

CHILD CARE & ECONOMIC RECOVERY ACROSS NORTH CAROLINA DURING COVID-19



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EXECUTIVE SUMMARY



Child care availability is a key challenge contributing to the divergent economic futures for families.

This report, drawing from the **North Carolina Early Childhood Foundation (NCECF) October 2020 Parent Survey data and December 2020 report** by Dr. Clive R. Belfield, provides insight into the experiences of families with young children during the COVID-19 pandemic across the eight North Carolina regions, called Prosperity Zones (PZs).

Given that the NC PZs have distinctive geographies, labor markets, and community contexts, we looked at family impact of child care access across regions. Specifically, we examined the variation in economic and social stress within PZs, especially when compounded by COVID-19. While there is a need to attend to the whole state, **particular attention should be given to the Sandhills and Piedmont-Triad PZs, as well as the Northeast and Northwest PZs** given their numerous and complex community needs (e.g., economic, housing, transportation) compared to other regions.

Child care availability is a key challenge, faced by communities, that is contributing to the divergent economic futures for families. For example, after controlling for race and ethnicity, findings showed that mid/high socioeconomic status (SES) families were able to find and maintain work even with the challenges from COVID-19. In contrast, families in low SES households, who were likely to be in school for higher education and unable to access stable child care, were less likely to find work and be able to access benefits such as paid leave.

While NC has seen some stabilization of the child care system due to federal resources, **the pre-COVID issues of availability and affordability are further exacerbated during the COVID-19 pandemic**, especially for families with young children in low SES households, including those who work non-standard hours and women in low SES households. This is especially pronounced for women in low SES households where almost half of families with young children live in areas designated as child care deserts, requiring attention to addressing this infrastructural need.

Women with young children, especially those in low SES households, are a large part of the employment system and the lack of available and affordable child care is likely disrupting their education and economic progress. For women in low SES households, especially, who are seeking to get more education or work out of the home, addressing their child care needs should be prioritized. For women in low SES households, in particular, child care provided by family, friends, and neighbors is preferred because it offers flexibility for working hours and attending school, a likely necessity to reduce their economic vulnerability. Their child care challenge is further compounded by their lack of employer-provided child care benefit.

In sum, North Carolina's continued economic recovery from COVID-19 will require sustained attention to child care affordability and availability for families, especially for mothers in low SES households who have children under the age of three. Parents of young children are making choices about their life because of child care and this is especially pressing for 80% of Black, 50% of White, 45% of Latina, and 40% of Asian American/Pacific Islander mothers who are their family breadwinners. These families want to work and gain higher education; however, their goals may be deferred or stalled due to the lack of available and affordable child care that meets their work conditions and educational needs (45% are dropping out of college/training or declined training). These barriers to educational attainment can impact **myFutureNC's** goal of 2 million North Carolinians (ages 25-44) with high-quality credentials or postsecondary degrees by 2030.

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INTRODUCTION

North Carolina's economy and child care industry are inextricably linked.

North Carolina's economy and child care industry are inextricably linked. As one does well, so does the other. The converse is also true, as exemplified by the COVID-19 pandemic. As a result, economic recovery across the state will be dependent on child care as a key strategy to support workforce development, which in turn, will benefit local business owners with skilled workers.

This report draws from North Carolina Early Childhood Foundation (NCECF) Parent Survey conducted in October 2020. To our knowledge, this was the first statewide survey of how families juggled early care and education with work demands in the immediate aftermath of COVID-19. The **Early Education in the Time of COVID-19: An Economic Analysis for North Carolina** report by Dr. Clive R. Belfield, which analyzed the survey data, concluded that:

Working parents are in a “double-bind”: they cannot find jobs because they cannot access child care; and without jobs, they cannot build the skills and experience that will allow them to afford high quality child care. At the same time, with rising costs of providing COVID-safe child care, parents are further pushed out of the formal child care market. These patterns are especially salient for minority females with children (Belfield, 2020).

This report sought to explore the link between child care, socio-economic status (SES), and employment across the eight regional Prosperity Zones. We analyzed the Parent Survey data, including a representative statewide sample of 802 working parents, with children aged birth to 5 years, collected on behalf of NCECF.

Rather than using a unidimensional measure of SES, based on either parental income or educational level, this report sought to capture the complexity of SES by allowing for multiple qualifications.^{1,2,3} Hence, low SES in the survey data is defined as:

- working parents who had a high school education level or less,
- met federal poverty guidelines for 2020, or
- utilized public assistance.

Parents who did not meet any of these qualifications were considered to have mid/high-SES (MH SES) or higher SES. Inclusion of utilization of public assistance allows us to ensure we capture a broader group experiencing **economic hardship with evidence** showing different take up rates by household and type of benefit.

Further, we sought to determine if significant differences exist in child care access and experiences during COVID for families in low SES households. In addition, we assessed if parental reports of workforce engagement were consistent with local market trends derived from county-level economic data that aligned to the survey respondents' zip codes. We examined the different community contexts of the Prosperity Zones regarding their baseline resources and local market responses to COVID.



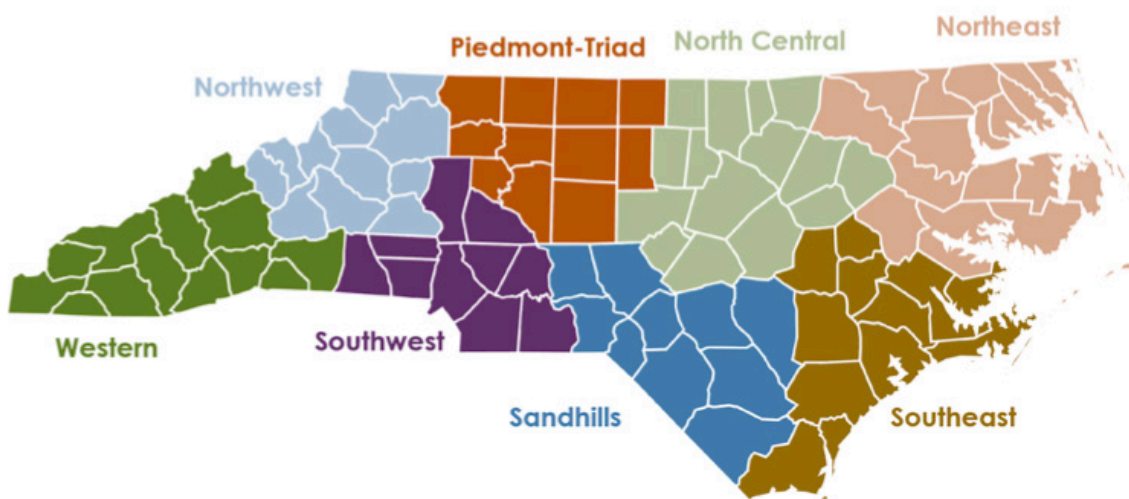
Women constitute the majority of part-time, low-wage workers for many NC communities and disproportionately serve as the primary caregiver in the home.

Lastly, we conducted a focused study on women from low SES households to better understand their experience. Women constitute the majority of part-time, low-wage workers for many NC communities and disproportionately serve as the primary caregiver in the home. **Collectively, these analyses help to pinpoint where and for whom local economic and social supports and resources are needed the most across the state for economic recovery and child care.**

NORTH CAROLINA PROSPERITY ZONES

North Carolina operates eight administrative regions to enhance collaboration, cooperation, and efficiencies between State agencies, local governmental agencies, and other regional entities, called Prosperity Zones (PZs) (see Figure 1). From west to east, the eight NC PZs are: Western, Northwest, Southwest, Piedmont-Triad, Sandhills, North Central, Northeast, and Southeast.⁴ To help contextualize these eight PZs, we examine their economic and social conditions, and COVID-19 and employment rates.

FIGURE 1. NORTH CAROLINA PROSPERITY ZONES



TAKEAWAYS: NORTH CAROLINA PRIORITY ZONES

- Two metrics—social determinants of health and distress tiers—used to examine the economic and social condition of the NC PZs indicated that risks and opportunities are not evenly distributed and vary across and within PZs. Nevertheless, while there is a need to attend to the whole state, particular attention should be given to the Sandhills and Piedmont-Triad areas, as well as the Northeast and Northwest PZs given their numerous and complex community conditions.
- COVID-19 cases and related deaths increased significantly across the state with considerable differences in these two metrics across NC PZs. As one of the densely populated areas in the state, the Southwest PZ had the highest COVID-19 cases and related deaths.
- While the Sandhills region unemployment rate was significantly higher than the state, there were differences in PZ areas who report being unable to work due to COVID-19 and the potential impact of COVID due to sectors where jobs predominate (e.g., agriculture, services, goods).

ECONOMIC AND SOCIAL CONDITIONS

The **Social Determinants of Health** (SDOH) are the economic and social conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes, risks, and opportunities. We examined the SDOH across the eight Prosperity Zones in NC based on a range of data that examined economic, housing and transportation, and social and neighborhood resources.

