents reported a decrease in the number of families served during the COVID-19 pandemic





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## FUTURE RESEARCH RECOMMENDATIONS

**EXPAND ON CAREGIVER  
DATABASE TO INCLUDE  
INFORMAL FACILITIES**



**PRESENT IDENTIFIED  
GAPS IN CHILDCARE  
ACCESSIBILITY TO  
STAKEHOLDERS**



**RE-ADMINISTER  
SURVEYS WITH THE  
RECOMMENDED  
ADJUSTMENTS:**



Provide a mail-in survey for low-tech  
childcare centers



Create a Spanish version of the survey  
for multi-lingual caregivers



Conduct focus groups alongside the  
survey

## POLICY RECOMMENDATIONS



**Direct financial support of shared-care  
networks:**

*Groups of providers networking to consolidate  
administrative, financial, and staffing burdens*



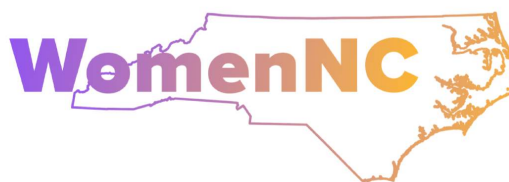
**Reimplementation of DHHS childcare subsidies:**

*Provided by the state to providers based on maximum  
enrollment capacity*



**Provisions for mental-health resources for  
caregivers:**

*State-supported hotlines, grants, and education*



## WomenNC Background

WomenNC is a nonprofit that was founded to advance gender equality in North Carolina. WomenNC leads several initiatives that address issues of gender equity including their flagship program, the Commission on the Status of Women (CSW) fellowship. In addition to the scholars program, WomenNC advocates for the implementation of the Cities and Counties for the Elimination Against All Forms of Discrimination Against Women (CEDAW) in Durham which requires cities and counties to evaluate their programs and budgets each year for their impact on gender equality, and founded the NC Coalition for Cities for CEDAW, whose core mission is to gain more cities' support for CEDAW (WomenNC, 2020). WomenNC has also published several reports on the status of women in North Carolina. These reports vary in content, but all address aspects of advancing gender equality in cities and counties across North Carolina. These reports provide comprehensive analyses of relevant gender equity issues and policies (WomenNC, 2020).

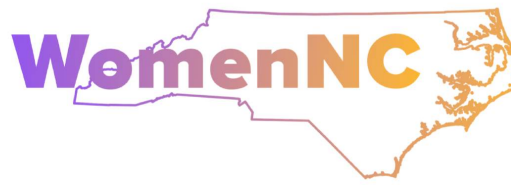
## Problem Statement

Women in the United States experience inequitable labor market outcomes as well as

decreased wellbeing as a result of systemic and cultural barriers. Working mothers take on the majority of unpaid household and care work in addition to their paid labor. Working women and men, and especially working mothers and fathers, do not have equal experiences when it comes to both paid and unpaid labor.

*This demands policy interventions that address the multifaceted responsibilities working mothers face* (Glynn, 2018).

During the COVID-19 pandemic, these inequities have been magnified as childcare facilities across the nation have begun closing over the past twelve months. These closings amplify many mothers' struggles in juggling full-time employment while also acting as full-time caregivers. WomenNC has yet to conduct specific research on how COVID-19 has impacted childcare, as well as the relationship between women's labor market outcomes and childcare access. WomenNC is particularly interested in expanding their research to include childcare issues related to the COVID-19 pandemic and areas of North Carolina they have not yet focused on in their research.



## Scope of Our Project

Our Capstone project aimed to inform WomenNC how the COVID-19 pandemic has impacted childcare access, maternal wellbeing, and labor force participation in Mecklenburg County. WomenNC's goals for this project included broadening their body of research to include childcare-centered research, expanding their geographic reach within North Carolina, establishing a foundation of research for future scholars to reference in their work, and creating tangible policy recommendations for our areas of focus.

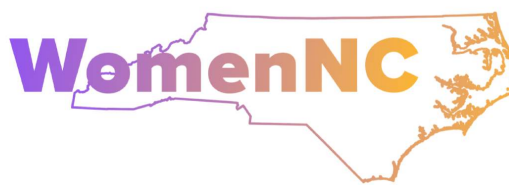
To achieve these goals, our team first conducted a comprehensive literature review of research relevant to childcare in Mecklenburg County, maternal wellbeing, and labor force participation preceding and during COVID-19 to gain an understanding of the topics we wished to address. We then created two surveys, one directed to childcare providers in the county, one directed to mothers and primary caregivers in Charlotte and Mecklenburg County. With the results from the survey and the knowledge obtained through our research we were able to create a list of policy recommendations on both a county- and state-wide level. We also finalized a contact list for childcare providers

in Mecklenburg County that will aid future scholars in investigating issues similar to the ones our team addressed.

### Client Goals:

- 1 *Broaden WomenNC's body of research to include childcare-centered research*
- 2 *Expand WomenNC's geographic reach within North Carolina*
- 3 *Create two surveys that are user-friendly, mobile-accessible, and methodologically rigorous*
- 4 *Produce tangible policy recommendations based on team findings*
- 5 *Establish a foundation of childcare research that future WomenNC scholars can build upon by providing detailed information on research and findings in a final report*





## Summary of the Literature Review

The literature review our team conducted focused on addressing WomenNC's goals of broadening their body of research to include childcare-centered research, expanding WomenNC's geographic reach within North Carolina, and establishing a foundation of childcare research that future WomenNC scholars can build upon (see Appendix A). The literature review is divided into three main sections: an overview of Mecklenburg County at large, maternal health and wellbeing, and labor force participation preceding and during the COVID-19 pandemic.

### *Overview of Mecklenburg County*

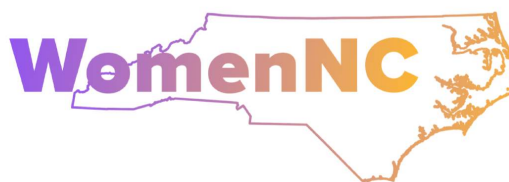
The first section involves a discussion of the demographics of the region, Charlotte's experiences with gentrification, geographic differences in childcare access across the county, and a summary of the current state of childcare in Mecklenburg County at large. Additionally, this first section provides a brief discussion of the impact of COVID-19 on childcare and why Mecklenburg County is an ideal location for studying the effects of COVID-19 on childcare access. This section aims to provide WomenNC with a basic understanding of Mecklenburg County and access to childcare.

### *Maternal Health and Wellbeing*

The second section involves an analysis of maternal health and wellbeing, factors that influence maternal stress, and the unique impact of COVID-19 on working mothers. Additionally, this section discusses the particular challenges working mothers face, which is a vital component of our research. This section aims to provide WomenNC with insight on ways to best support working mothers and the unique experiences of working mothers on a large scale.

### *The Impact of COVID-19 on the Labor Market*

The third section investigates how COVID-19 has impacted the labor market and advances themes of the second section through deep analyses of the labor market situation for mothers preceding and during the pandemic. This section also involves a discussion of international trends in the division of domestic labor and the impact of motherhood on economic outcomes. This section aims to provide WomenNC with analyses of the disproportionate impact of COVID-19 on working mothers.



## Survey Methodology

After our team conducted research for the literature review, we began developing two separate surveys and a consent form to accompany both. The creation and distribution of a survey to childcare providers was one of WomenNC's goal for our project. After discussion with Dr. Maria Riemann, the executive director of WomenNC, our team decided to distribute an additional survey to mothers and primary caregivers to gain further insight on the unique effects COVID-19 has had on mothers.

The first survey was designed for childcare providers (see Appendix B). To distribute this survey, our team had to first establish a contact list for childcare facilities in Mecklenburg County. We used the North Carolina Department of Health and Human Services list of childcare facilities to identify 449 childcare facilities in Mecklenburg County. We contacted every facility listed by phone, and were able to receive contact emails for 263 facilities. This contact information was compiled into an Excel workbook for WomenNC to utilize in the future. Of the 263 emails our team sent, 29 emails bounced and 37 emails were duplicates, meaning our childcare provider survey reached 197 individual providers. We received 16 responses, giving our childcare provider survey a response rate of 8.1%.

The second survey was designed for primary caregivers (see Appendix C). Our team distributed this survey and the accompanying consent form through Facebook groups for Mecklenburg mothers. We received 31 responses for the primary caregiver survey.

Both surveys were created and distributed using the online survey platform Qualtrics. We chose this online survey tool because it is user-friendly, accessible via phone and computer, allows for the production of data reports and visualizations, and distributes large email listservs.

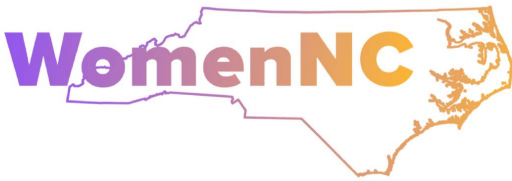


*We received 16 responses for the provider survey*

*We received 31 responses for the primary caregivory survey*

*Note: Due to delays in the UNC IRB process, the survey timeline was highly compacted.*





# Summarized Key Findings

After analyzing our survey results, we found some discrepancies between the population our primary caregiver survey reached and the population of Mecklenburg County at large. It is important to note that these differences may contribute to a skewed understanding of how COVID-19 has impacted childcare access, maternal wellbeing, and labor force participation.

Overall, the survey respondents were more likely to be White, to have a bachelor's degree or higher, and were much less likely to be single parent households. furthermore, their median income was almost double that of the county as a whole.

Despite the discrepancy between our sample and the population of Mecklenburg County, 96% of our respondents identify as female which does allow some insight to how COVID-19 has impacted mothers in Mecklenburg County.

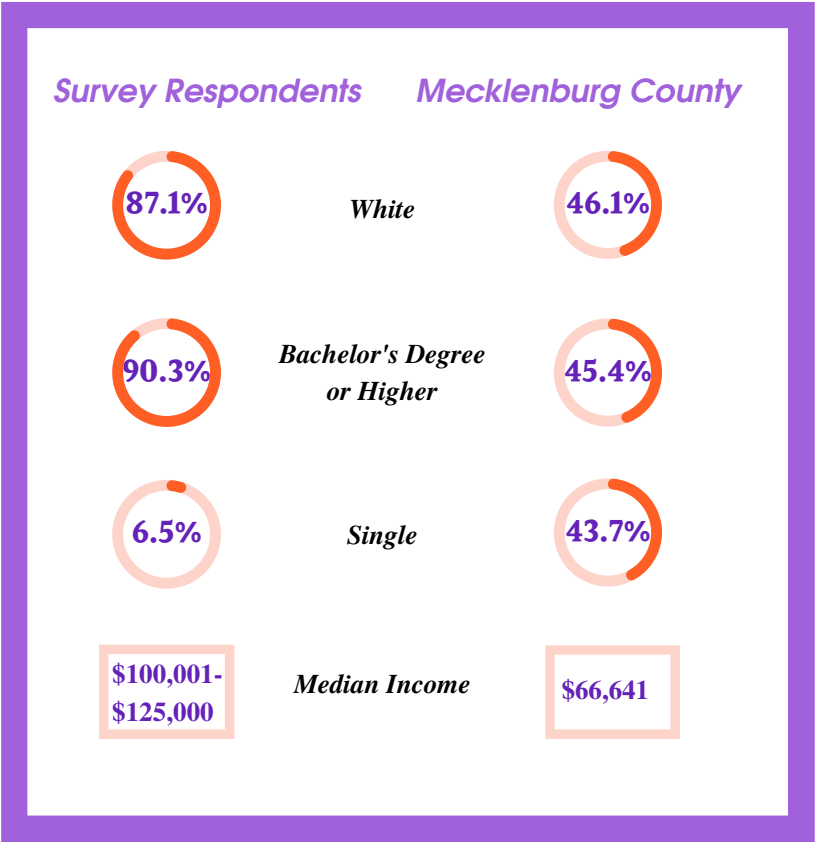
42.2% of respondents reported working from home as a result of COVID-19.

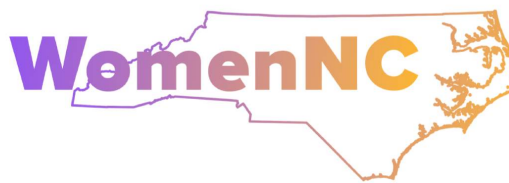
22% of respondents reported they did not have access to childcare

21.1% of respondents reported price rates as a restriction of their access to childcare

28% of respondents reported childcare becoming more expensive since the start of COVID-19

In self-evaluations of mental health, 33.3% of respondents ranked their mental health as 'Poor', with 50% reporting anxiety and 30% reporting depression. Additionally, 50% of the respondents mentioned their mental health has declined since the start of the pandemic.





For the childcare provider survey, the majority of facilities that responded were in-facility organizations (87.5%) with the remaining facilities operating as in-home care. 75% of the facilities reported being privately owned, 6.25% reported religious affiliations, and 18.75% were a non-profit.

*56.25% of the facilities reported having to decrease the number of families served because of COVID-19*

*75% of the facilities reported offering subsidized childcare spots*

When assessing challenges faced over the past year,

**11.4%** *of the facilities reported feeling unsure about how to reduce risk*

**29.6%** *of the facilities reported issues with social distancing*

**4.6%** *of the facilities reported problems obtaining resources*

**15.9%** *of the facilities reported having to limit educational lessons*

**18.2%** *of the facilities reported difficulties in addressing anxieties of infection*

## Future Research Recommendations

### Heightening survey response rates

WomenNC anticipated that one of the challenges for this project would be getting survey responses. This challenge was heightened by our IRB delays.