In order to make comparisons using different data and sources, we standardize the indicators (e.g., “comparing apples to apples”). Standardized *z-scores* allow for comparisons across three broad categories of SDOHs, including (1) economic, (2) housing and transportation, and (3) social and neighborhood resources. In this case, we use a *z-score* with “0” as the average. Scores below the average of “0” are deemed below average and scores above the “0” line are deemed above average.



The Social Determinants of Health are the economic and social conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes, risks, and opportunities.

Figure 2 shows the variation in SDOH needs across North Carolina pre-pandemic. The lower the value (i.e., standardized z-score), the greater the need for supports pertaining to economics, housing and transportation, or other neighborhood and social contexts. This baseline is informative to provide perspective on where future investments may be needed across the state, especially knowing that COVID most likely exacerbated community needs.

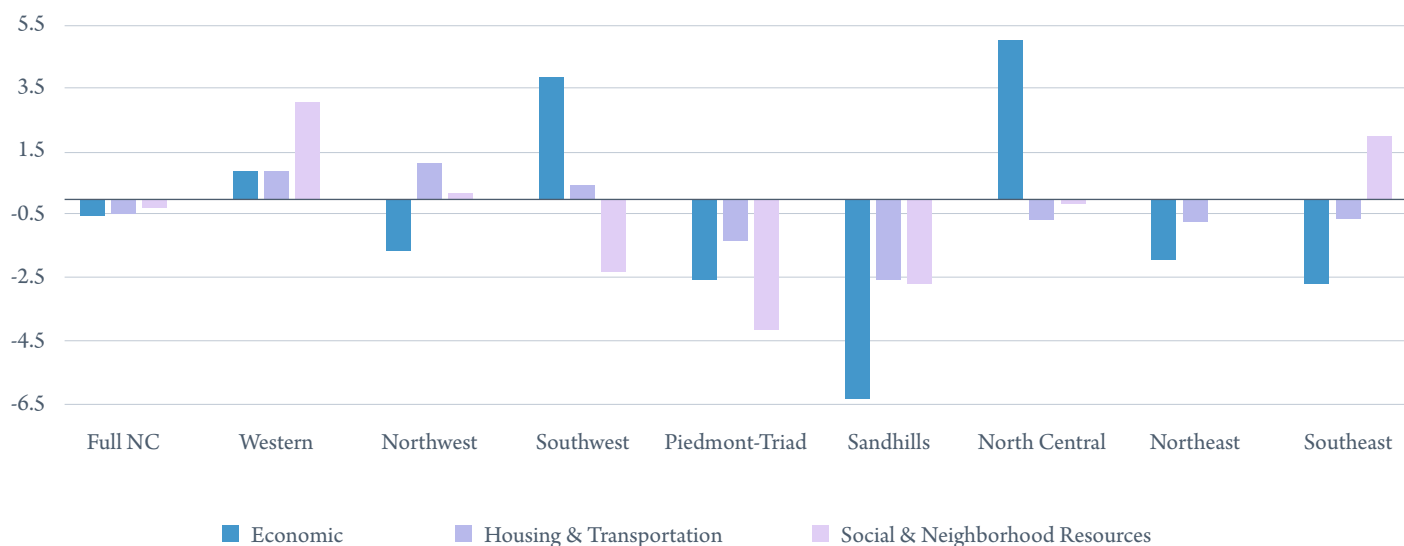
Each Prosperity Zone's mean SDOH scores were compared against the state's average mean scores.

- The *Sandhills* region had significantly worse SDOH economic scores for the number of residents living below the poverty line and median household income. The region also lagged behind the state average for residents paying greater than 30% of their income on housing.
- The *Southeast* region had more unemployed residents.
- *North Central* region had more residents living in overcrowded households compared to the state's average SDOH scores.
- Both the *Northwest* and the *Piedmont-Triad* regions had significantly less individuals than the mean for the state for those with a high school education or more.

There were also several PZs which were doing statistically better than the state averages for SDOH z-scores.

- Economically, the *Southwest* region had fewer residents living below the poverty level.
- The *Western* region had less unemployed residents. The Western region also had better scores for housing and transportation—as did the *Northwestern* region—as well as improved SDOH values beyond the state average for overall social and neighborhood resources, single parent households, and access to healthy foods.

FIGURE 2. SDOH DOMAINS BY PZ (MEAN Z-SCORES)



DISTRESS TIERS

Distress tiers are designations, mandated by state law in North Carolina, which can determine the allocation of state funds. See Appendix A for more information on how these tier rankings are calculated and assigned to counties. Tiers are calculated based on average unemployment rate, median household income, percentage growth in population, and adjusted property tax base per capita.⁵ Tier 1 is deemed most distressed to Tier 3 as less distressed. Lower distress rankings (lighter colors) represent worse conditions.

As shown in Figure 3, there is only mild variation in the ranking distribution between 2020 and 2022. The majority of the Sandhills and Northeast areas were in Distress Tier 1; the majority of Piedmont-Triad and Northwest were in the Distress Tier 2; and about 50% of areas in the Southwest were in Distress Tier 3 in 2020 (see Figure 4). Also, it is important to note that at least 25% of Western, North Central, and Southeast areas were in Distress Tier 3 in 2020.

FIGURE 3. MAPS OF NC COUNTY DISTRESS TIERS 2020 AND 2022 (PER NC DEPARTMENT OF COMMERCE)

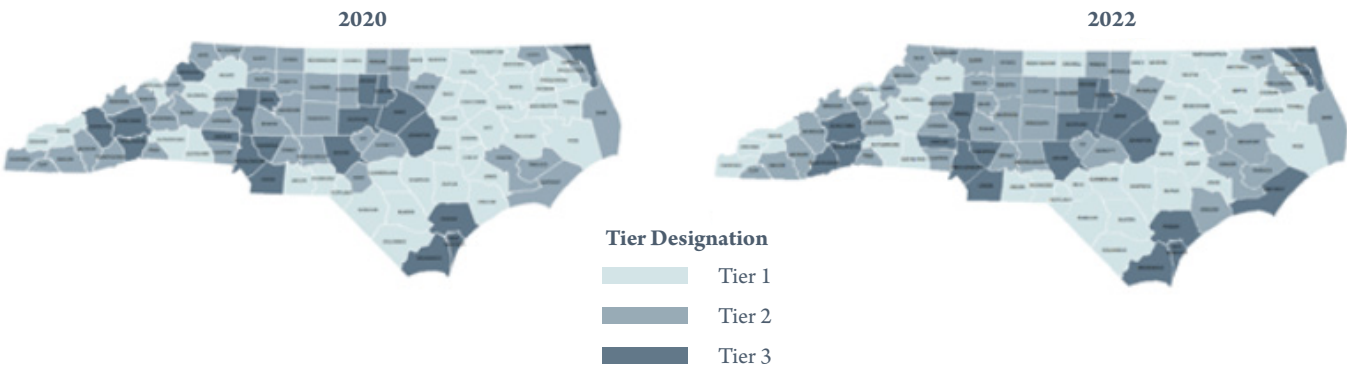
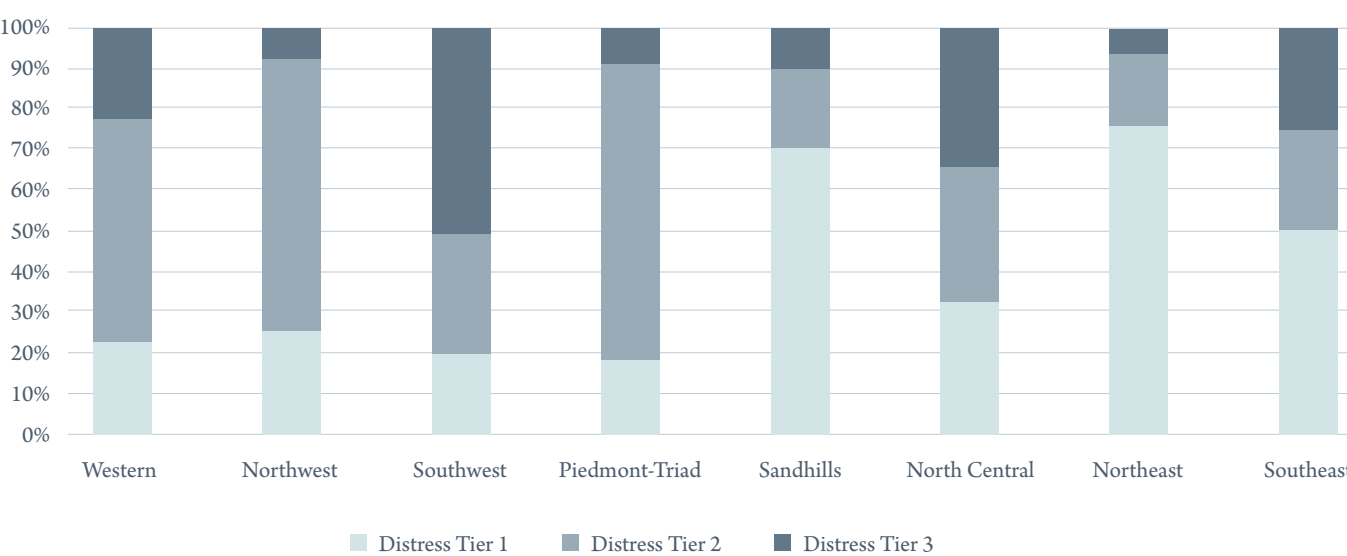