Considering our limited time frame, these communications with the IRB significantly delayed our research and we were forced to shorten the time allotted to distributing surveys and collecting responses. However, our group created an Excel workbook with the contact information for all 449 childcare facilities in Mecklenburg County, which will enable future research groups to start where we left off.

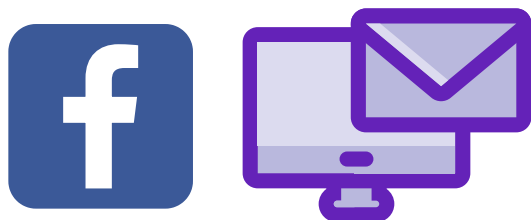


**Contact  
Information for  
449 Childcare  
Facilities**



## Overcoming complications attributed to COVID-19 safety regulations

Though a major element of our project focused on conditions during COVID-19, pandemic safety regulations limited our group's outreach efforts to a virtual and digital scale. Our methods of emailing childcare providers and sharing the link to the caregiver survey on Facebook groups may not be optimal for garnering the highest response rates.



## Gathering a more representative sample

The sample for our caregiver survey ended up severely under-representing various races and ethnicities, as White caregivers constituted almost 90 percent of our respondents. Finding ways to heighten survey distribution among non-white residents of Mecklenburg County is vital to truly understanding the range of

experiences with childcare access, maternal wellbeing, and labor force participation during COVID-19. The provision of a mail-in survey may help heighten responses in low-tech childcare centers. A Spanish version of the caregiver survey may help heighten responses among Latinx caregivers. Additionally, conducting focus groups alongside the survey may help WomenNC gather more complex information pertaining to how COVID-19 has impacted childcare access, maternal wellbeing, and labor force participation.



**Mail-In Survey for Low Tech Centers**



**Spanish Version of the Caregiver Survey**



**Conduct Focus Groups Alongside the Survey**

## Incentivizing survey responses

Though our team faced time constraints, an additional difficulty was that our surveys also did not have any tangible incentive for respondents. While we did emphasize the importance of completing the survey to the providers and caregivers we contacted, tangible incentives would like generate more responses. That being said, we advise future WomenNC scholars to use tangible incentives in addition to emphasizing this research's importance in order to increase response rate. This incentive could include gifting the respondent a gift-card or small sum of money, or entering them into a raffle to earn such a prize.



## Expanding Beyond Mecklenburg County

Our team selected Mecklenburg County for this research for a multitude of reasons, including the diverse population, size of the county, and to expand WomenNC's reach in North Carolina. However, Mecklenburg County is not representative of the entire state of North Carolina. Our team recommends extending this research to a larger audience in order to fully measure the pandemic's impact on North Carolina mothers. Additionally, expanding past Mecklenburg County may result in a more representative sample and provide greater insight to current gaps in state-wide childcare policies. Expanding this research to other counties could also shed light on the distribution of the pandemic's effects across the state.

## Policy Recommendations

Based on our findings, our team has three policy recommendations for how the state of North Carolina can improve conditions for primary caregivers and child care providers and increase child care accessibility. It is important to acknowledge that these recommendations are based on research that has reduced generalizability due to a small sample size. More research must be conducted before any recommendations are

enacted. The three areas that our research identified as the most critical are financial needs of care providers, financial needs of caregivers, and the mental health needs of families and caregivers. The following recommendations are designed to meet each of these needs.

### Financial Support for Providers: Direct Support and Shared Care

Our team first recommends that the Mecklenburg County and the State emphasize policy that would directly financially support childcare providers. Such support might come in many ways. Two are recommended here.

#### 1 | *Operational grants allocated for more effective childcare resources, such as Shared Care Networks*

Per the 04/03/20 NC Department of Health and Human Services (NCDHHS) memo on COVID-19 Childcare Payment Policies, the State currently provides monthly operational grants to open childcare providers in an effort to offset monthly fixed operating costs (NCDHHS, 2020). While these grants are available to all private, licensed child care centers, they are only approved through the month of April. Our team recommends that such grants continue until centers are opened to full capacity with no restrictions. Furthermore, our team recommends that additional grants should be used to support effective and efficient childcare initiatives,





such as Shared Care Networks (SCN) (ShareCare Network, 2021). Through our research our team found that many programs were independently owned or operated facilities that operated under a wider administrative umbrella, as evident to our team by their shared administrative email. Such networks strike an effective balance between individualized facilities catering to the needs of a specific community while sharing administrative burdens. The responsibilities of staffing, payroll, reimbursement submission, and everyday tasks can be financially and logistically overwhelming. Investing in networks of facilities that have opted into a group that consolidates administrative responsibilities may increase the spending power of each grant.

## 2 Further subsidization of childcare programs

In response to the COVID-19 pandemic, NCDHHS expanded their pre-existing childcare subsidies. In essence, facilities are reimbursed by the State for each child that they serve. In the face of the pandemic, facilities were permitted to report enrollment as though they were at maximum capacity and received based on that modified value. This provision will end in May of 2021 and facilities will be required to enter true attendance beginning in August. Our team recommends that these subsidy payments be reinstated until facilities can reopen with no

restrictions and; furthermore, recommend that facilities are reimbursed based on enrollment instead of attendance. This distinction allows facilities to be compensated whether or not a child was in attendance for a certain period.

## Financial Support for Families: Childcare Payment Policy

The second area of concern that our research identified was that of financial strain on caregivers and families. Our team recommends that Mecklenburg County and the state of North Carolina address this area as a priority by making provisions for direct financial support of North Carolinian families. Prior to COVID-19, an NCDHHS subsidization system was set in place to support families who met a stringent set of criteria including: those with children in child protective services, those with developmentally different children, those who were in school, and a variety of other criteria (MeckNC, 2020). In response to the pandemic, the State expanded these subsidies to include any family within 200% of the poverty line with children between the ages of five and thirteen (NCEEC, 2020). This financial assistance ended in November of 2020. Our team recommends that a similar provision of financial assistance to primary caregivers with children in licensed childcare facilities be reinstated. The NCDHHS Emergency Childcare subsidy is a second example of necessary direct financial support of caregivers. Caregivers who



were essential workers, had no other safe childcare options, and had a household income below 300% of the poverty line were eligible for financial assistance until May 31st, 2020. The effects of the pandemic are still ongoing, and many frontline workers have no choice but to leave their child at home while at work. Our team bases our recommendation for the reinstitution of direct financial assistance as described above based on the 21.1% of respondents who cited cost as a barrier to childcare. The provision of a direct subsidization of the cost of childcare would aid in mitigating this barrier.

### *Mental Health Support for Families:*

Our findings suggest that COVID-19 has had a negative impact on the mental health of primary caregivers. Many survey respondents reported that the condition of their mental health deteriorated through the pandemic. As mental health is an important facet of general wellbeing, such a deterioration must be addressed. It is also important to note how worsened mental health in caregivers might impact the wellbeing of the children being cared for. The state of North Carolina should improve these conditions by implementing a framework of mental health resources directed at primary caregivers who have been adversely impacted by the COVID-19

pandemic. Our team recommends that North Carolina and Mecklenburg County invest in policy initiatives that emphasize the prevention and treatment of mental illness in an effort to improve outcomes in these difficult times. Preventing mental health deterioration before it occurs might be achieved by integrating mental health resources into the grant receiving programs detailed above or by expanding programs like the Medicaid Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit to all state-sponsored insurance plans. EPSDT has been highly effective in ensuring access to diagnosis and treatment of mental health disorders in children and would be a useful tool for the prevention and early treatment of mental health concerns in adults as well as children that should be considered by the state. Improving access to mental health care might be accomplished with policy by:

#### *Tailoring healthcare financing*

#### *Subsidizing and encouraging modern use of technology in mental healthcare*

#### *Ensuring availability of clinicians*

The first of these suggestions might be addressed by emphasizing value, rather than volume, based care. The second might be addressed by subsidizing telehealth facilities through which caregivers in more rural areas could access care. Finally, the third might be addressed by expanding clinical-loan forgiveness programs.

*Each of these three recommendations have been developed to address the financial and mental health needs of caregivers and facilities.*



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## Appendix A

### Literature Review: Mecklenburg County, Maternal Health and Wellbeing, and the Impact of COVID-19 on the Labor Market

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## Overview of Mecklenburg County

Charlotte is the most populous city in North Carolina and the seventeenth-largest city in the United States, covering most of Mecklenburg County. The county itself is one of the ten fastest growing counties in the United States (Khabazi, 2017). Consequently, Charlotte has undergone extensive urbanization that changed the demographic makeup and distribution of the county. Charlotte's growth has prompted large-scale investments in neighborhoods throughout Mecklenburg County, resulting in extensive gentrification. In the center of the city, older public housing projects have been replaced by high-density condominium projects, forcing low-income and minority renters to relocate to lower-priced neighborhoods west and north of the downtown area (Delmelle, Thill, & Furuseth, 2012).

### *Demographics and Other Relevant Statistics*

The Charlotte Health Alliance reports that as of 2019, 57.3 percent of Mecklenburg County's residents are white, 33 percent are Black or African American, 13.8 percent are Hispanic or Latino, 6.3 percent are Asian, 0.8 percent are American Indian or Alaska Native, and 0.1 percent are Native Hawaiian or other Pacific Islander (One Charlotte Health Alliance, 2019). Additionally, 43.7 percent of households in Mecklenburg County are single-parent households. A report by Pew Research Center in 2019 states that 23 percent of children under the age of 18 in the United States live in single-parent households (Kramer, 2019). This means Mecklenburg County has a much larger proportion of single-parent households than the national proportion. The United States Census Bureau reports that as of 2019, Mecklenburg County had an estimated population of 1,110,356 (United States Census Bureau, 2019). The poverty rate in the county is 11.6 percent. The national poverty rate, as of 2019, was 10.5 percent. This means the poverty rate is slightly higher in Mecklenburg County than in the nation overall.

### *Charlotte's Unique Relationship to Gentrification*

The gentrification process is typically introduced to cities and neighborhoods as students, artists, and young couples settle in run-down areas close to the urban core in places that are affordable and accessible. Smith and Graves (2016) detail the effects of gentrification as gradual improvements to neighborhoods raise property values, rents, and increase the overall interest in the area by affluent classes, real estate investors, and corporate developers. As gentrification progresses, neighborhoods transition from affordable and accessible to prestigious and profitable.



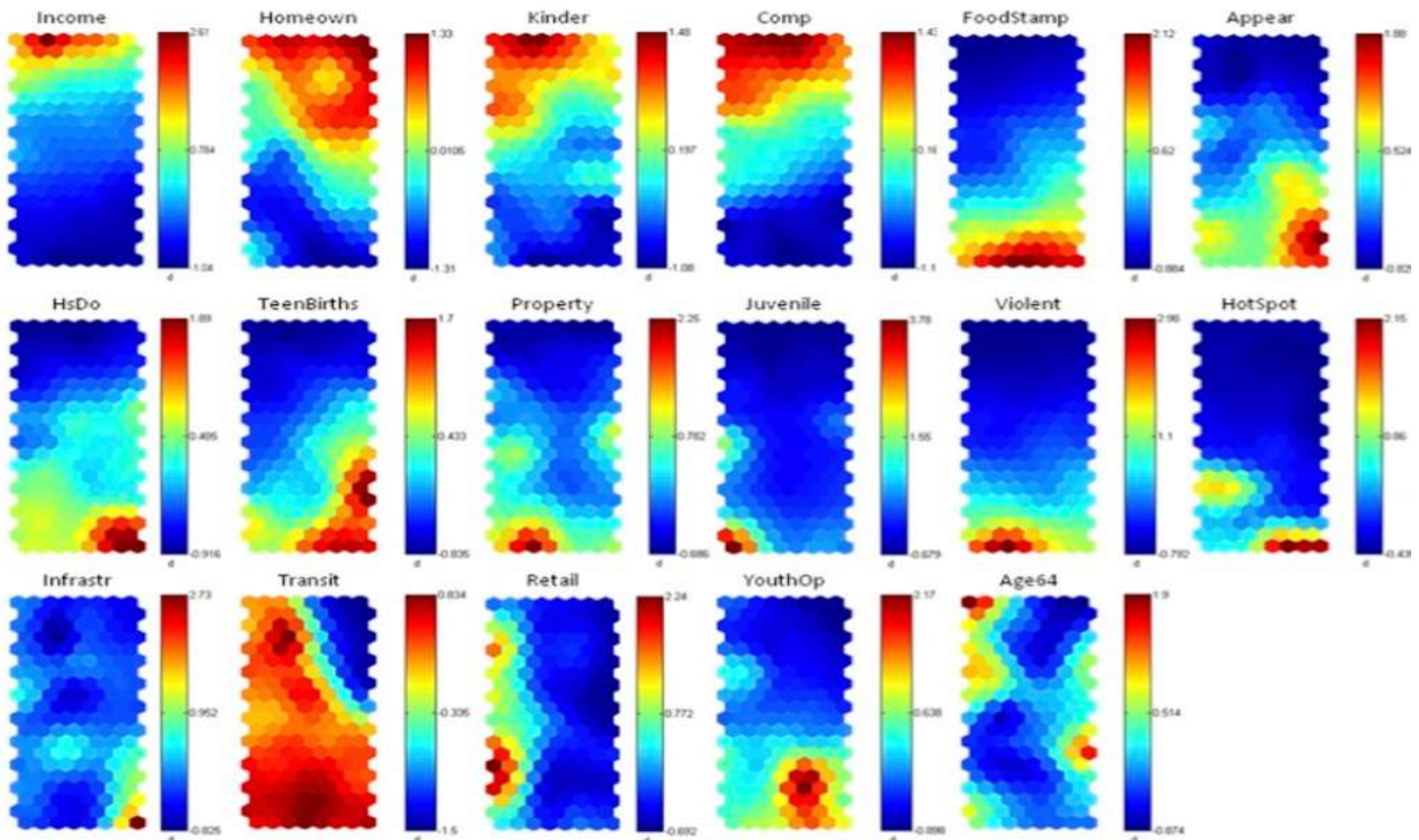
The authors highlight Charlotte's unique history of gentrification, as the process was kickstarted by a corporation rather than an influx of individual investors. Charlotte's most prominent employer, Bank of America, encouraged the initial stages of investment in downtown Charlotte. With its headquarters in Charlotte, Bank of America aimed to transform the city's image and neighborhood spaces in a way that would attract and retain the (more educated, wealthier) labor force necessary to meet its expansion goals (Smith & Graves, 2016). The gentrification process that followed Bank of America's investments has contributed to the economic divides within the county.

### *Gentrification and Childcare*

Access to quality childcare is a vital aspect of ensuring caregivers can participate in the workforce, support themselves and their families, and afford the cost of living. Gentrification significantly affects the cost of living as it tends to drive up property prices in previously low-cost neighborhoods and may force relatively low-income natives from a particular area of a city to relocate. Income is a primary determinant of the cost of living and regional variation in housing costs, and Mecklenburg County has a median household income of \$61,695 (Campbell & James, 2021). While the median income suggests a well-off population, the concentration of high-income families and individuals living in gentrified neighborhoods and areas of Mecklenburg County overshadows the equally concentrated poverty and low-income families in other parts of the county. Gentrification has contributed to the creation of distinctive geographic clusters within Mecklenburg County that have varying levels of access to a plethora of social resources, including childcare options. Understanding the different divisions within the county will be a vital aspect of understanding county-specific recommendations for childcare.

### *Geographic Clusters in Charlotte*

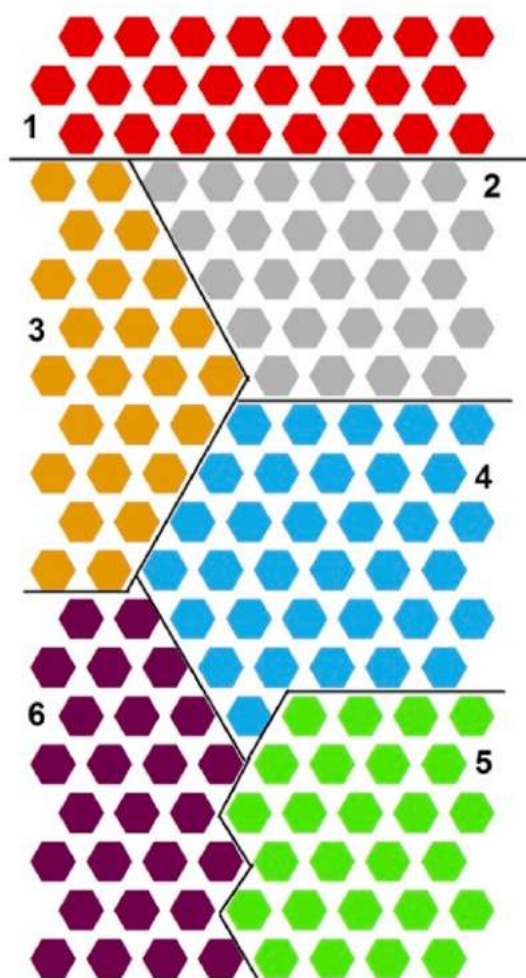
Quality of life (QoL) indicators help analyze neighborhood conditions over time, measuring the multidimensional notions of livability, desirability, and competitiveness of a particular location. In Charlotte, there are six main geographic clusters that have undergone gentrification-related transformations. Delmelle, Thill, and Furuseth (2012) use seventeen different metrics to analyze the social, physical, economic, and crime dimensions of neighborhoods in Mecklenburg County. These metrics include income, homeownership, kindergarten enrollment, food stamp dependency, teen births, juvenile crime, violent crime, access to transit, access to retail, and youth opportunities.



*Delmelle, Thill, & Furueth. (2012). Figure 4.*

The authors then used the metrics of each neighborhood to develop clusters of shared social, physical, economic, and crime dimensions. Cluster one has the highest QoL neighborhoods and can be identified by high levels of income, homeownership, and education, with low food stamp dependency, crime rates, and teen birth rates. Cluster two and cluster three represent more middle QoL neighborhoods, with cluster three having slightly higher education scores than cluster two and greater access to transit and retail. Both geographic groups have low levels of crime. Clusters four, five, and six are all lower QoL neighborhoods. Cluster four is characterized by low income and education, median homeownership, and above-average teen birth rates, with high transit access and low retail access. Cluster five has the highest concentration of teen births and numerous high crime ‘hot spots’, while cluster six has the highest concentration of violent, juvenile, and property crime. Clusters five and six both tend to have low income, low rates of homeownership, and high food stamp dependency.





Delmelle, Thill, & Furuseth. (2012). Figure 5.

The authors find that neighborhoods with the highest QoL indicators tend to be concentrated in the southern portion of the city, and a majority of the neighborhoods in this cluster stayed in the same group from 2000 to 2010. The clusters with middle QoL indicators are often found along the outermost periphery of the city. However, from 2000 to 2010 the middle QoL neighborhoods either joined the first cluster, or suffered from declining QoL characteristics and joined low QoL clusters. Consequently, middle QoL neighborhoods are gradually disappearing with the differences between high QoL and low QoL neighborhoods becoming more extreme. From 2000 to 2010, low QoL clusters faced limited mobility, with only a few neighborhoods seeing improvements in QoL indicators. The low QoL clusters also tend to be further from the city center than higher QoL clusters. Additionally, clusters four, five, and six absorbed many of the inner-city residents displaced by gentrification and Latino immigrants.

### *The Role of Geography in Accessing Childcare*

Each geographic cluster within Charlotte is accompanied by QoL indicators fairly specific to that group, including living conditions, economic status, education, health, and welfare (Liu, 1973). Access to childcare is something that can impact, and be impacted by, multiple variables related to each of these indicators. In Mecklenburg County, childcare supply is more adequate towards the center of the city, with the scarcity of supply increasing with the distance from Charlotte's city center (Belfield, 2020). Consequently, childcare access is better in the first several clusters, with clusters four, five, and six facing lower levels of access. Access to childcare can help improve the QoL indicators in low QoL neighborhoods, and policy recommendations for Mecklenburg County should be sure to address the heightened challenges low QoL neighborhoods face in securing affordable and high-quality childcare.





## *Assessing Childcare from a State and County Perspective*

Excessive childcare costs have been shown to regularly push mothers out of the labor market (Ruppanner, Moller & Sayer, 2019). The United States stands as the only Western industrialized nation with no paid parental leave and minimal childcare support for preschool-aged children. Ruppanner, Moller, and Sayer describe the states as the key actors in determining childcare tax subsidies and allocating federally subsidized funds pertaining to childcare. As a result, childcare environments and costs vary dramatically across the United States.

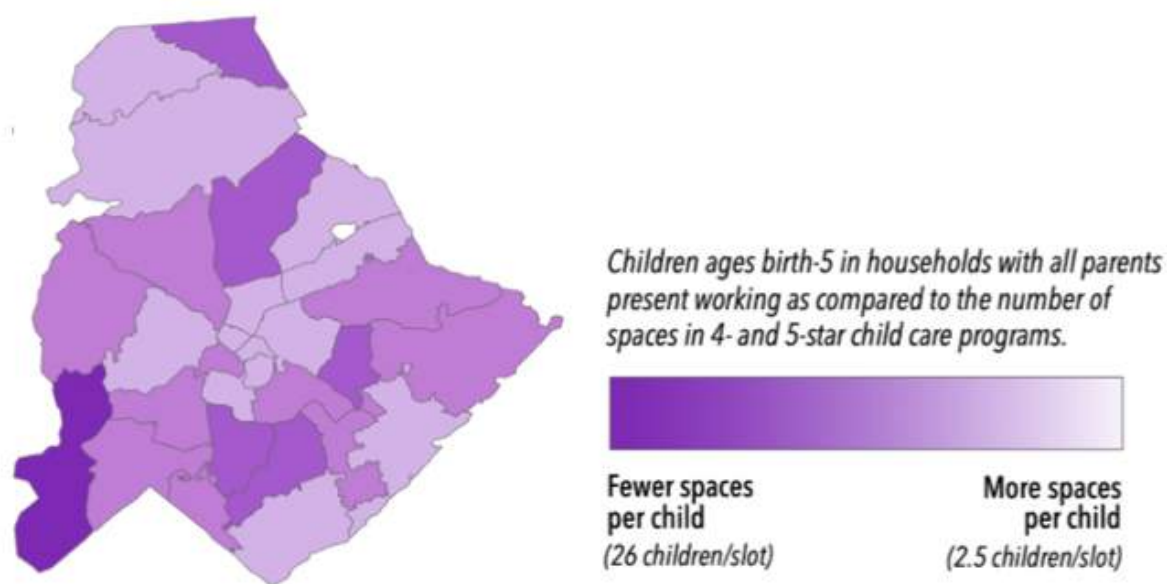
### *Childcare Access in North Carolina*

In North Carolina, roughly half of all parents were able to access any type of center-based or formal childcare (Belfield, 2020). Factoring in parental employment constrains access even further. Two-thirds of children aged five and under have both parents in the labor force, indicating that childcare is a necessary element of ensuring caregivers can continuously participate in the workforce (Greszler & Burke, 2020). 49 percent of working parents in North Carolina receive at least one benefit from their employer, with 20 percent having flexible working hours, 17 percent having paid family leave, 14 percent having emergency leave, 11 percent having on-site childcare, 10 percent having a childcare referral service, and 7 percent providing subsidies to the cost of childcare (Belfield, 2020).

### *Childcare Access in Mecklenburg County*

Of all counties in North Carolina, Mecklenburg County has historically had the longest waiting list of qualified applicants requesting subsidized childcare for employment-related reasons (Bowen & Neenan, 1993). However, Mecklenburg County's Board of County Commissioners has made consistent improvements in county-funded childcare subsidies with the aim of reducing the number of children on the childcare subsidy waitlist (Mecklenburg County Government, 2019). In 2017, Mecklenburg County launched the Waitlist Reduction Initiative to provide additional funding for childcare subsidies to low-income working families, and in 2019 the waitlist for childcare subsidy was cleared. Additionally, Mecklenburg County has partnered with Child Care Resources, Inc. (CCRI) to provide subsidized childcare to working families in Mecklenburg County (Child Care Resources Inc., 2019). CCRI offers free and confidential childcare search services to families seeking childcare, provides childcare financial aid to income-eligible working

families in Mecklenburg County, and delivers free and low-cost development services to help early educators and caretakers improve the quality of care services. As of 2019, CCRI had served 6,315 families and 8,750 children in Mecklenburg County. Additionally, CCRI administered \$61,684,710 in childcare subsidy. CCRI also delivered training, consultation, and coaching to 75 percent of the licensed programs in Mecklenburg County to help early educators improve their knowledge, skills, and practices. CCRI mapped the demand of childcare in different geographic locations across Mecklenburg County to help determine areas that are facing the most limited supply, which will aid in developing policy suggestions for the county in heightening childcare access.



*Child Care Resources Inc. Annual Report. (2019).*

The economic barriers created by childcare costs can contribute to a cycle of limited socioeconomic and QoL mobility. High demand and limited supply of subsidized childcare can prevent employed low-income mothers from advancing in the workforce and dampen their ability to pursue post-secondary education and higher-level jobs. Education and job training often result in improved employment prospects and higher wages, both of which would be more feasible with the ability to access affordable and quality childcare. This can heighten the effects of limited childcare among lower socioeconomic groups. While Mecklenburg County has made progress in addressing the waiting list for subsidized childcare slots, there are still some extreme differences in access within the county. Geographic clusters around the city center and other related urban



hubs benefit from having more spaces per child, while neighborhoods on the periphery of the county face fewer spaces per child. Unsurprisingly, the areas around the edge of the county tend to be the neighborhoods with low QoL indicators as discussed by Delmelle, Thill, and Furuseth.

### *The Impact of COVID-19 on Childcare*

Before the pandemic, 51 percent of working parents in North Carolina used center-based or formal care, compared to 32 percent mid-pandemic (Belfield, 2020). Center-based childcare centers are commercial businesses. They can be independent or part of a chain of centers, for-profit or non-profit, and publicly or federally funded. Alternatively, formal childcare simply refers to care that involves a monetary transaction. Belfield highlights how COVID-19 has introduced new demands on parental time, as school closings add educational supervision to the list of parental duties. Additionally, childcare centers across North Carolina have closed as a result of the pandemic, introducing heightened levels of competition for childcare.

Though Mecklenburg County has focused on increasing the funding for subsidized childcare, COVID-19 has created unprecedented pressure on center-based and formal childcare. The closure of childcare centers causes particular problems for essential workers (Hashikawa et al., 2020). Many low-income essential workers without paid leave faced limited childcare options in the face of unemployment at the onset of the pandemic. The lack of available childcare programs for families after disasters such as COVID-19 can significantly affect financial recovery by keeping families from working and businesses from economically rebounding.