FIGURE 4. NC DISTRESS TIERS DISTRIBUTION BY PZ (2020)

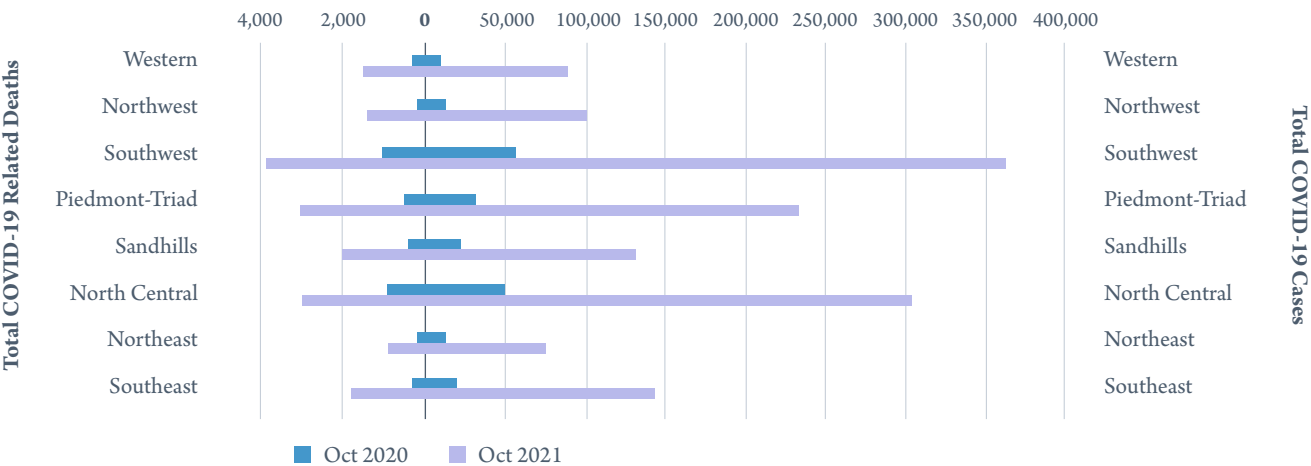


COVID-19 RATES

There continues to be variation across regions for the impact of COVID on local communities from 2020 until now, affecting both rural and metro areas. As shown in Figure 5, the left side shows COVID-19 related deaths, and the right side shows COVID-19 cases; dark blue shading is for October 2020 and lighter blue is October 2021. For example, in October 2020, Western NC saw very little COVID-19 cases and deaths; however, the number of COVID-19 related deaths inched closer to 2,000 with COVID-19 cases reaching almost 100,000.

In contrast, the North Central part of the state had about 1,000 COVID-related deaths in October 2020, and this reached close to 4,000 in October 2021. Simultaneously their COVID-19 cases also significantly increased from about 30,000 in October 2020 to over 300,000 by October 2021. **The trends for COVID infections and deaths in the Southwest region are particularly concerning given that this region is home to the most densely populated county in the state, Mecklenburg County** which is nearly 10% of the state’s total population with COVID-related deaths nearing 4,000 in October 2021 and COVID cases surpassing 350,000.

FIGURE 5. COVID-19 CASES AND DEATHS (2020 AND 2021)



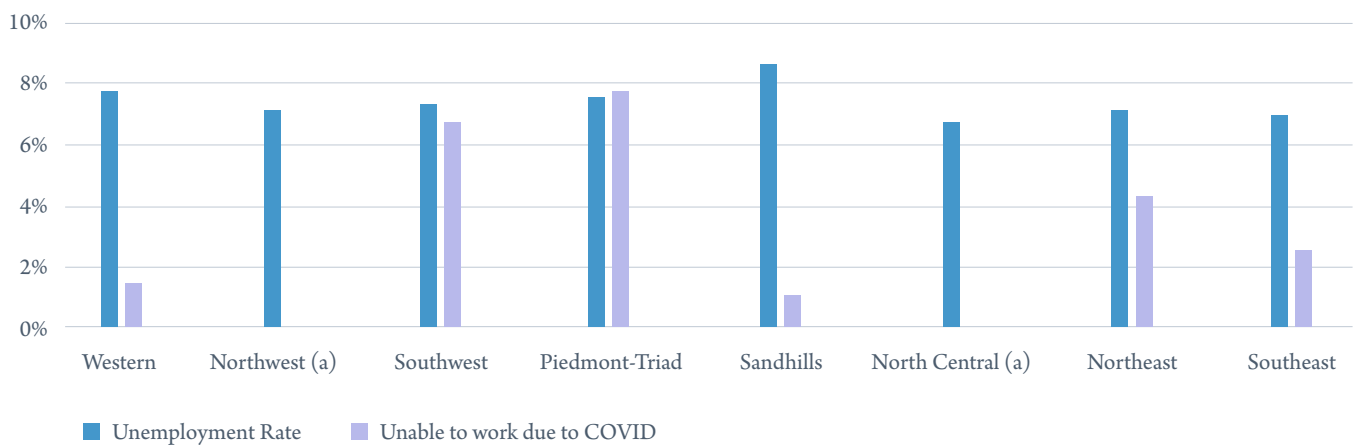
EMPLOYMENT RATES

At the outset of the pandemic, the Sandhills regional unemployment rate was significantly higher than the state average, while North Central's unemployment rate was significantly lower with considerably more people in the Piedmont-Triad, Southwest, and Northeast regions being unable to work due to COVID-19 (see Figure 6; Table 1).

Figure 7 shows that the distribution of government and non-government jobs is fairly consistent across PZs, ranging from nearly 10% in the Piedmont-Triad region to close to 30% in the Northeast region.

In 2020, the majority of employment (84%) on average in NC was for non-government sector jobs. As depicted in Figure 8, these included employment in the service sector, goods sector, self-employed (non-agriculture) sector, and agriculture sector.

FIGURE 6. EMPLOYMENT DURING COVID-19 BY PZ



Note: Northwest and North Central PZs are not reported for 'unable to work due to COVID.'

TABLE 1. UNEMPLOYMENT BY PROSPERITY ZONE

	Full NC	Western	Northwest	Southwest	Piedmont-Triad	Sandhills	North Central	Northeast	Southeast
Unemployment Rate	7.3	7.8	7.2	7.4	7.7	8.6***	6.7**	7.2	7
Unable to work due to COVID-19	5.27*	1.43	—	6.78	7.77	0.99***	—	4.32	2.5