### *The Importance of Mecklenburg County*

Mecklenburg County is ideal for studying the effects of COVID-19 on childcare access. Charlotte is the largest city in North Carolina, so a study of Mecklenburg County will involve analyses of a wide range of demographic groups. This will be useful in the development of policy recommendations that are both county-specific and applicable to other regions of North Carolina. Additionally, the proportion of households headed by a single-parent is quite large in Mecklenburg County. Researching the effects of COVID-19 on both childcare and maternal wellbeing will be well suited to an area where a lot of households are headed by single parents, as the effects of COVID-19 on labor force participation and access to childcare will likely be more prominent.



## Maternal Health and Wellbeing, Influential Factors and Child Development

Maternal health measures typically include indicators of mental health, physical health complications, and every day behaviors that influence our health (Didericksen et al., 2015). Wellbeing refers to an individual's satisfaction with their own lives (Kim-Prieto et al., 2005). Satisfaction levels can be negatively impacted by the measurements of health referenced above. This means negative mental health, physical injury and general physical complications can all decrease how an individual evaluates their life. High levels of stress, low maternal emotional stamina (referred to as resilience), social support, and old age have all been cited as confounding variables when measuring maternal wellbeing (Bennett et al., 2018; Ngai & Chan, 2011). Having a poor maternal wellbeing can decrease a mother's ability to complete daily tasks, including paid labor, domestic unpaid labor, and general everyday responsibilities. Additionally, sub-optimal wellbeing in mothers increases the chances of reduced cognitive and emotional development in maturing children (Bennett et al., 2018). These affects exemplify how maternal wellbeing is a vital aspect of the lives of both mothers and their children.

### *Sources of Maternal Stress*

Financial, environmental, and social factors can all impact levels of maternal stress. These factors can have both indirect and direct influence over maternal wellbeing and are often experienced unequally between parents. Maternal stress has been cited as "one of the most imperative environmental factors when evaluating child wellbeing" (Mulsow et al., 2004, 944). Muslow et al. detail that while outside work stressors have been cited as the general reason for paternal stress, mothers are more likely to bear the weight of stressors related to child-rearing and caregiving. Social norms play a part in these gendered differences, as mothers are often expected to spend more time with their children than fathers. Traditional gender norms tend to label mothers as more nurturing and responsible for child-related duties, with fathers serving as the breadwinners outside of the home. Due to these expectations, working mothers may experience increased levels of stress as they bear more responsibilities in seeking out childcare and ensuring their children are in safe and high-quality care environments in their absence. This balance between work and family poses a tricky situation as maternal income has become "essential to family survival" (Chavkin, 1999, 477). As mothers participate in paid labor, they are often simultaneously balancing responsibilities related to finding reliable and quality care for their children.





### *The Importance of Support Systems*

One factor that can mitigate the negative influence of stress experienced by mothers is a supportive and facilitative network. Social support systems include family, friends, or licensed professionals. The absence of a support system is cited as a predictive factor for postpartum depression, poor maternal competence, and low satisfaction levels (Ngai & Chan, 2011). This highlights the inverse relationship between social support and postpartum depression. As a mother's social system grows and becomes more helpful, the chances of experiencing postpartum depression go down. While the postpartum period refers to immediately after birth up until roughly the first 100 days of an infant's life (Romano et al., 2010), social support is a beneficial resource for mothers because it can assist in reducing stress that accompanies raising a child (Muslow et al., 2004). Social support systems offer emotional support to mothers, helping them adjust and navigate the uncharted waters of parenting and offering reassurance. Social assurance can reduce the chances of decreased mental wellbeing, as reassurance helps to alleviate potential stress derived from a fear of failing (Ngai, F. & Chan, S., 2011).

### *Family Enrichment Theory*

While working mothers may experience increased stress attributed to balancing their maternal and workforce responsibilities, family enrichment theory introduces an alternative view. This theory contends that working is beneficial to mothers outside of providing income for the family. Working can improve personal wellbeing by increasing opportunities for success, building a social network, and boosting self-confidence (Teng et al., 2018). Having mothers employed and earning an income also alleviates some economic insecurity. Financial insecurity can lead to higher levels of emotional distress in mothers, as financial constraints create difficulties when it comes to providing for a family. This includes affording childcare, nutritious food and basic necessities.

Increased financial opportunities help to deplete maternal fears of being unable to provide for children. Additionally, financial opportunity increases the likelihood of the child experiencing a healthy development (Osborne et al., 2012). Additionally, economic security can ameliorate parental conflict, reducing instability in parenting or conflicts between parental figures that are detrimental to child development (Huebener et al., 2020; Osborne et al., 2012; Teng et al., 2018). Financial stability can also help parents afford childcare while they are away at work.



## *The Impact of COVID-19 on Mothers*

The closing of schools and daycare facilities that accompanied the Covid-19 pandemic poses complications for families who were using the services of daycare centers during the workweek. While the pandemic has brought some families closer as children and parents are forced to work and learn remotely, it has also caused disruptions to the everyday routines families were accustomed to. With the closing of daycare centers and schools, parents now have to find a new means of watching their children while also continuing to work, blurring the spheres of work and home (Huebener et al., 2020; Tani et al., 2020). The merging of these two spheres is represented as the hours devoted to unpaid care and domestic housework have increased throughout the pandemic (Heilman et al., 2020).

This is even more challenging as social distancing guidelines remain in place. Due to the social isolation practices recommended by the WHO, support systems that once offered helpful assistance to families have now been dismantled. As a result, many parents have reported cutting their hours in response to the closure of education and childcare facilities, resulting in a reduction in family income (Huebener et al., 2020). This reported reduction in time devoted to professional work can be seen as parents devote three hours per day to professional work, whereas time devoted to housework can average around nine hours per day during the pandemic (Andrew et al., 2020). This statistic highlights the increased possibility of higher stress levels attributed to financial constraints.

Additionally, the closure of schools requires online education to be supervised by parental figures. This means parents are now often required to be free during “school hours”, hours that were previously occupied by professional work (Tani et al., 2020). The heightened demands of parental at-home supervision increase the stress levels associated with balancing work and home. Men are more likely to think the bulk of this additional childcare and housework is evenly distributed; however, women were more likely to report higher levels of anxiety whereas their male counterparts reported increased relaxation during the COVID-19 pandemic (Heilman et al., 2020).



## COVID-19 and the Labor Market

Unemployment, lost income, and other labor market challenges are some of the defining characteristics of the pandemic. During the week of March 21st, 2020, over 3 million initial unemployment claims were filed (Falk 2021). The following week, 6.86 million more initial claims were filed and 6.62 million more were filed the week after that. These initial unemployment numbers represent the single largest increase in unemployment insurance claims in the program's history. The unemployment rate peaked at 14.8% in April of 2020, higher than the 10% at the height of the Great Recession in October and while it fell to 6.7% by December of 2020, this figure remained twice as high as the pre-pandemic rate in February 2020. The Congressional Budget Office predicts that unemployment will persist around 6% for the next three years as the American economy attempts to recover from the pandemic. Not all industries were affected equally, though, with service industries as well as industries with a concentration of low-educational attainment, racial and ethnic minority workers, and part-time employees experiencing the largest increases in unemployment (Falk 2021).

### *The Disproportionate Impact on Working Mothers*

Unemployment, furlough, and virtual work affect all Americans, but primary caregivers, particularly the mothers of young children ages 0-5, have been disproportionately impacted by the COVID-19 labor market. This is both quantitatively and qualitatively demonstrable. The New York Times published a project entitled "Primal Scream" that examines the experiences of mothers during the pandemic; the project follows several mothers as they attempt to work from home, aid their children through virtual school, and complete essential housework. Burnout, exhaustion, and a sense of being abandoned by policy makers at all levels permeate the mothers' case studies. The project estimates that one million mothers have left the labor force altogether in 2020, discouraged workers no longer included in the Bureau of Labor Statistics' calculation of the unemployment rate. In the words of prominent economist Betsey Stevenson, "Covid took a crowbar into gender gaps and pried them open," (Grose, 2021) The concern is that the effects of COVID-19 will not be short-lived but, rather, will affect gender equality in the United States for years to come.

### *The Pre-Pandemic Labor Market Situation for Mothers*

Though much ink is spilled on the topic of gender inequality in the United States, economists



have demonstrated that much of the observed labor market disparities between men and women are actually disparities between mothers and everyone else. Economist Claudia Goldin (2019) notes that earnings gaps between men and women are primarily connected to child bearing; earnings gaps increase between similarly educated male and female partners after the couple has a child, a dynamic Goldin calls “couple inequality.” Wage gaps, rather than materializing when women first enter the labor force, are associated with marriage and childbearing, the “joyous occasions” of life (Goldin, 2019).

### *Motherhood and Economic Outcomes*

The dynamic between motherhood and poor economic outcomes for women is illustrated in a study of male and female Harvard MBA graduates. While there are large income and wealth disparities between the two groups at the end of their careers, the men and women entered the workforce after graduation earning very similar wages (Bertrand, 2010). Bertrand notes it is only after having children that women’s outcomes diverge from their male classmates. In the first 15 years after the MBA program, the average woman with children worked 8 fewer months than their male colleague and logged 24% fewer hours. A woman from the same graduating class who chose not to have children works 1.5 months less and just 3.3% fewer hours than their average male classmate. The study of Harvard graduates demonstrates that the majority of variation between women and men’s earnings has to do with women’s labor supply decisions after giving birth.

Looking internationally, over the past forty years, wage gaps between men and women across OECD nations have shrunk and converged to a similar level (Kleven 2019). Kleven’s research into the lives of parents in Denmark from 1980-2013 has demonstrated that in 1980 child penalties explained 40% of the wage gap between men and women. As of 2013, the total gap was reduced, and child penalties explained 80% of the remaining observed differences in wages between men and women. In Denmark, the birth of a single child is associated with a 20% decrease in lifelong earnings for women. In short, it is clear that to be concerned with unequal outcomes with respect to gender in the workplace is to be concerned with motherhood and the policy issues attached. The evidence summarized above suggests that becoming a mother is the largest predictor of experiencing labor market outcomes unequal to your male and childless female peers.





### *The Second Shift*

Mothers do not decide to leave the labor force or to reduce their hours in a vacuum, though. In her seminal work “The Second Shift,” sociologist Arlie Hochschild described the state of working wives in the 1980s, plagued by an unpaid, invisible second shift of housework and childcare even as she worked nearly equal hours to her spouse in the labor market (Hochschild 1989).

Hochschild’s theories borne out in the empirical literature; for example studies of German couples’ time allocation through the weekdays and weekends have shown that men and women spend an average of 9.5 hours per day on market and non-market work, with men spending more time on average on market labor and women spending more time on non-market labor. Women’s investment in non-market labor remains largely unchanged even when they are working in the market as well. An interesting dynamic arises between the husband and wife; the husband acts as the “first mover,” determining his hours of market labor without regard to his wife’s allocation of time. Wives, however, increase household production in response to their husband’s allocation decision, suggesting that when women increase hours worked in the market, their husbands will not engage in more household work to compensate. Instead, women will simply work more (Bredtmann 2014). The motherhood penalty can further be understood as a result of being partnered with a man; studies have demonstrated that the motherhood penalty does not exist for women in same-sex partnerships with children. This is often attributed to the fact that lesbian couples are not bound by the same gendered expectations of housework, allowing these mothers to balance household and labor market production (Peplau 2004).

### *Working Mothers and Household Production During COVID-19*

When the pandemic began, at least two major events shaped mothers’ lives: schools closed and a large share of workers became telecommuters, working remotely from their homes. Many working mothers suddenly received the more flexible, home-based job that could hypothetically foster equality between mothers and non-mothers, but they also assumed the role of managing virtual school for older children or providing full-day childcare to younger kids. Additionally, in two-parent households where both parents’ employment situation was affected by the pandemic, it was unclear how mothers and fathers would divide childcare and housework labor if they were both at home all day. In many ways, COVID-19 presented cross-cutting changes, some potentially improving the status of mothers and some potentially worsening their economic outcomes.



Economists have published preliminary empirical studies examining the relationship between mothers, fathers, and household labor allocation in many OECDs during COVID-19. As referenced above, there were pre-existing disparities between male and female partners and the allocation of childcare tasks and housework. Studies out of multiple different countries and different pandemic circumstances have shown that these disparities mapped onto the COVID-19 circumstance.

### *International Trends in the Division of Domestic Labor*

Studies out of Italy and the United Kingdom suggest that pre-COVID trends in household labor were largely borne out during the pandemic with a few exceptions. Despite using data from outside of the U.S. and Mecklenburg County more specifically, Spain and the United Kingdom experienced a similar scale of COVID-19 spread to the United States and are both OECD member states alongside the U.S. A study of Spanish couples found that the majority of housework and childcare fell on Spanish women during lockdown, but that childcare duties were more equally shared than housework duties (Farré, 2020). Farré notes the Spanish mothers of children under five were the most likely to report that work-life balance is difficult during the pandemic. In the United Kingdom, time use surveys found that mothers in relationships with men provided on average 60% of the increase in childcare needs that arose during the pandemic in addition to the preexisting domestic labor gap, but both mothers and fathers increased their total hours of childcare and housework (Hupkau, 2020). One interesting finding from Hupkau's study of UK mothers is that remote work was actually helpful to working mothers, allowing them to balance their work schedules and familial responsibilities. These studies suggest that the increase in household work during the pandemic was not solely borne by female caregivers, and Hupkau's exploration of remote work's benefits speaks to the need for greater job flexibility in professional careers in order to improve mothers' labor market outcomes as referenced above.