FIGURE 7. NC EMPLOYMENT SECTORS BY PZ

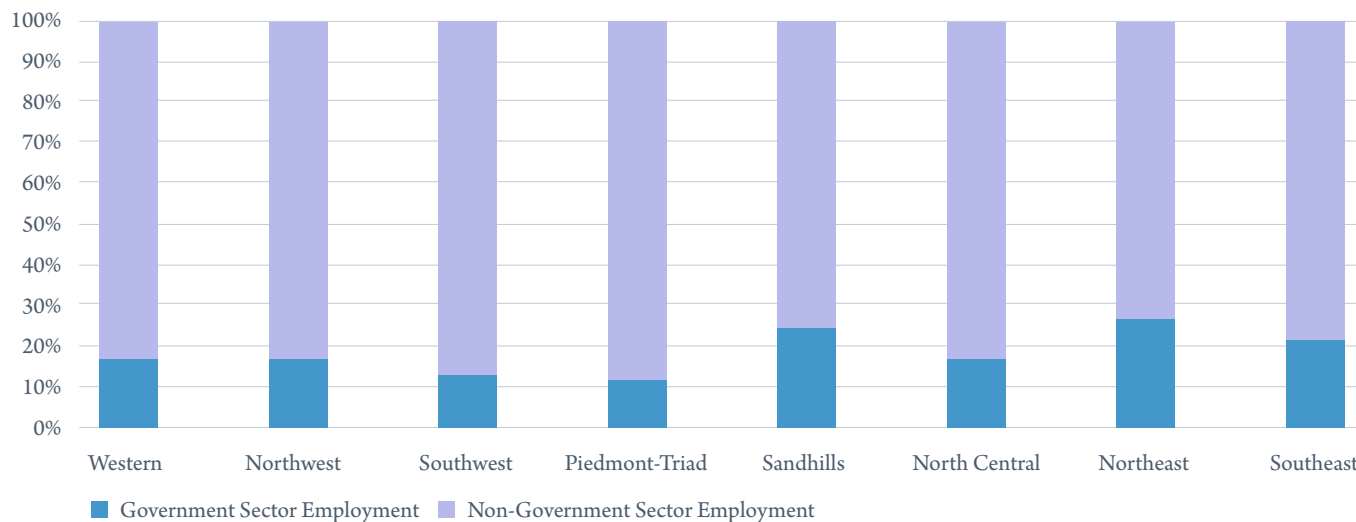
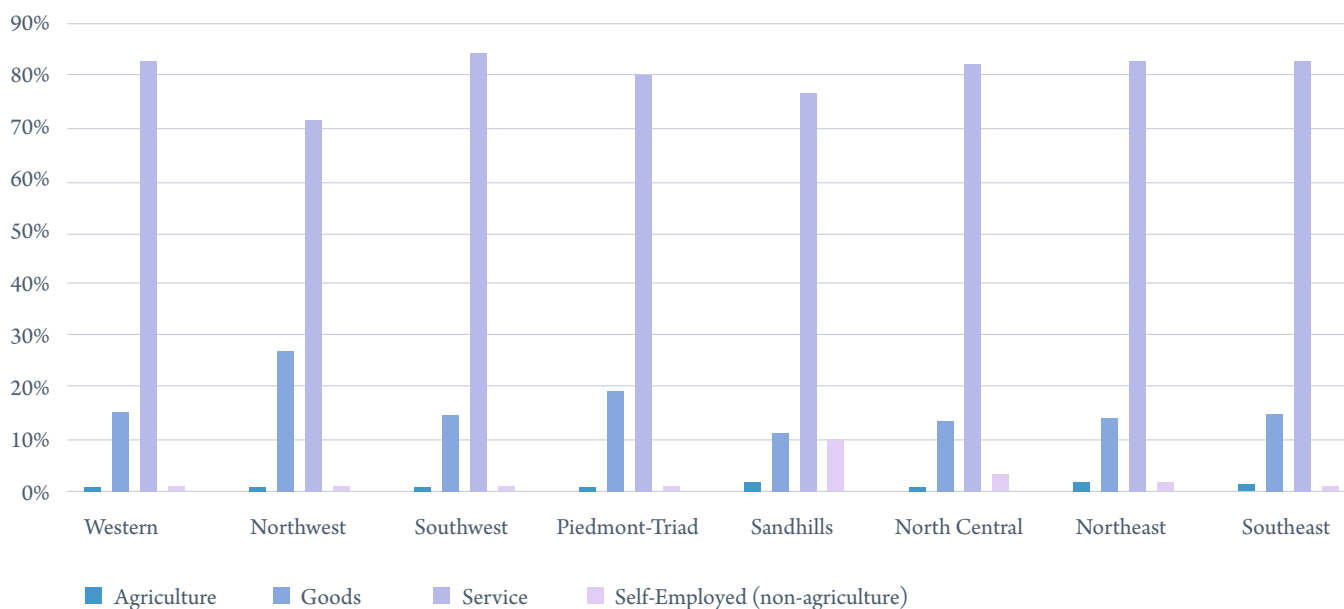


FIGURE 8. NC NON-GOVERNMENT SECTOR EMPLOYMENT BY PZ



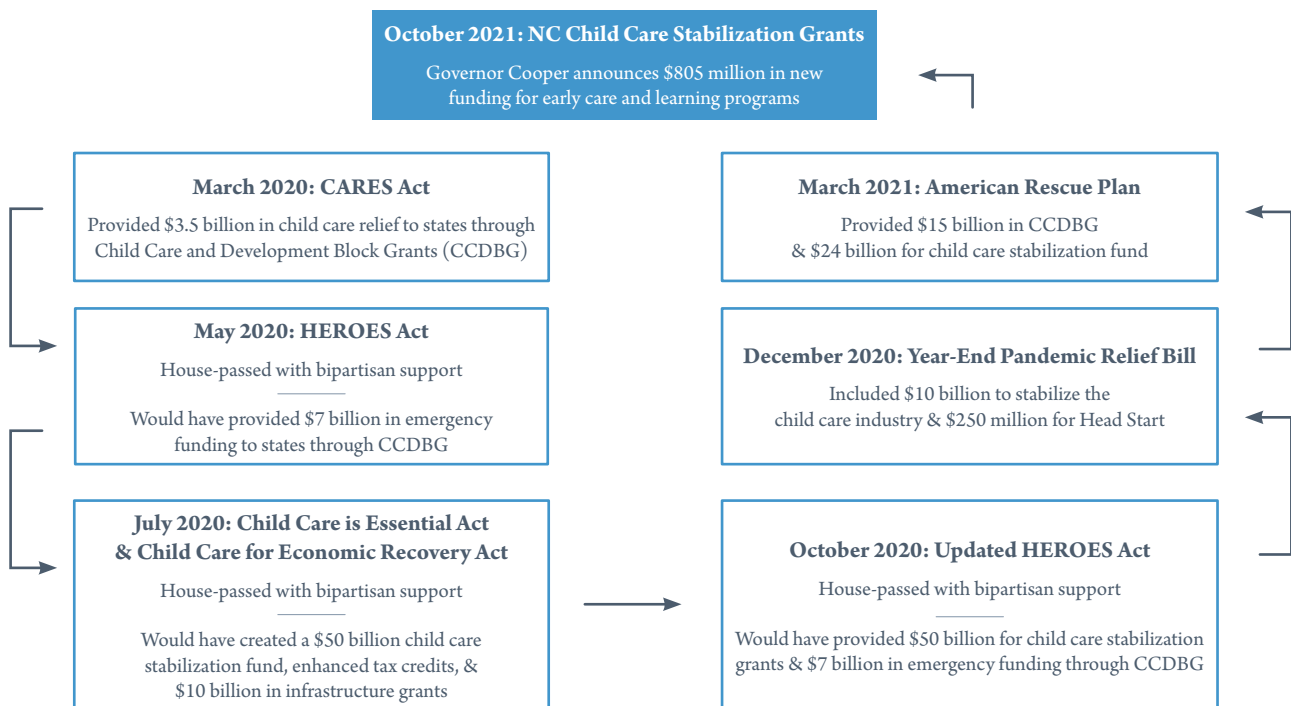
COVID-19 AND NC CHILD CARE FUNDING

Throughout the pandemic, child care providers have been serving children in a constantly changing landscape of safety protocols, training requirements, and staffing availability. National data show an average increase of 47% in operating costs during the pandemic, due to cleaning and physical distancing protocols alone.⁶ These increased costs have caused many child care facilities to close temporarily or permanently.

In North Carolina, child care enrollment was reduced by 40% across the state due to the pandemic, despite only 2% of open providers closing.⁷ Moreover, approximately 21% of NC child care providers were flagged as being at risk of closing by the end of 2021.⁸ Fortunately as of March 2022, based on the [NC Early Care and Learning Dashboard](#), about 188 sites have been lost since January 2020, which is much less than the expected amount. At the same time, there has been a loss in child enrollment of about 26,450 during this same time.

Although child care plays a critical role in supporting economic development and recovery from COVID, child care providers and owners have had a hard time securing sufficient relief funds to stay in business and provide high quality care. The Coronavirus Aid, Relief, and Economic Security (CARES) Act, passed by Congress in March 2020, provided states with \$3.5 billion through the Child Care and Development Block Grants (CCDBG).⁹ As shown in Figure 9, legislation continues to push for industry support, but the pace and amount of relief is struggling to meet the ever-growing demand.¹⁰ **Nevertheless, as of April 25, 2022, \$167,922,380 has been paid out to child care providers.**

FIGURE 9. COVID-19 RELIEF FUNDING 2020-2021



FAMILY PROFILES FROM NCECF PARENT SURVEY

The NCECF parent survey is a North Carolina-based survey conducted in October 2020 about how pandemic-related changes in early education are affecting families' work options, especially in contexts where there was already a shortage of available places for children. On average, respondents were younger and had a higher education level than the general working population.¹¹ To better understand the challenges facing low-SES families in their local communities, based on their zip codes, we looked at publicly available statewide data on social determinants of health (SDOH) scores and rankings of distress for their respective NC prosperity zones.

TAKEAWAYS: FAMILY PROFILES FROM NCECF PARENT SURVEY

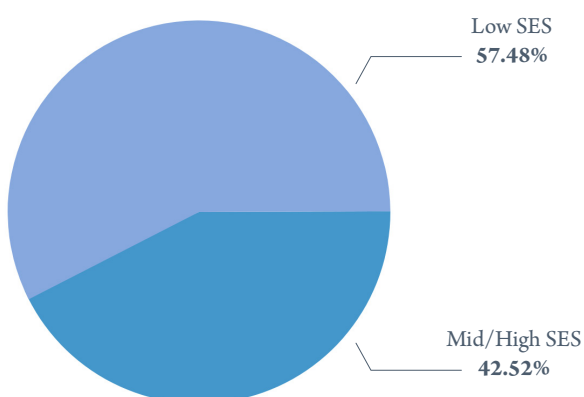
The families in the NCECF Parent Survey were diverse in their SES, race/ethnicity, language, education, and locale:

- majority were in low SES households;
- over 2/3rd were White and about a third were Black and Hispanic;
- majority of families were English speakers with 7% who spoke a language other than English;
- a quarter had a high school diploma or less and over a third had a college degree or higher;
- majority were in two-parent households; and
- about an even split across rural locale (37%), suburban (32%), and urban local area.