In the article "The Gendered Division of Paid and Domestic Work During Lockdown," economists compared time use of two-parent, opposite gender families in England during lockdown. Most notably, the study found support for Hochschild's "second shift" phenomenon. On average, the study found that mothers did four more hours of unpaid, household work per day than their partner, two on childcare and two on housework. Even more notable, though, is that when mothers chose to stop working and fathers became the sole earner, mothers did twice as much household labor as the working husband, commensurate with the notion that household



labor became her full-time job. When husbands chose to stop working and mothers became the sole earners, though, time use data suggests that the husband and wife did equal amounts of unpaid household labor (Andrew, 2020). This points towards Hochschild's thesis that when mothers work, their husbands are not compensating by taking on a larger share of household chores. This has large implications for women in Mecklenburg County as policymakers consider policies that increase women's attachment to the labor force and overall wellbeing; even when women have better jobs than their male partners, the literature suggests that they will still be overburdened with caregiving tasks.

### *Taking Time Off Work*

In addition to questions about household chore allocation, whether mothers are taking time off of work because of the pandemic is another crucial question. As discussed in the study of Harvard MBA graduates, the bulk of the wage gap between male and female graduates came about when the women took time out of the labor force to take care of children. If women are systematically taking more time off of work than men because of the pandemic, we can expect to see long-term effects on the wage gap between men and women in coming years. Using data from the Current Population Survey (CPS) in the United States, economist Misty Heggeness estimated that women who lived in states that closed their schools relatively early in the pandemic were 31.8% more likely to stop working in the week that schools shut down than their peers in late closure states. More specifically, mothers in early closure states were 68.8% more likely to stop working than their peers in late closure states. There was no statistically significant difference between men or fathers in early and late closure states (Heggeness 2020). This suggests that the loss of childcare particularly affected mothers early in the pandemic but not fathers. This, then, is not a parenthood penalty but specifically a motherhood penalty.

Empirical evidence on the pandemic's effect on mothers' labor supply is not uniform, though. Administrative data out of The Netherlands suggests that the primary force causing men and women to stop working was a reduction in labor demand rather than labor supply as parents of young children did not face a larger negative employment effect than their peers without children. According to this study, the primary phenomenon causing unemployment was firms needing to employ fewer people during the pandemic rather than employees wanting to work less (Meekes 2020). It is worth noting that the authors of the study attribute the lack of a particular negative effect on parents to the Dutch social safety net that provided emergency paid leave to parents who



needed to take time off work during lockdown to take care of children. In considering the case of the United States and Mecklenburg County in particular, there is no such social program that pays parents to take care of their children, likely meaning that American women are more likely to reduce labor supply in response to their children switching to virtual school.

## Conclusion

It is clear that the mothers of Mecklenburg County sit at the intersection of a number of important policy issues. Demographically, the city is diverse racially, socioeconomically, and culturally. The county is situated within North Carolina, a state with a patchwork approach to early childhood education and subsidized childcare. Within the context of COVID-19, one could expect that Charlotte is full of mothers experiencing different childcare related hardships: well-educated, highly paid mothers trying to juggle working from home and acting as primary caregiver as well as lower-income mothers working essential jobs trying to find care for their child even as centers operate at reduced capacity. The implications of childcare difficulties are clear from the literature: mothers with reduced wellbeing as well as reduced labor market outcomes. Given the context of COVID, it is worthwhile to investigate the state of Mecklenburg mothers as it pertains to childcare access and quality.





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# Appendix B

## Childcare Provider Survey, Consent Form, and Survey Introduction

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## Survey Introduction

Thank you for taking the time to complete this survey. Your efforts will assist a nonprofit organization called [WomenNC](#) to analyze the status of mothers and primary caregivers in Mecklenburg County, especially during the onerous times of COVID-19. All answers are kept confidential and the survey should take about **15 minutes** to complete entirely. If you have any questions, please contact Mariah Warner at [mariahlw@live.unc.edu](mailto:mariahlw@live.unc.edu).

*WomenNC's mission is to advance gender equality throughout North Carolina.*

They address these initiatives by publishing reports on the status of NC women, **which will influence better policy for the future**. Your role as a care provider gives us an important perspective on navigating COVID-19 while continuing to provide childcare resources to Mecklenburg County.



## Consent Form

### University of North Carolina at Chapel Hill partnered with WomenNC

This is the consent page to Participate in a Research Study

Adult Participants

IRB Acknowledgement: This has been approved as Non-Human Subject Research (NHSR) by UNC IRB.

### Title of Study: *The Impact of COVID-19 on Childcare Access and Maternal Wellbeing*

Principal Investigators: Katherine Sacks

Student Advisees: Isabella Hatch, Daniel Kleissler, MacKenzie Mensch, Hannah Olmstead, Sophie Temple,  
Mariah Warner

Principal Investigator Department: Public Policy

If you have questions or concerns about your rights, or if you would like to obtain information or offer input, you may contact the UNC Faculty Advisor below:

Katherine Sacks: [ksacks@live.unc.edu](mailto:ksacks@live.unc.edu) | +1 (919) 962-2788

Funding Source and/or Sponsor: No sponsorship agreements are present within this student research study.

### What are some general things you should know about research studies?

You are being asked to take part in a research study. To join the study is voluntary.

You may choose not to participate, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Deciding not to be in the study or leaving the study before it is done will not affect your relationship with the researcher, your childcare provider, or the University of North Carolina-Chapel Hill.

### What is the purpose of this study?

The purpose of this research study is to determine how accessible childcare resources are in Mecklenburg County, specifically looking at the difference in accessibility pre- and post-COVID-19. This study also seeks to understand maternal wellbeing during the pandemic, and how childcare providers have been impacted by COVID-19.

You are being asked to be in the study because you are a childcare provider located in Mecklenburg County.





### **What are the possible benefits from being in this study?**

Research is designed to benefit society by gaining new knowledge. You will not benefit personally from being in this research study.

### **What are the possible risks or discomforts involved from being in this study?**

This survey will ask participants to think about their childcare business before and during COVID-19, which could be an uncomfortable topic for some.

### **How will your privacy be protected?**

This survey will prioritize confidentiality by protecting participants' privacy. Responses will be secured in a Google Drive folder shared with the principal investigators and the faculty advisor. Our community partner, WomenNC, will have access to the Google Drive folder and survey records as well. Participants will not be required to reveal identifying information (such as name or address) during the course of this survey.

Participants will not be identified in any report or publication about this study. We may use de-identified data in future research without additional consent.

It is possible that other researchers will partner with WomenNC and continue this research or utilize it in the future. In that case, the data will be handed over to them and they will have access to the Google Drive folder as well.

### **Will you receive anything for being in this study? Will it cost you anything to be in this study?**

You will not receive anything for taking part in this study. It will not cost you anything to be in this study.

### **What if you are a UNC student?**

You may choose not to be in the study or to stop being in the study before it is over at any time. This will not affect your class standing or grades in the UNC system. You will not be offered or receive any special consideration if you take part in this research.

### **What if you are a UNC employee?**

Taking part in this research is not a part of your University duties, and refusing will not affect your job. You will not be offered or receive any special job-related consideration if you take part in this research.

### **What if you have questions about this study?**

You have the right to ask any questions you may have about this research, even after the completion of the survey. If you have questions about the study, complaints, or concerns, you may contact the researchers listed on the first page and the top of this form.

### **Participant's Agreement:**

By selecting "I consent" below you consent to participating in this study, and the study will continue. Checking the "I consent" box serves as a signature.



## Survey Questions

1. What year were you founded?

---

2. What is the organization of your service?

- ☐ In client's home care
- ☐ In your home care
- ☐ In-facility
- ☐ Hybrid

3. What is the affiliation of your organization?

- ☐ Privately owned
- ☐ Publicly provided
- ☐ Religious
- ☐ Other 

---

4. What is the zip code of your childcare facility?

---

5. What ages do you provide services for? Check all that apply.

- ☐ All minors
- ☐ All ages
- ☐ 0-3 Infant
- ☐ 4-5 (Pre-Kindergarten)
- ☐ 5-6 (Kindergarten)
- ☐ 7-11 (Elementary School)
- ☐ 12-14 (Middle School)
- ☐ 15-18 (High School)
- ☐ 18+ (Adults)

6. How many children do you currently provide care for?

---



7. How many children did you provide care for in 2019?

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8. How many children did you provide care for in 2020?

---

9. Has your facility had to decrease your number of families served as a result of COVID-19?

- ☐ Yes
- ☐ No

10. How does your facility advertise itself to potential clients? (Check all that apply)

- ☐ Website
- ☐ Online advertisements (including social media advertisements)
- ☐ Partnerships with local government services (Department of Social Services, SNAP, WIC, etc.)
- ☐ Locally posted flyers/posters
- ☐ Referrals/word of mouth
- ☐ Television commercials
- ☐ Other 

---

11. What is the standard cost of your services? (In dollars)

- ☐ Hourly 

---
- ☐ Tuition 

---

12. What demographic do the families you provide care for best fit?

- ☐ Mostly no income
- ☐ Mostly low-income
- ☐ Mostly middle-income
- ☐ Mostly high-income
- ☐ Mix of incomes

13. How many hours a day does your facility offer childcare services?

---



14. Does your childcare facility operate based on admissions or eligibility?

- ☐ Admissions
- ☐ Eligibility
- ☐ Other \_\_\_\_\_

15. If your facility operates based on admissions, what is your admissions process? If not applicable, write N/A.

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16. If your facility operates based on eligibility, what is your eligibility/screening process? If not applicable, write N/A.

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17. Has your facility changed your admissions or eligibility process as a result of COVID-19?

- ☐ Yes, please elaborate on how:

---

- ☐ No

18. Does your facility offer spots provided by subsidized federal funds?

- ☐ Yes, how many? \_\_\_\_\_
- ☐ No

19. What health and safety practices has your facility put into place in response to COVID-19?

---

---





20. Which, if any, of the following challenges have you faced over the past year when providing care? (Check all that apply)

- ☐ Unsure how to reduce the risk of contracting or transmitting COVID-19 while providing care
- ☐ Ability to exercise 6-foot distance while providing childcare
- ☐ Ability to separate yourself from those you provide care to when experiencing COVID-19 symptoms
- ☐ Getting necessary food and supplies for those you provide care to
- ☐ Accessing educational or learning materials
- ☐ Having to limit educational lessons and/or recess due to COVID-19 precautions
- ☐ Addressing loneliness or social isolation of those you provide care to
- ☐ Addressing the anxiety over risk of infection of those you provide care to

21. If you would like to expand on the challenges you faced over the past year and how it might have affected you and/or your facility, please feel free to elaborate here:

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## End of Survey Remark

We thank you for your time spent taking this survey.  
Your response has been recorded.



## Reaching Participants

To acquire a high response rate for this survey, our team contacted over 400 childcare facilities by phone throughout Mecklenburg County in North Carolina. We accumulated over 300 emails for the directors of these facilities, which we inputted in our Provider Survey Listserv. Through the distribution application on Qualtrics, we were able to send our first email on the morning of Thursday, April 1, 2021. Below is the email outline.

Good Morning,

Thank you for taking the time to connect with our team. We are working with the Policy Capstone class at the University of North Carolina at Chapel Hill to provide policy consultation for **WomenNC**, a local nonprofit organization. **This study is concerned with the number, type, and accessibility of childcare resources in Mecklenburg County. Furthermore, the study seeks to understand the impact of COVID-19 and how it might change childcare resources and the maternal lived experience.**

We are excited to include your facility in this project, which would entail your completion of the fifteen-minute survey attached to this email. **Additionally, we will follow up this email with a link to the Primary Caregiver survey and if you are comfortable with it, we would greatly appreciate that you forward the next email (or our information) to any of the families you serve. Their completion will help our research immensely.**

Below is the link to the Childcare Provider Survey. Please do not hesitate to reach out with any questions to Mariah Warner at [mariahlw@live.unc.edu](mailto:mariahlw@live.unc.edu). Again, we greatly appreciate your time and energy to work with us.

Best,

Bella Hatch, Daniel Kleissler, MacKenzie Mensch, Hannah Olmstead, Sophie Temple, Mariah Warner

### Take the Survey

#### Consent Form-Childcare Provider Survey

Follow the link to opt out of future emails:  
[Click here to unsubscribe](#)



## References

Childcare Provider Survey created on Qualtrics. To take the survey, visit:

[https://unc.az1.qualtrics.com/jfe/form/SV\\_9NabLMWFa5NNQKG](https://unc.az1.qualtrics.com/jfe/form/SV_9NabLMWFa5NNQKG)



# Appendix C

## Primary Caregiver Survey, Consent Form, and Survey Introduction

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## Survey Introduction

Thank you for taking the time to complete this survey. Your efforts will assist a nonprofit organization called [WomenNC](#) to analyze the status of mothers and primary caregivers in Mecklenburg County, especially during the onerous times of COVID-19. All answers are kept confidential and the survey should take about **15 minutes** to complete entirely. If you have any questions, please contact Mariah Warner at [mariahlw@live.unc.edu](mailto:mariahlw@live.unc.edu).

*WomenNC's mission is to advance gender equality throughout North Carolina.*

They address these initiatives by publishing reports on the status of NC women, **which will influence better policy for the future**. Your role as a caregiver gives us an important perspective on navigating childcare services during COVID-19 all the while taking responsibility for your own dependent(s).





## Consent Form

### University of North Carolina at Chapel Hill partnered with WomenNC

This is the consent page to Participate in a Research Study

Adult Participants

IRB Acknowledgement: This has been approved as Non-Human Subject Research (NHSR) by UNC IRB.

### Title of Study: The Impact of COVID-19 on Childcare Access and Maternal Wellbeing

Principal Investigators: Katherine Sacks

Student Advisees: Isabella Hatch, Daniel Kleissler, MacKenzie Mensch, Hannah Olmstead, Sophie Temple,  
Mariah Warner

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Deciding not to be in the study or leaving the study before it is done will not affect your relationship with the researcher, your childcare provider, or the University of North Carolina-Chapel Hill.

### What is the purpose of this study?

The purpose of this research study is to determine how accessible childcare resources are in Mecklenburg County, specifically looking at the difference in accessibility pre- and post-COVID-19. This study also seeks to understand maternal wellbeing during the pandemic, and how childcare providers have been impacted by COVID-19.

You are being asked to be in the study because you are the caregiver of your dependent(s) in Mecklenburg County.



### **What are the possible benefits from being in this study?**

Research is designed to benefit society by gaining new knowledge. You will not benefit personally from being in this research study.

### **What are the possible risks or discomforts involved from being in this study?**

This survey will ask participants to think about their child care provider's response to COVID-19, financial status and current mental/physical wellbeing, which could be an uncomfortable topic for some.

### **How will your privacy be protected?**

This survey will prioritize confidentiality by protecting participants' privacy. Responses will be secured in a Google Drive folder shared with the principal investigators and the faculty advisor. Our community partner, WomenNC, will have access to the Google Drive folder and survey records as well. Participants will not be required to reveal identifying information (such as name or address) during the course of this survey.

Participants will not be identified in any report or publication about this study. We may use de-identified data in future research without additional consent.

It is possible that other researchers will partner with WomenNC and continue this research or utilize it in the future. In that case, the data will be handed over to them and they will have access to the Google Drive folder as well.

### **Will you receive anything for being in this study? Will it cost you anything to be in this study?**

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### **What if you have questions about this study?**

You have the right to ask any questions you may have about this research, even after the completion of the survey. If you have questions about the study, complaints, or concerns, you may contact the researchers listed on the first page and the top of this form.

### **Participant's Agreement:**

By selecting "I consent" below you consent to participating in this study, and the study will continue. Checking the "I consent" box serves as a signature.



## Survey Questions

1. What is your gender identity?

- ☐ Male (Cis, Trans)
- ☐ Female (Cis, Trans)
- ☐ Nonbinary
- ☐ Other \_\_\_\_\_

2. What is your age?

- ☐ 0-17
- ☐ 18-25
- ☐ 26-35
- ☐ 35-45
- ☐ 45+

3. What is your racial identity/ethnicity? Select all that apply.

- ☐ Black, African American
- ☐ Southeast Asian
- ☐ East Asian
- ☐ Hawaiian, Pacific Islander
- ☐ Latinx
- ☐ Afro-latinx
- ☐ Middle Eastern
- ☐ Native American, Alaskan Native
- ☐ South Asian
- ☐ White, European American
- ☐ Not Listed. Fill in here: \_\_\_\_\_



#### 4. What is your highest completed level of education?

- ☐ None
- ☐ Some high school
- ☐ GED
- ☐ Associated
- ☐ Bachelor's
- ☐ Master's
- ☐ Doctorate/Professional
- ☐ Trade school

#### 5. What is your annual household income?

- ☐ Less than \$25,000
- ☐ \$25,001-\$50,000
- ☐ \$50,001-\$75,000
- ☐ \$75,001-\$100,000
- ☐ \$100,001-\$125,000
- ☐ \$125,001-\$150,000
- ☐ \$150,001+

#### 6. How many minors depend on you for care?

---

#### 7. Including yourself, how many people depend on your income?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7+

#### 8. What is your zip code?

---



#### 9. What is your marital status?

- ☐ Single
- ☐ Married/Domestic Partnership
- ☐ Divorced
- ☐ Widowed
- ☐ Separated
- ☐ Other \_\_\_\_\_

#### 10. If you have a partner, what is their employment status?

- ☐ N/A – do not have a partner
- ☐ They work full-time
- ☐ They work part-time
- ☐ They are unemployed

#### 11. Which of the following options best describes your employment directly before the COVID-19 pandemic? Select all that apply.

- ☐ Employed full-time (40 hours per week)
- ☐ Employed part-time (Less than 40 hours per week)
- ☐ Self-Employed
- ☐ Full time student
- ☐ Part-time student
- ☐ Unemployed
- ☐ Unable to work for health reasons
- ☐ Stay at home parent/caregiver
- ☐ Other \_\_\_\_\_





12. How has your employment status changed since the COVID-19 pandemic (after March 1, 2020)? Select all that apply.

- ☐ N/A – did not work pre-COVID-19
- ☐ I am still going to my workplace for the same number of hours as before the pandemic
- ☐ I am still going to my workplace but am working reduced hours
- ☐ I am working from home
- ☐ I was laid off
- ☐ I was furloughed
- ☐ I had to quit my job because I needed to take care of people who depend on me (children, parents, etc.)
- ☐ I had to quit my job because of the health risks of working

13. Does your current place of employment offer any of the following benefits? Select all that apply.

- ☐ Paid family leave
- ☐ Flexible hours
- ☐ Emergency leave
- ☐ On-site childcare
- ☐ Childcare referral services
- ☐ Subsidies for the cost of childcare
- ☐ None of the above

14. How is your household income and financial wellbeing as a result of COVID-19?

- ☐ Much worse than before COVID-19
- ☐ Somewhat worse than before COVID-19
- ☐ Hasn't changed
- ☐ Somewhat better than before COVID-19
- ☐ Much better than before COVID-19



15. Do you feel financially stable enough to accommodate your family's lifestyle?

- ☐ Very stable
- ☐ Slightly stable – enough to get by
- ☐ Slightly unstable – barely making ends meet
- ☐ Very unstable

16. Who is the primary caregiver in your household?

- ☐ I am the sole caregiver
- ☐ I am the primary caregiver
- ☐ My partner and myself share caregiving responsibilities
- ☐ My partner is the primary caregiver

17. How many minors under your care do you seek external childcare for?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7+

18. Do you have access to a childcare provider?

- ☐ Yes, I have access to a childcare provider
- ☐ No, I do not have access to a childcare provider
- ☐ I am on the waitlist for a childcare provider, but will have access once I am off the waitlist



19. Do the price rates or operating hours prohibit you from accessing childcare? Select all that apply.

- ☐ Yes, price rates restrict me from accessing childcare
- ☐ No, price rates do not restrict me from accessing childcare
- ☐ Yes, childcare operating hours do not accommodate my schedule and I have to seek external childcare options, i.e. parents, friends, neighbors:  
\_\_\_\_\_
- ☐ Yes, childcare operating hours do not accommodate my schedule and I do not seek external childcare options
- ☐ No, childcare operating hours accommodate my schedule

22. How has your childcare facility responded to the COVID-19 pandemic?

- ☐ Has remained open for the entirety of the pandemic, with full services available
- ☐ Has remained open for the entirety of the pandemic, with limited services available
- ☐ Initially closed, but has since reopened with full services
- ☐ Initially closed, but has since reopened with limited services
- ☐ Has remained closed, and has yet to reopen
- ☐ I do not use childcare services

21. How satisfied are you with your childcare provider's response to COVID-19?

- ☐ Extremely satisfied
- ☐ Somewhat satisfied
- ☐ Neither satisfied nor dissatisfied
- ☐ Somewhat dissatisfied
- ☐ Extremely dissatisfied
- ☐ I do not use childcare services

22. Has the price of your childcare changed since the start of COVID-19?

- ☐ My form of childcare has become more expensive
- ☐ My form of childcare has not changed
- ☐ My form of childcare has become less expensive
- ☐ I am not sure
- ☐ I do not use childcare services



23. Have you previously applied for (or are currently applying for) subsidized childcare?

- ☐ Yes, I have previously applied for and received subsidized childcare
- ☐ Yes, I have previously applied for and not received subsidized childcare
- ☐ No, I have not previously applied for subsidized childcare

24. Do you ever feel unsafe at home?

- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Never

25. Have you experienced high levels of stress or heightened tempers in your household in the past year?

- ☐ Yes
- ☐ No

26. If you answered yes to the previous question and would like to elaborate on your experience, please include it here:

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27. How stressed have you been in the last 30 days?

- ☐ Unstressed
- ☐ Neither stressed or unstressed
- ☐ Stressed
- ☐ Too stressed to cope



28. How would you evaluate your physical health?

- ☐ Physically fit
- ☐ Moderately physical
- ☐ Less than moderately physical
- ☐ Physically unfit

29. Overall, how would you rate your mental health?

- ☐ Excellent
- ☐ Good
- ☐ Average
- ☐ Poor
- ☐ Terrible

30. Have you experienced any of the following since March 1, 2020:

- ☐ Anxiety
- ☐ Depression
- ☐ Mood Disorder
- ☐ Eating Disorder
- ☐ Personality Disorder
- ☐ Post-Traumatic Stress Disorder (PTSD)
- ☐ Obsessive-Compulsive Disorder (OCD)
- ☐ Panic Disorder
- ☐ Other \_\_\_\_\_

31. If you would like to elaborate on your level of physical or mental health, please do so here:

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32. Have you accessed mental health care since March 1, 2020?

- ☐ No, I have not tried to access mental health care, or I haven't needed care since March 1, 2020
- ☐ Yes, I have accessed mental health care since March 1, 2020
- ☐ Yes, I have continued mental health care since before March 1, 2020

## End of Survey Remark

Thank you for taking the time to complete this survey.

Your answers have been recorded.

Below are Mecklenburg County helplines and services if you are experiencing a crisis.  
For more information, you can visit: <https://www.opencounseling.com/crisis-lines/north-carolina/charlotte>

- **Cardinal Innovations Healthcare Solutions, Mental Health Crisis Line:** (800) 939-5911 (Live Chat)
- **National Suicide Crisis Line:** 1-800-SUICIDE (1-800-784-2433), 1-800-273-TALK (1-800-273-8255)
- **Safe Alliance:** (704) 375-9900
- **Alcohol and Drug Helpline:** (800) 821-4357
- **Women's Commission:** (704) 336-3210



## Reaching Participants

Our team used two methods to acquire responses for our Caregiver Survey. First, we attempted to utilize snowball sampling by asking directors, in our original emails to Childcare Facilities, if they could forward a follow-up email to the families they serve. Through the distribution application on Qualtrics, we were able to send our follow-up email on the morning of Thursday, April 1, 2021. The outline of this email is shown below. The alternative method was to follow various "Charlotte Mom" Facebook groups and formulate posts that included the link to the Caregiver Survey.

Please forward this to the families you serve:

Good Morning,

We are working with the Policy Capstone class at the University of North Carolina at Chapel Hill to provide policy consultation for [WomenNC](#), a local nonprofit organization. **This study is concerned with the number, type, and accessibility of childcare resources in Mecklenburg County. Furthermore, the study seeks to understand the impact of COVID-19 and how it might change childcare resources and the maternal lived experience.**

We are excited to include your family in this project, which would entail your completion of an anonymous **fifteen-minute** survey attached to this email below. Your completion will help our research immensely.

Below is the link to the Primary Caregiver Survey. Please do not hesitate to reach out with any questions to Mariah Warner at [mariahlw@live.unc.edu](mailto:mariahlw@live.unc.edu). Again, we greatly appreciate your time and energy to work with us.

Best,

Bella Hatch, Daniel Kleissler, MacKenzie Mensch, Hannah Olmstead, Sophie Temple, Mariah Warner

[Take the Survey](#)