SOCIOECONOMIC STATUS

More working parents were categorized as low SES (57%) compared to mid/high SES (43%) (see Figure 10).

FIGURE 10. NCECF PARENT SURVEY: SES DISTRIBUTION



RACE/ETHNICITY

The majority of respondents identified as White (68%), with the other respondent population including Black (24%), and Hispanic ethnicity (12%) (see Figure 11). Surprisingly, there were significantly more Blacks among the mid/high SES group compared to the low-SES groups, and more Asians among the low SES group compared to the mid/high SES group (see Figure 12). Adjusting for these characteristics in the statistical analyses going forward will help to reduce effects of race/ethnicity differences on the outcomes of interest.

FIGURE 11. NCECF PARENT SURVEY: RACE/ETHNICITY DISTRIBUTION

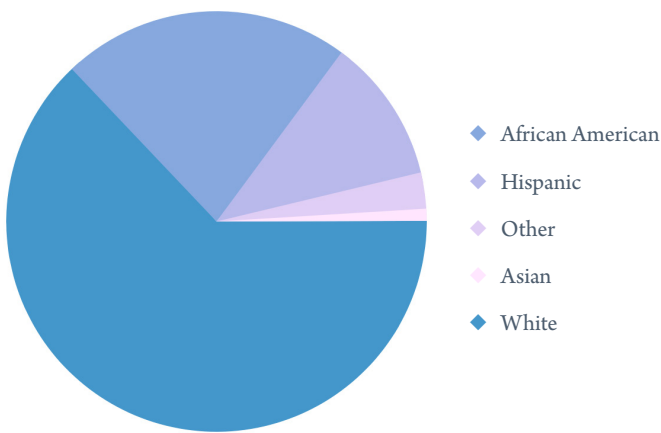
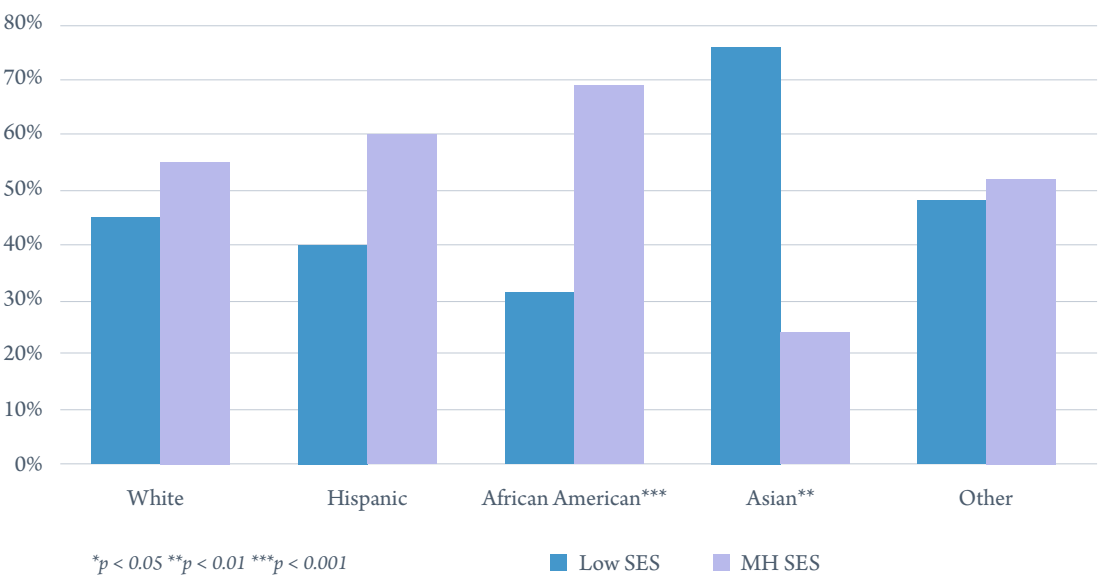


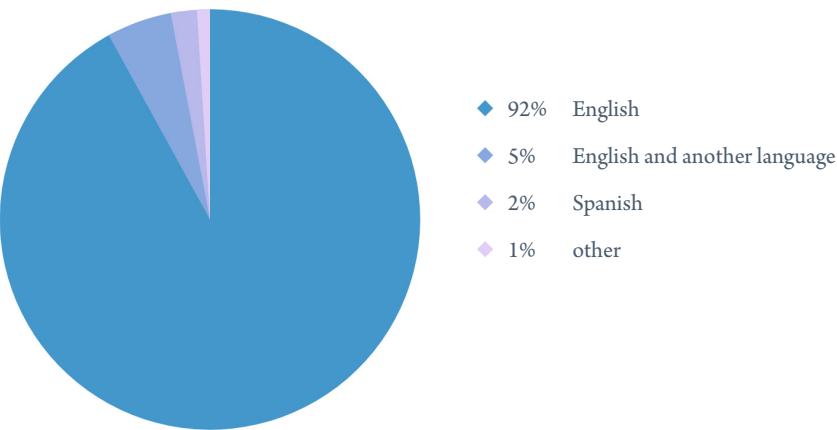
FIGURE 12. NCECF PARENT SURVEY: SES DISTRIBUTION BY RACE/ETHNICITY



LANGUAGE

Despite there being race/ethnicity distribution differences by SES, there were no significant differences in primary languages spoken at home. The majority of survey respondents (93%) spoke English as their primary language with 5% speaking English and another language, 2% speaking Spanish, and 1% speaking another language (see Figure 13).

FIGURE 13. NCECF PARENT SURVEY: LANGUAGE SPOKEN AT HOME DISTRIBUTION



EDUCATION LEVEL

Nearly half of the sample had some college education or less while the other half had a 2-year associate degree or higher (see Figure 14). It was not surprising to find that those with a high school diploma or less were all in the low SES group (see Figure 15), given the criteria. Surprisingly, those with a 2-year and 4-year degree were likely to be in the low-SES group, and as expected, more respondents with an advanced degree were likely to be in the high-SES group. However, over 40% of people in the advanced category were likely to be in the low SES group, showing that higher education was not necessarily a buffer from being potentially economically vulnerable.

FIGURE 14. NCECF PARENT SURVEY: HIGHEST LEVEL OF EDUCATION DISTRIBUTION

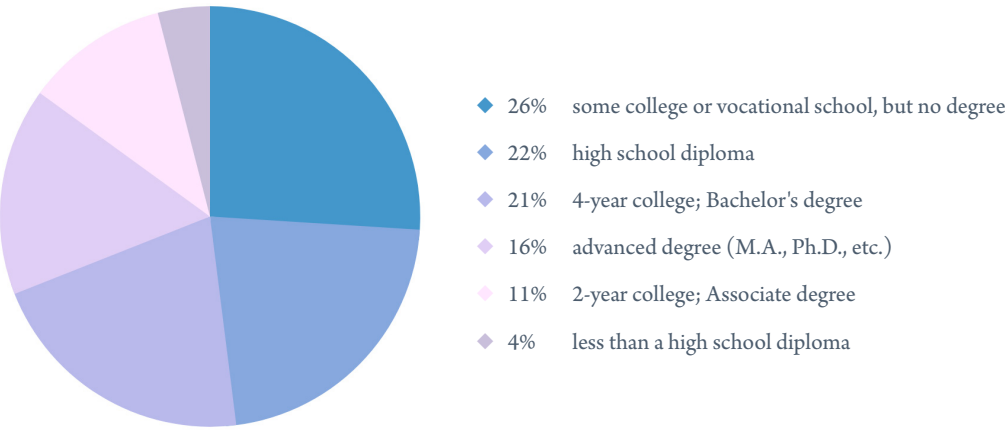
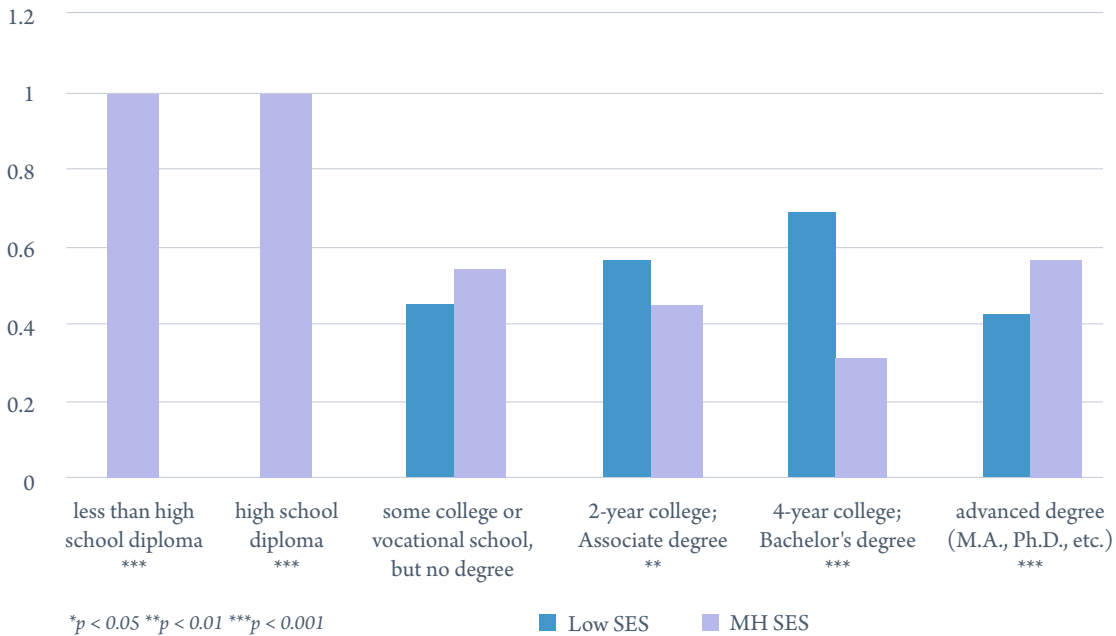