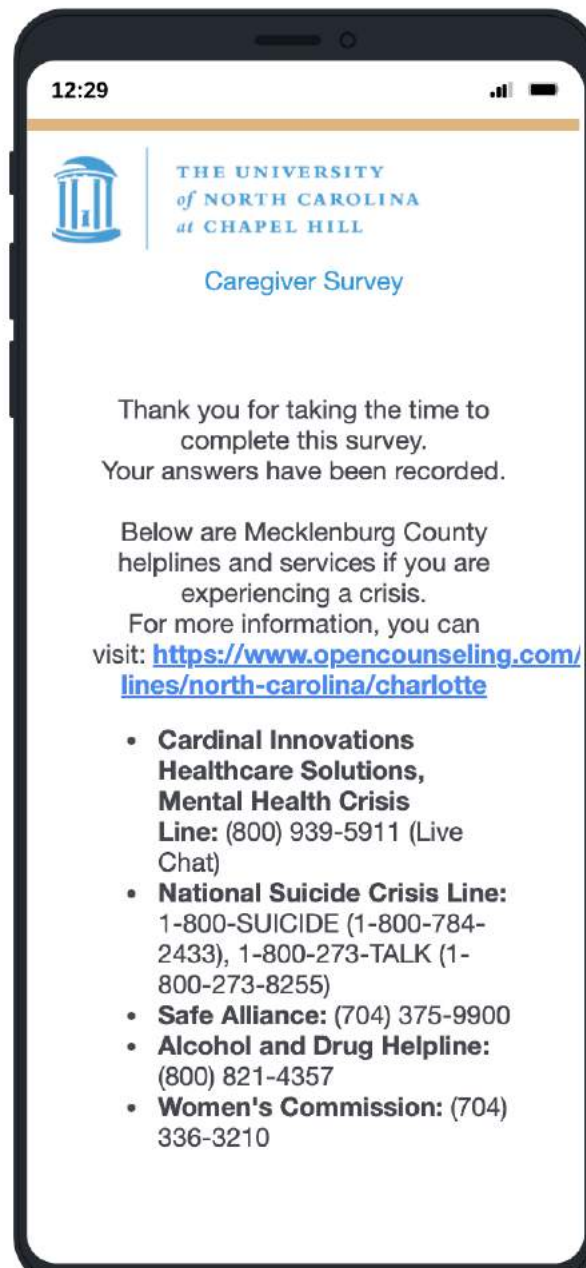
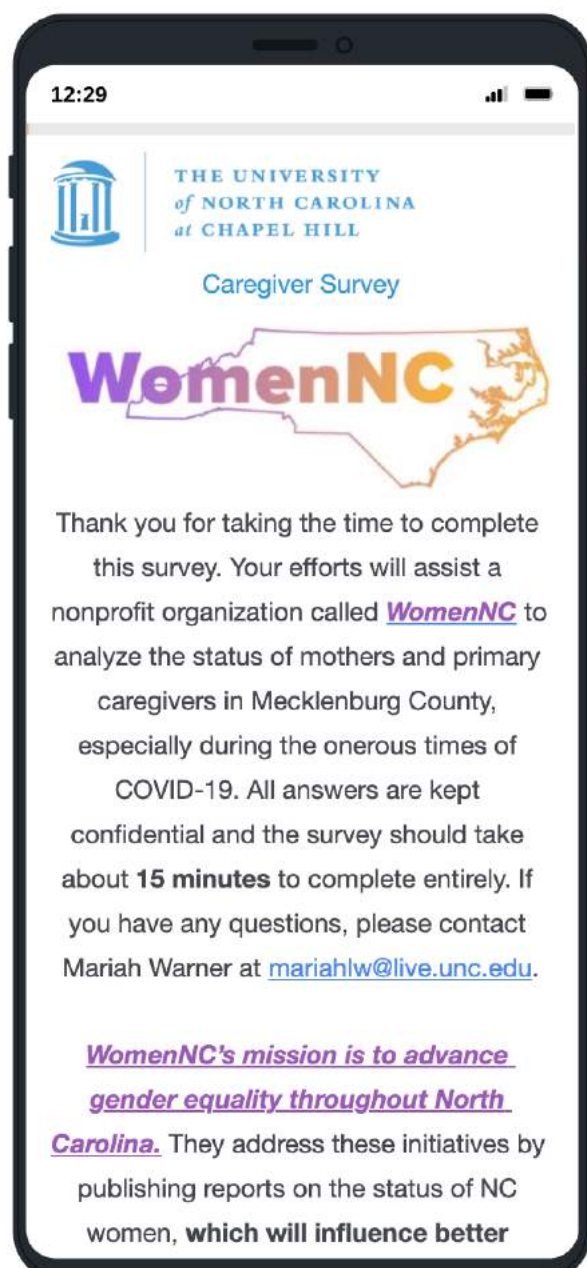
[Consent form primary caregiver survey](#)

Follow the link to opt out of future emails:  
[Click here to unsubscribe](#)

## References

Caregiver Survey created on Qualtrics. To take the survey, visit:

[https://unc.az1.qualtrics.com/jfe/form/SV\\_1Ifw8OtvWeD0Yqq](https://unc.az1.qualtrics.com/jfe/form/SV_1Ifw8OtvWeD0Yqq)



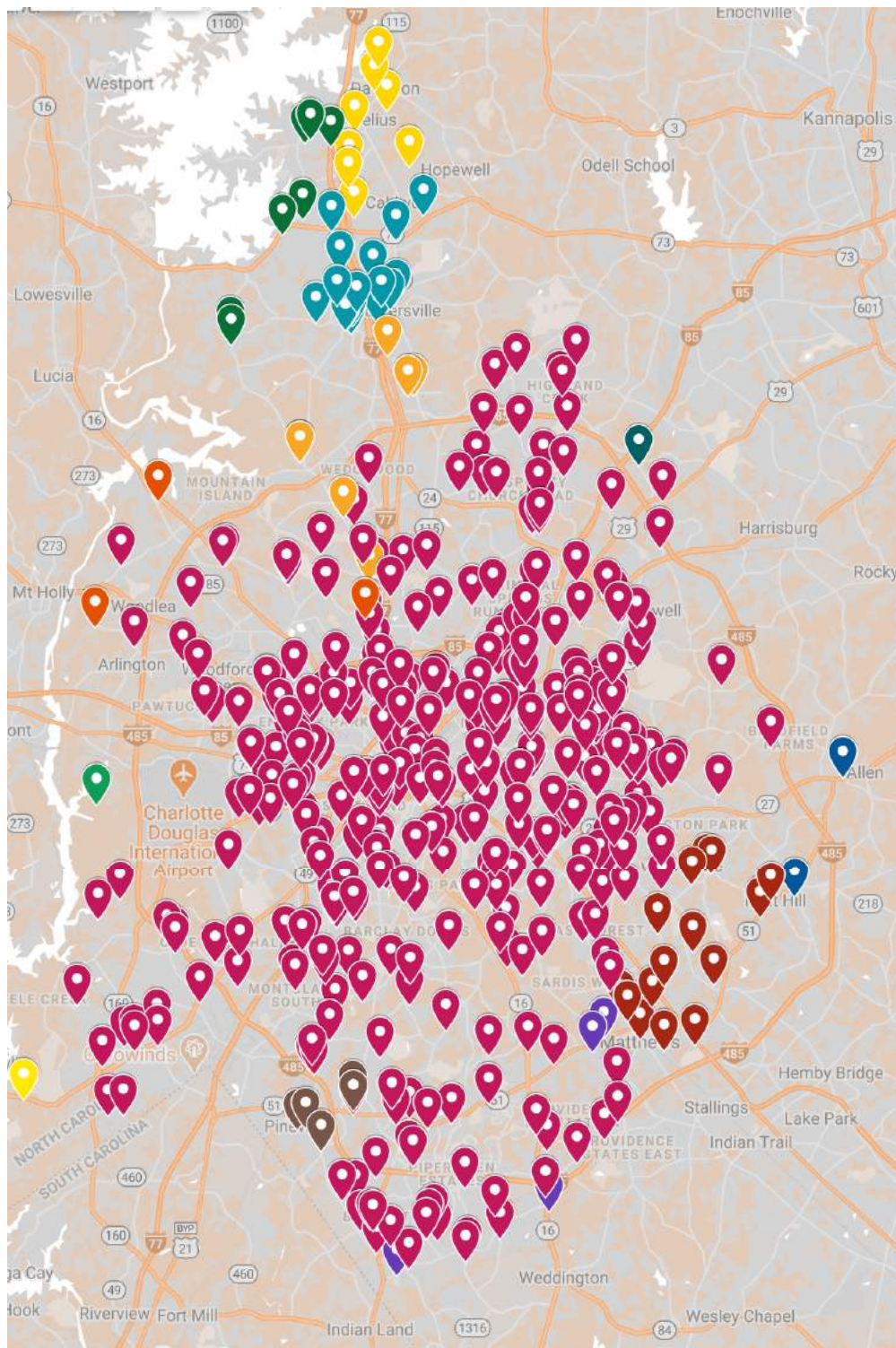


## Appendix D

### Additional Visuals for WomenNC

- 📍 Township 1: Charlotte (377)
- 📍 Township 13: Morning Star (16)
- 📍 Township 15: Huntersville (16)
- 📍 Township 9: Deweese (8)
- 📍 Township 10: Lemley (7)
- 📍 Township 11: Long Creek (7)
- 📍 Township 14: Pineville (5)
- 📍 Township 5: Providence (4)
- 📍 Township 12: Paw Creek (3)
- 📍 Township 6: Clear Creek (2)
- 📍 Township 2: Berryhill (1)
- 📍 Township 3: Steele Creek (1)
- 📍 Township 8: Mallard Creek (1)

An overwhelming majority of childcare centers in Mecklenburg County are located in the Charlotte Township. This township essentially represents the city center, but also spans to the edges of the county as well. There are clusters of childcare centers in Deweese, Huntersville, Lemley, and Pineville. Lemley, Huntersville, and Deweese have median household incomes of \$96,000, \$93,400, and \$86,900, respectively. Pineville has the lowest median household income of all Mecklenburg County townships, which is \$40,600.





## Final Report

### WomenNC

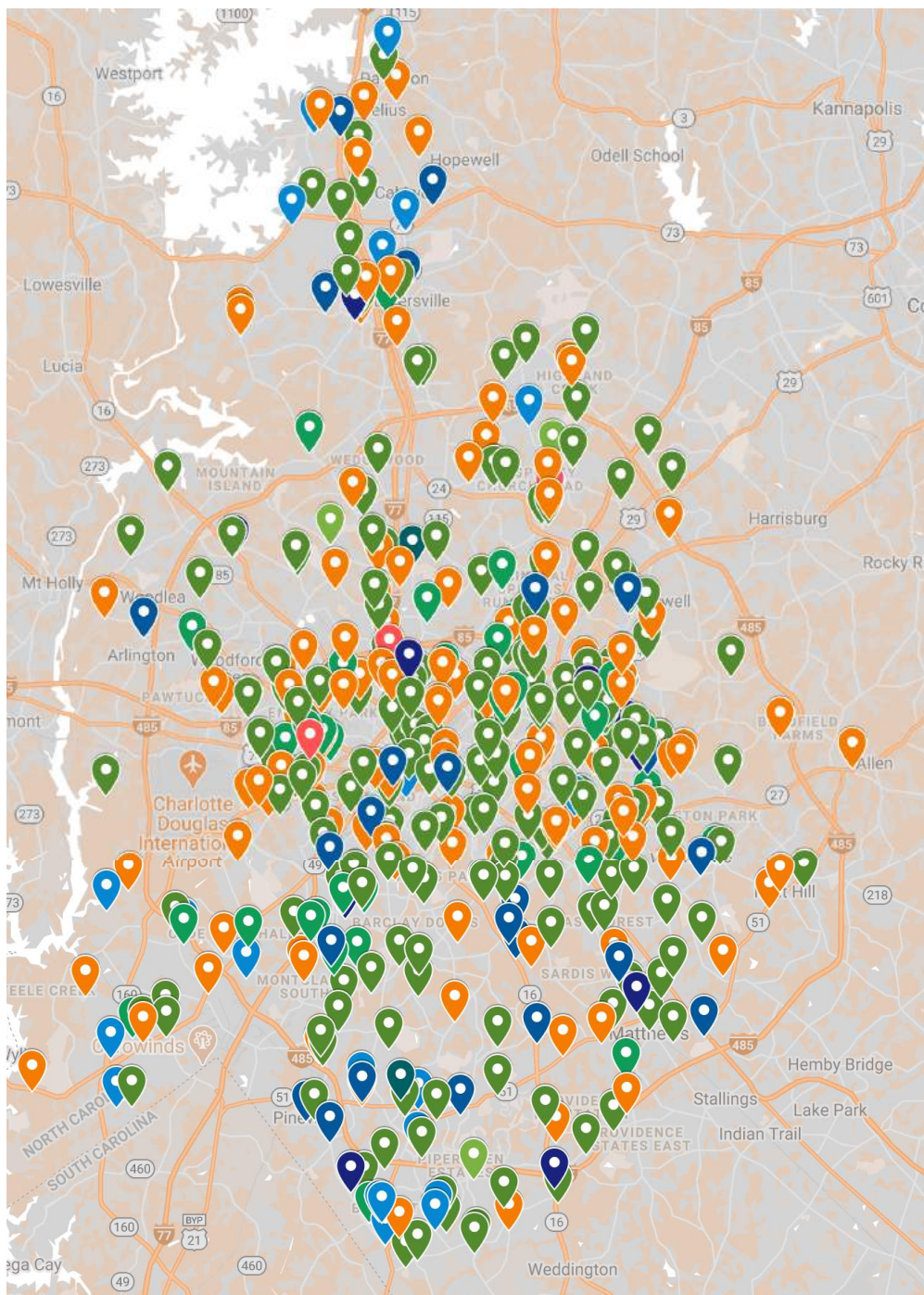
Bella Hatch, Hannah Olmstead, Daniel Kleissler, Sophie Temple, Mariah Warner, MacKenzie Mensch



COLLEGE OF  
ARTS AND SCIENCES  
Public Policy

- 📍 Five Star Center License (216)
- 📍 Four Star Center License (126)
- 📍 Three Star Center License (39)
- 📍 GS 110-106 (24)
- 📍 One Star Center License (23)
- 📍 Temporary License (11)
- 📍 Probationary License (4)
- 📍 Prov License (3)
- 📍 Sp Prov License (2)

Star rated licenses are determined on points awarded to a facility by a child care consultant. The NCDHHS describes that a facility earns one point for meeting minimum requirements and can earn more than one point in program and education standards by meeting higher standards. Program standards include meeting requirements of spacing, staff to child ratios, the number of activity and activity areas offered. Education standards include the administrator and lead teachers having completed their credential requirements, and the semester hours and childcare experience of the staff. If a facility receives 1-3 points it receives one star; 4-6 points, two stars; 7-9 points, three stars; 10-12 points, four stars; 13-15 points, five stars (NCDHHS). There is no apparent pattern in the distribution of license levels in Mecklenburg County. Childcare centers with a five star and four

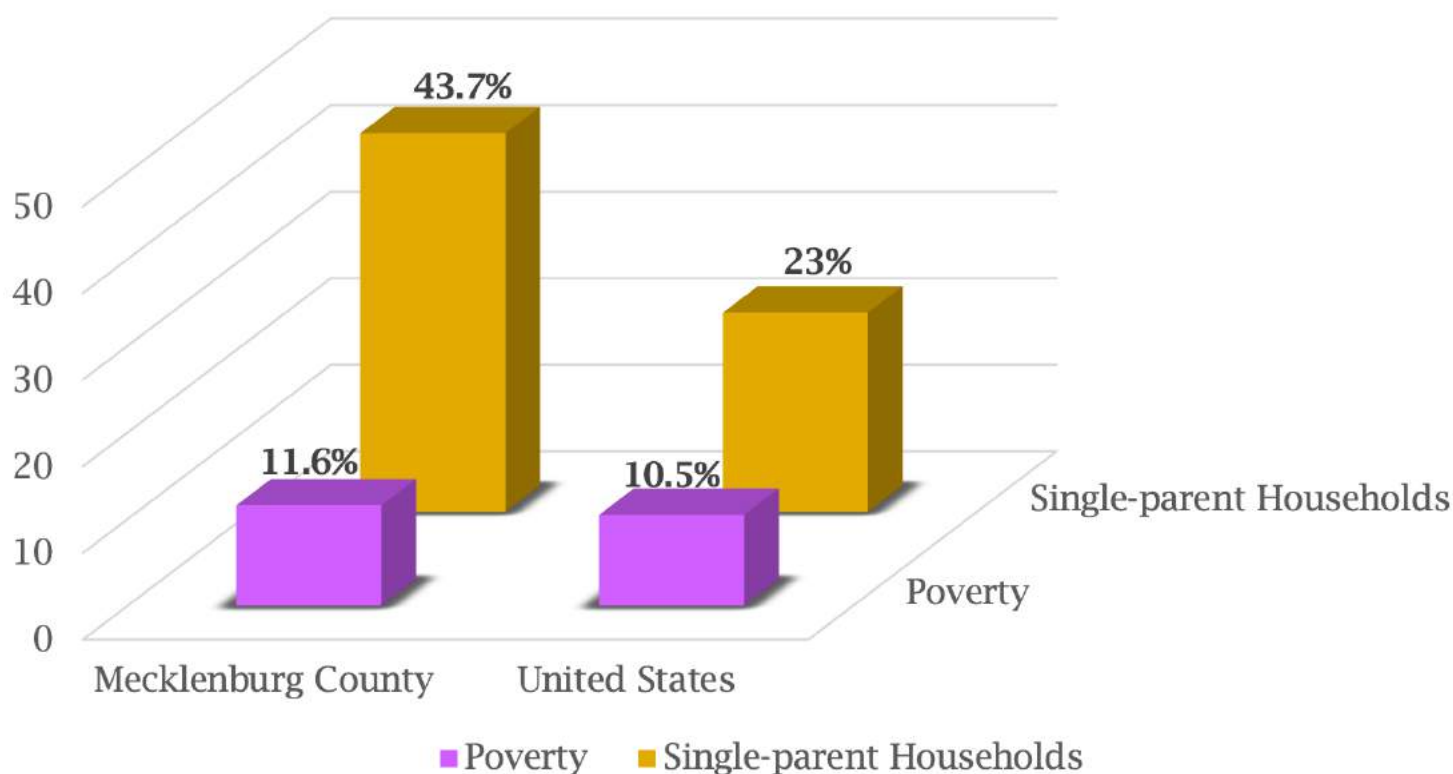


four star center license are the most common, and are relatively evenly dispersed across the county. One star center licenses seem to be concentrated along the northern and southern periphery of the county. As you get further from the city-center, the number of childcare centers across license levels becomes less concentrated.

(2000). Star Rated License. NorthCarolina Division of Child Development and Early Education. <https://ncchildcare.ncdhhs.gov/Services/Licensing/Star-Rated-License>

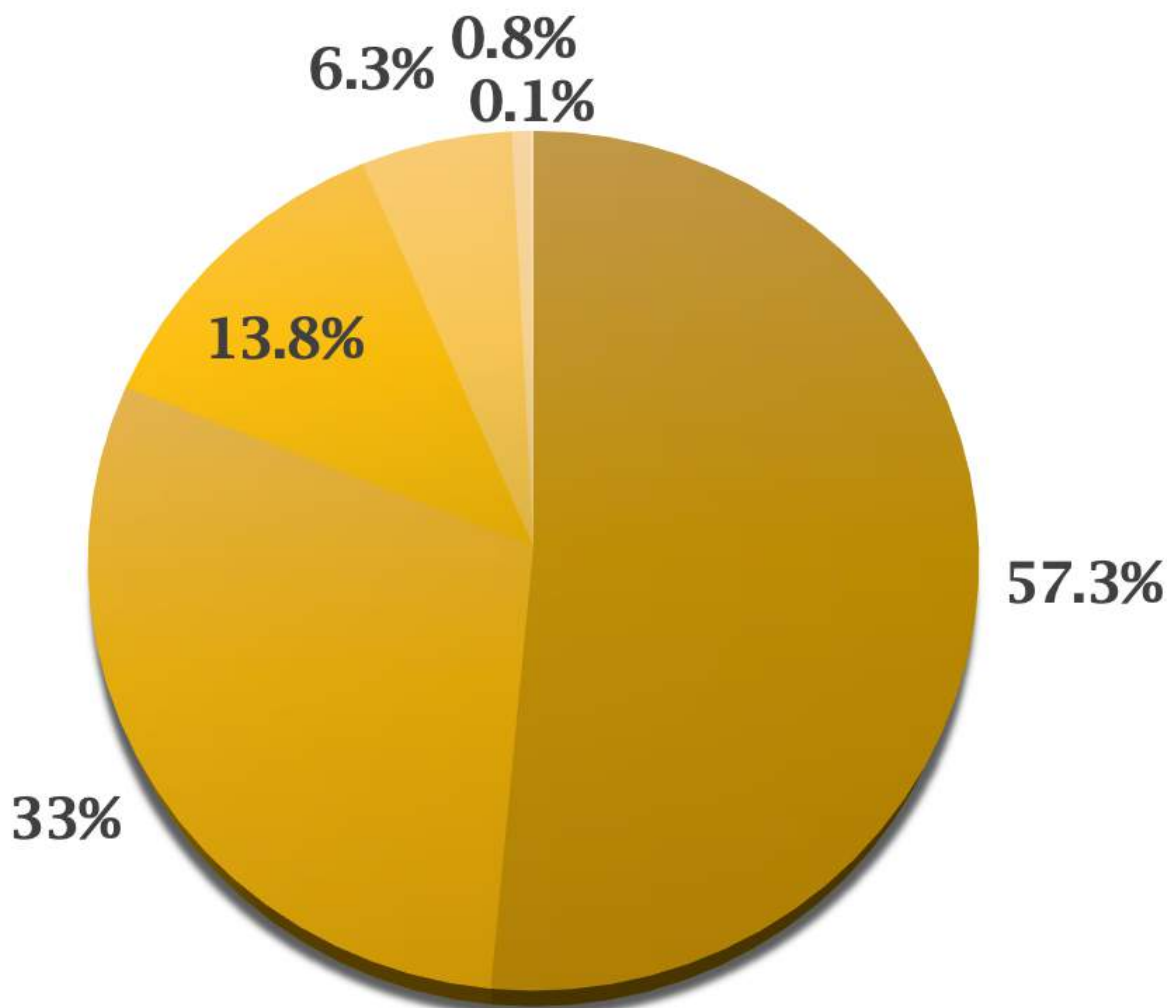


## Why Mecklenburg County?



*Comparative rates of poverty and single-parent households for Mecklenburg County and the United States at large.*

(2019). QuickFacts: Mecklenburg County. U.S. Census Bureau.  
<https://www.census.gov/quickfacts/mecklenburgcountynorthcarolina>



- White
- Black
- Hispanic or Latino
- Asian
- American Indian or Alaska Native
- Pacific Islander

*Racial distribution of Mecklenburg County.*

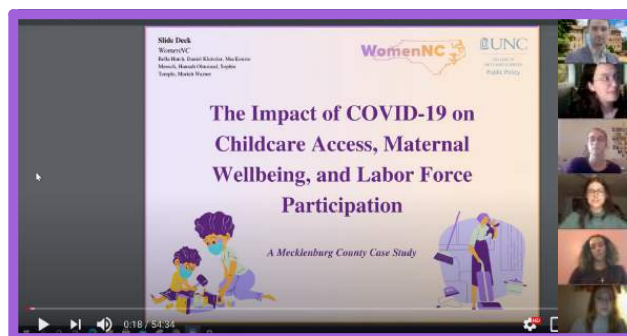
(2019). Mecklenburg County. One Charlotte Health Alliance. <http://www.oneclthealth.org/?module=indicators&controller=index&action=indicatorsearch&doSearch=1&showComparisons=1&l=2001>

## Appendix E

### Hyperlinks to Other Elements of Our Project

#### A recording of our presentation to WomenNC:

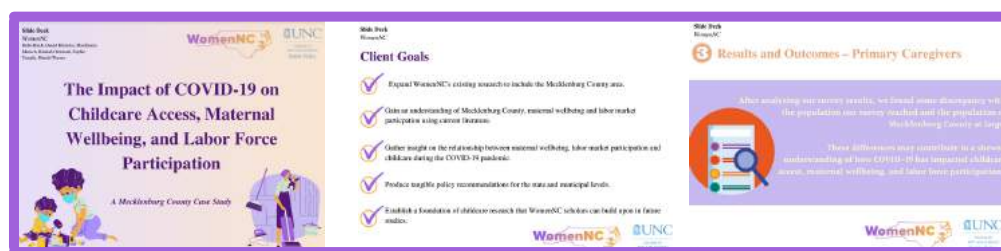
<https://www.youtube.com/watch?v=wjHGr218sq8&t=251s>



#### A link to our presentation slide deck on Canva:

[https://www.canva.com/design/DAEbd0PV690/Rnm5rVPnfOPYkICiG2-wbg/view?](https://www.canva.com/design/DAEbd0PV690/Rnm5rVPnfOPYkICiG2-wbg/view?utm_content=DAEbd0PV690&utm_campaign=designshare&utm_medium=link&utm_source=sharebutton&mode=preview)

[utm\\_content=DAEbd0PV690&utm\\_campaign=designshare&utm\\_medium=link&utm\\_source=sharebutton&mode=preview](https://www.canva.com/design/DAEbd0PV690/Rnm5rVPnfOPYkICiG2-wbg/view?utm_content=DAEbd0PV690&utm_campaign=designshare&utm_medium=link&utm_source=sharebutton&mode=preview)



An Excel sheet with contact information for formal Mecklenburg County childcare centers was submitted to WomenNC. A notable source we used in creating this list that will aid in future research is the NCDHHS childcare provider search tool. We narrowed the search down to 'Child Care Centers' in Mecklenburg County, but this search can be extended to formal 'Family Home Centers' as well:

<http://ncchildcaresearch.dhhs.state.nc.us/search.asp>



## Appendix F

### Notes from Our Final Discussion with Dr. Riemann

Based on our consultation with the Dr. Riemann, we developed further recommendations for future scholars taking on this topic. A major concern of the client is how to engage with both caregivers as well as childcare providers in future projects. The client is concerned both about the size of the future survey's sample as well as the representative nature of the sample. The following suggestions will address these concerns.

#### *Addressing the Issue of Expanding Childcare Provider Responses*

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We had initially suggested a mail-in survey as opposed to the Qualtrics online survey. As mentioned above, the Qualtrics survey is well designed but poses barriers for centers with low access to technology or a stable internet connection. Our client pointed out that a mail-in survey would require too many steps (finding an envelope, return address, a trip to the post office, etc.) and likely wouldn't improve response rates. Instead, COVID-19 conditions permitting, we suggest that future scholars physically visit the centers and drop o

off the surveys or that they try to complete over-the-phone surveys with individual care providers.

**Administering the survey in-person will likely be the most effective means of increasing the response rate.**

#### *Addressing the Issue of Expanding Caregiver Responses*

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To expand the number and diversity of caregivers included in the survey, a number of possible paths came up in our conversation with the client. First, while snowball sampling from provider to caregiver did not work well during our fifteen day survey period, it might garner better results after the pandemic or if the research scholar delivers the survey in-person to the providers. Additionally, instead of solely relying on Facebook groups to administer the survey to caregivers, another option is distributing the survey via Nextdoor, a popular social media platform for neighborhoods. With respect to increasing the representative nature of the sample, we shared



with WomenNC that the Facebook group surveys garnered an extremely white, wealthy sample compared to Charlotte population at large. One idea for a future project that has a longer time-frame is to form a partnership with Mecklenburg County WIC clinics or the Charlotte Department of Health and Human Services and work with them to distribute the survey to either their caseload or people who come to their offices to sign up for different programs that are connected to having a child (WIC, FNS, children's Medicaid, etc). Conceptually, this will bring in a sample of caregivers from more diverse backgrounds that will then garner more representative and useful data.

## *Clarifying the Nature of Different Types of Childcare*

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Finally, WomenNC asked our team to clarify the nature of the different types of childcare providers in the state's database. The database of emails that we collected from phone numbers was strictly center-based, licensed childcare providers. The state database also includes home-based centers that are similarly licensed, but we were not able to distribute the survey to this subset because of time constraints. Future researchers should consider surveying home-based centers, but another important type of childcare are informal care

networks. Many Americans find childcare through their neighbors, an unofficial nanny-share arrangement, and a variety of other unlicensed arrangements. These are not tracked by the state but are nonetheless important to the overall landscape of childcare in Mecklenburg county.

**Reaching informal care networks will be much more difficult, but it is an important area of future study.**

One option is a "reverse snowball sampling method" in which the survey reaches parents and asks parents to forward the childcare provider survey on to their provider, informal or otherwise.