FIGURE 15. NCECF PARENT SURVEY: SES DISTRIBUTION BY HIGHEST LEVEL OF EDUCATION



HOUSEHOLD STRUCTURE

Over 70% of the respondents were in a two-parent household (73%), with 15% living in a one-parent household and 10% in a one-parent household where the other parent is actively involved but does not live in the household; the remaining two percent represented other relative and non-relative households (see Figure 16). Figure 17, however, shows that there were significantly more single-parent households among the low SES group, represented by the light-blue bars. There were just as many low SES (51%) as mid/high SES (49%) categories in two-parent households.

FIGURE 16. NCECF PARENT SURVEY: PARENTING ARRANGEMENT DISTRIBUTION

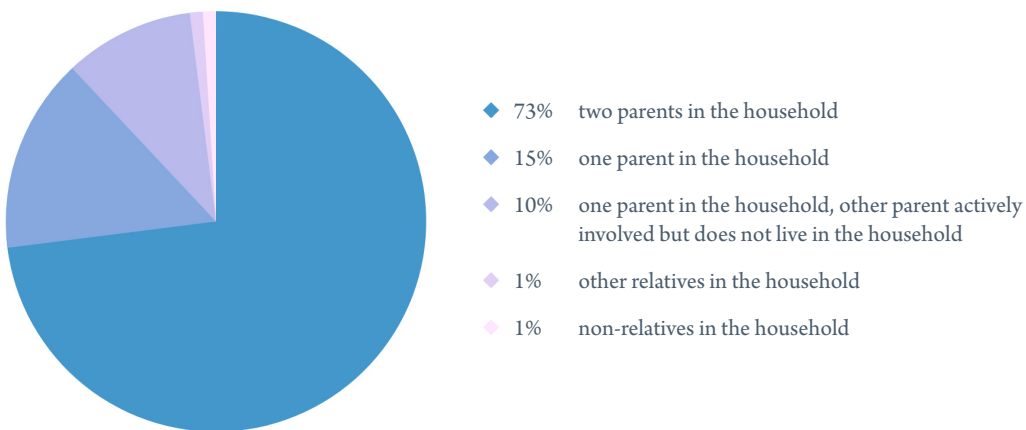
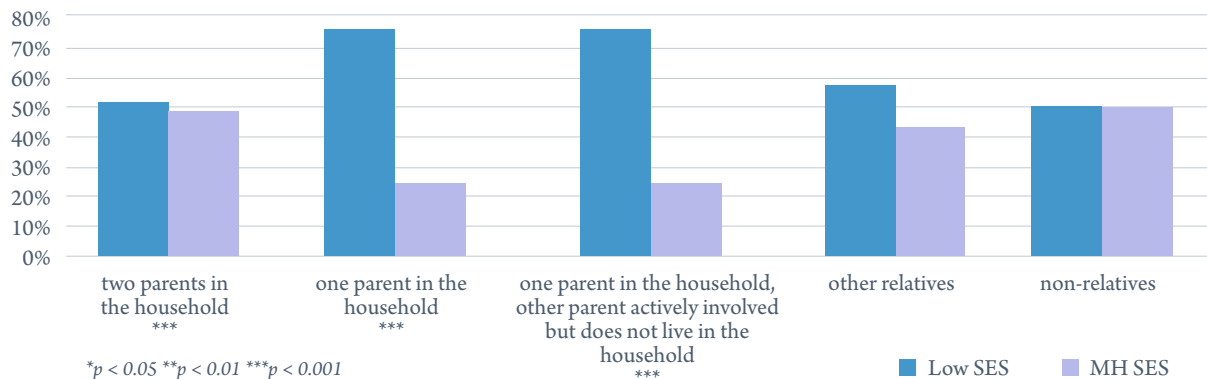


FIGURE 17. NCECF PARENT SURVEY: SES DISTRIBUTION BY PARENTING ARRANGEMENT

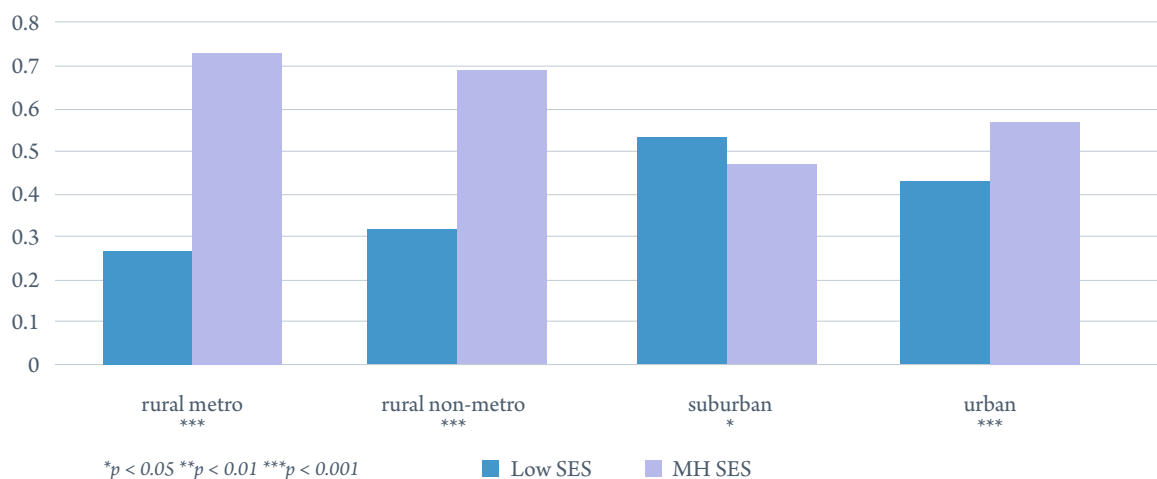


There were significantly more single-parent households among the low SES group.

LOCALE

Over a third of the sample lived in a rural locale (37% metro and non-metro), about a third in the suburbs (32%), and a third in urban areas (31%). Significantly more mid/high SES families lived in rural metro, rural non-metro, and urban areas compared to low SES families; whereas, more low SES families lived in Suburban areas compared to mid/high SES families (Figure 18).

FIGURE 18. NCECF PARENT SURVEY: SES DISTRIBUTION BY LOCALE



CHILD CARE & EMPLOYMENT ACROSS NC DURING THE COVID-19 PANDEMIC

The child care ecosystem constitutes the interrelated child care businesses, facilities, providers/teachers, support staff, caregivers, children, stakeholders, assistance (e.g., referrals, subsidies), policies, processes, practices, and interactions. Each element has been disrupted at one point or another since the onset of pandemic, challenging an infrastructure that was already under-resourced and disjointed in regard to availability, access, and utilization.

CHILD CARE ECOSYSTEM: AVAILABILITY & AFFORDABILITY

Throughout the pandemic, families have been balancing the need for employment and child care. Approximately 400,000 working parents across NC are assumed to be constrained by child care needs, given that there are an estimated 610,000 children, aged 0-5 years.¹² The 2020 U.S. Census Household Pulse Survey estimated that 46% of NC families with children experienced loss of employment income. This loss of employment income averages approximately 20% of household income, an amount that far exceeds what families pay for child care, on average.¹³

For instance, child care availability outside of the home is limited for caregivers working nontraditional hours, diverse families, and families living in areas of concentrated poverty [see Figures 14-16]. Ironically, families, such as these, are the ones for whom child care could make the biggest difference for social mobility.

Likewise, rural areas have less access, or means for attainment, than urban areas to child care assistance for referrals or subsidies; proximity or ease of transportation to child care; and high quality, formal child care centers.^{14,15} Mapped against licensed child care slots across the state, 44% of families were classed as living in a “child care desert,” with less than one slot for every three children aged 0-5 years.¹⁶ Factors, such as these, result in disproportionate utilization of child care services.

TAKEAWAYS: CHILD CARE AVAILABILITY & AFFORDABILITY

- Almost half of families, with children, in NC live in areas designated as “child care deserts.”
- While the majority of parents, who responded to the NECF survey, report centers make up the majority of programs their children attended, regardless of PZ region, there were differences across the state in the percent of children in home care.
- Families with children, ages 3 to 5, were likely to have subsidized child care (~40% across PZs) compared to families of infants and toddlers (~20% across PZ).

Of the total number of licensed child care programs across the state in 2020 when the NCECF working parent survey was conducted, approximately 25% were in North Central PZ, 20% in Southwest PZ, 16% in Piedmont-Triad PZ, 12% in the Sandhills PZ, 9% in Southeast PZ, and 6% in Western PZ, Northwest PZ, and Northeast PZ (see Table 2). Furthermore, licensed centers made up 77% of the programs on average for the state. However, there was a broad range across PZ from 69% to 88%.

TABLE 2. CHILD CARE TYPES BY PROSPERITY ZONE

	Full NC N (%)	Western N (%)	Northwest N (%)	Southwest N (%)	Piedmont- Triad N (%)	Sandhills N (%)	North Central N (%)	Northeast N (%)	Southeast N (%)
Number of Licensed Child Care Programs	5687 (100)	352* (6.19)	366* (6.44)	1124* (19.76)	907 (15.95)	665 (11.69)	1424*** (25.04)	363* (6.38)	486 (8.55)
Number of Centers (Birth to 5)	4367 (100)	310* (7.1)	323 (7.4)	900* (20.61)	707 (16.19)	520 (11.91)	985** (22.56)	268* (6.14)	354 (8.11)
Number of Family Child Care Homes (Birth to 5)	1320 (100)	42* (3.18)	43* (3.26)	224 (16.97)	200 (15.15)	145 (10.98)	439*** (33.26)	95 (7.2)	132 (10)
Children in Subsidized Child Care (Birth to 3)	11305.6 (100)	891* (7.88)	920.37** (8.14)	2079.28* (18.39)	1691.96 (14.97)	1237.72 (10.95)	2597.55 (22.98)	611.71* (5.41)	1368.92* (12.11)
Children in Subsidized Child Care (3-5)	23741.76 (100)	1615.05 (6.8)	1492.32* (6.29)	4563.72* (19.22)	4008.36 (16.88)	2664.54 (11.22)	5360.18 (22.58)	1499.93 (6.32)	2502.61 (10.54)

* $p < .05$. ** $p < .01$. *** $p < .001$



Availability of child care programming was inconsistent across PZs, with more than half of the children in some regions living in a child care desert.

Further, there is a range in the children, birth to age 5, attending centers and homes across PZ (see Figure 19). Also in Figure 19, the percentage of families with children in these programs receiving subsidies was consistent across PZs at approximately 20% for children up to age 3 and 40% for children aged 3 years to 5.

Access aside, availability of child care programming was inconsistent across PZs with more than half of the children in some regions living in a child care desert (where there was less than one child care licensed slot for every three children aged 0-5 years) as shown in Figure 20. For example, over 50% of children in the Southeast and Piedmont-Triad PZ live in a child care desert.

FIGURE 19. PERCENT OF CHILDREN BIRTH TO FIVE IN EARLY CHILD CARE

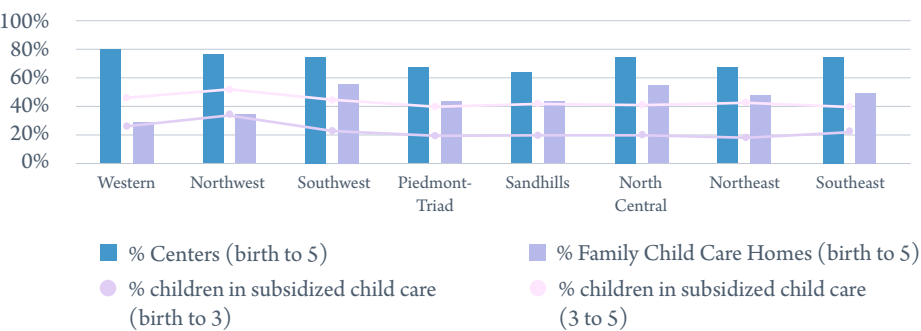
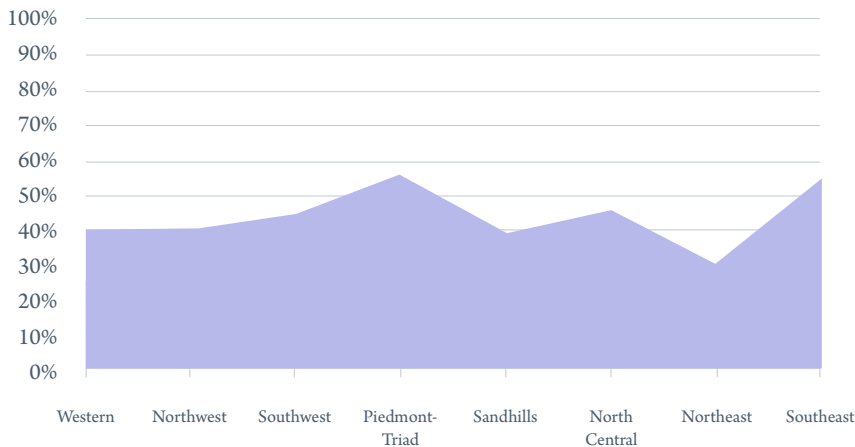


FIGURE 20. PERCENT OF CHILDREN IN CHILD CARE DESERT



CHILD CARE IMPACTS ON EMPLOYMENT

On average, the majority of survey respondents (57.9%) were employed at the outset of the pandemic (see Figure 21) with less than 15% anticipating that they would become unemployed in the following months (see Figure 22).

Low SES households were significantly less likely, 42%, than mid/high SES families to be working and were twice as likely to anticipate being unemployed in the coming months due to pandemic-related issues, controlling for race/ethnicity (See Tables 3-4). Compared to mid/high SES households, 71% of parents in low SES households were less likely to anticipate being able to work on-site in the Northwest region and 90% in the North Central region reported a likelihood of being able to work on-site (Table 5).

TAKEAWAYS: CHILD CARE IMPACT ON EMPLOYMENT

- Families’ employment was impacted by COVID-19, regardless of their SES. However, families in low SES households report more challenges than families in mid/high SES households, primarily due to the lack of child care. Half of families reported not having employer-provided child care benefits, especially for families in mid/high SES households.
- Almost 50% of low SES parents were using child care, but mostly informal care (e.g., relative, friend, or neighbor). While parents across SES groups did not differ on their reasons for using relative, friend, or neighbor (e.g., preferred, affordable, COVID-19 concern), parents in low SES households were more likely to report going to school compared to parents in mid/high SES households.

FIGURE 21. NCECF PARENT SURVEY: RESPONDENT EMPLOYMENT STATUS

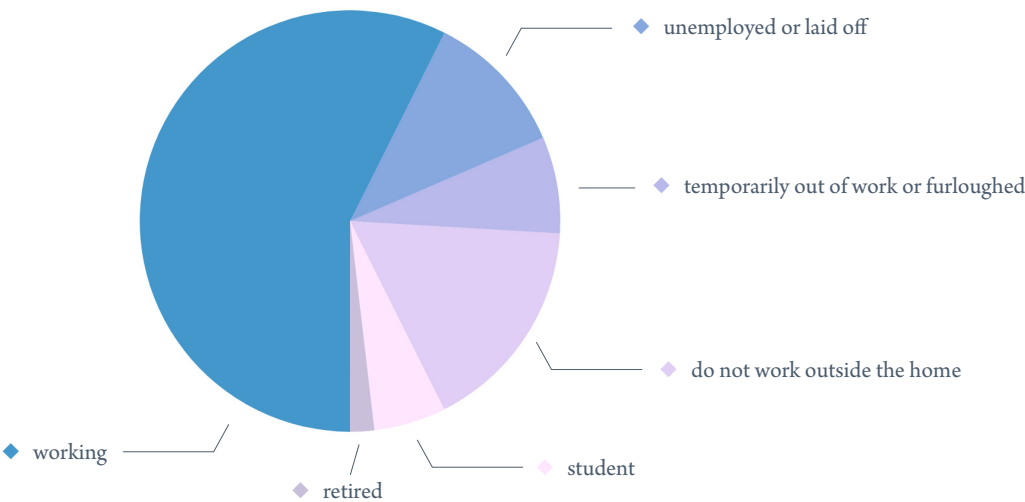


FIGURE 22. NCECF PARENT SURVEY: RESPONDENT'S ANTICIPATED WORK STATUS IN COMING MONTHS

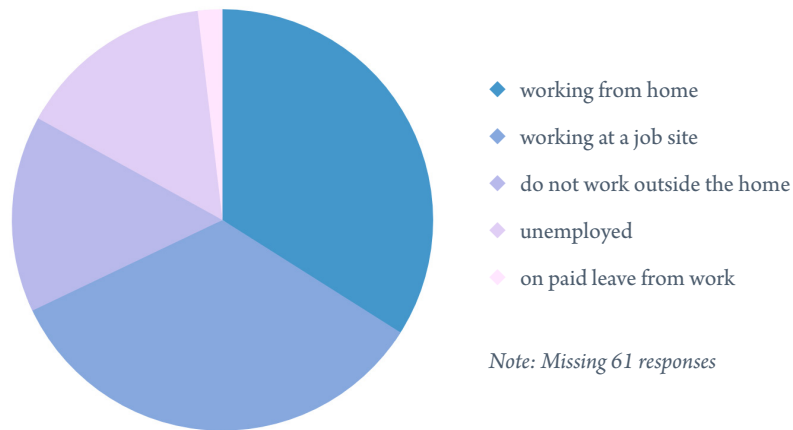


TABLE 3. LOGISTIC REGRESSIONS OF RESPONDENT'S CURRENT EMPLOYMENT STATUS, CONTROLLING FOR LOW SES AND RACE-WHITE (ODDS RATIOS)

	Working	Unemployed	Do Not Work Outside the Home	Student
Low SES	0.58***	2.53***	1.04	1.19
White	1.03	1.00	1.96**	0.34***
Observations	802	802	802	802

* $p < .05$. ** $p < .01$. *** $p < .001$

TABLE 4. LOGISTIC REGRESSIONS OF RESPONDENT'S ANTICIPATED EMPLOYMENT STATUS, CONTROLLING FOR LOW SES AND RACE-WHITE (ODDS RATIOS)

	Work From Home	Paid Leave Work	Unemployed	Do Not Work Outside the Home
Low SES	0.61**	1.03	2.09**	0.92
White	0.77	0.13**	1.12	1.86*
Observations	741	741	741	741

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

TABLE 5. LOGISTIC REGRESSIONS OF RESPONDENT'S ANTICIPATED EMPLOYMENT STATUS AS WORKING ON-SITE, CONTROLLING FOR LOW SES AND RACE-WHITE, VARIATION ACROSS PROSPERITY ZONES (ODDS RATIOS)

	Western	Northwest	Southwest	Piedmont-Triad	Sandhills	North Central	Northeast	Southeast
Low SES	0.81	0.29*	1.76	0.75	0.37	1.90*	1.34	1.04
White	2.24	1.82	0.77	0.34**	0.57	1.00	4.32	1.60
Observations	53	65	125	123	70	195	45	65

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Findings from the NCECF survey data showed that working parents in mid/high SES households were significantly more likely than parents in low SES households to have their work impacted by the pandemic, including being more likely to lose their job as shown in Figure 23. Yet, there was considerable variation across the state. When race/ethnicity was accounted for, working parents in low SES households were significantly more likely than parents in mid/high SES household to have their jobs impacted in the Northwest region (5 times more likely) and in the North Central region (2 times more likely) (see Table 6).

FIGURE 23. NCECF PARENT SURVEY: SES BY COVID-19 IMPACTS ON EMPLOYMENT

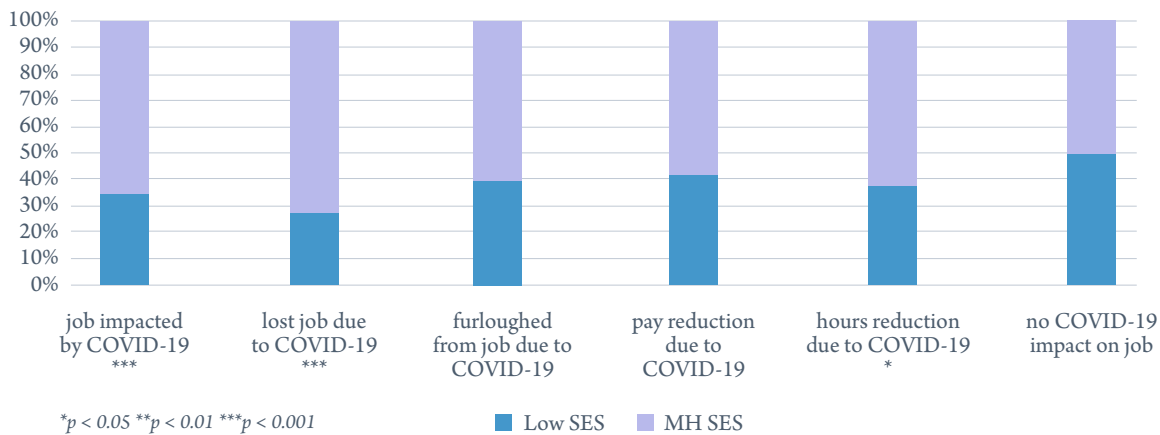


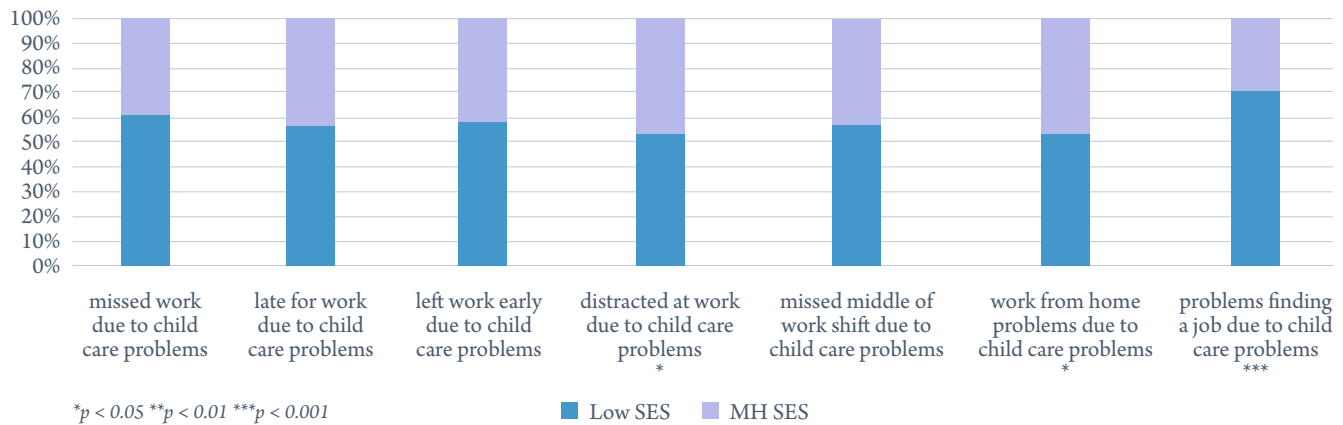
TABLE 6. LOGISTIC REGRESSIONS OF JOB IMPACTED BY COVID-19, CONTROLLING FOR LOW SES AND RACE-WHITE, VARIATION ACROSS PROSPERITY ZONES (ODDS RATIOS)

	Western	Northwest	Southwest	Piedmont-Triad	Sandhills	North Central	Northeast	Southeast
Low SES	2.80	5.43**	1.42	1.61	2.00	2.27**	2.24	1.75
White	0.67	0.37	1.28	0.86	1.26	0.61	0.81	1.73
Observations	59	70	142	134	78	201	47	71

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Child care problems during the pandemic also impacted jobs. Figure 24 shows that parents in low SES household parents had more distractions and difficulties finding jobs, due to child care problems, than parents in mid/high SES households.

FIGURE 24. NCECF PARENT SURVEY: SES BY CHILD CARE IMPACTS ON EMPLOYMENT DURING COVID-19



Approximately half of the survey respondents (50.8%) did not have employer-provided child care benefits. For those who did, low-SES working parents were more likely than those with higher-SES to take paid family leave, emergency leave, and paid sick leave as shown in Figure 25. However, when race/ethnicity was adjusted for in the analysis, parents in low SES households were 64% less likely to take paid family leave and 70% less likely to take paid sick leave. There were no differences between groups on preferences of benefits which included flexible working hours (41%), on-site child care (40%), subsidized child care (35%), flexible spending accounts (27%), and child care referral services (23%) (see Figure 26).

FIGURE 25. NCECF PARENT SURVEY: SES BY EMPLOYER-PROVIDED CHILD CARE BENEFITS

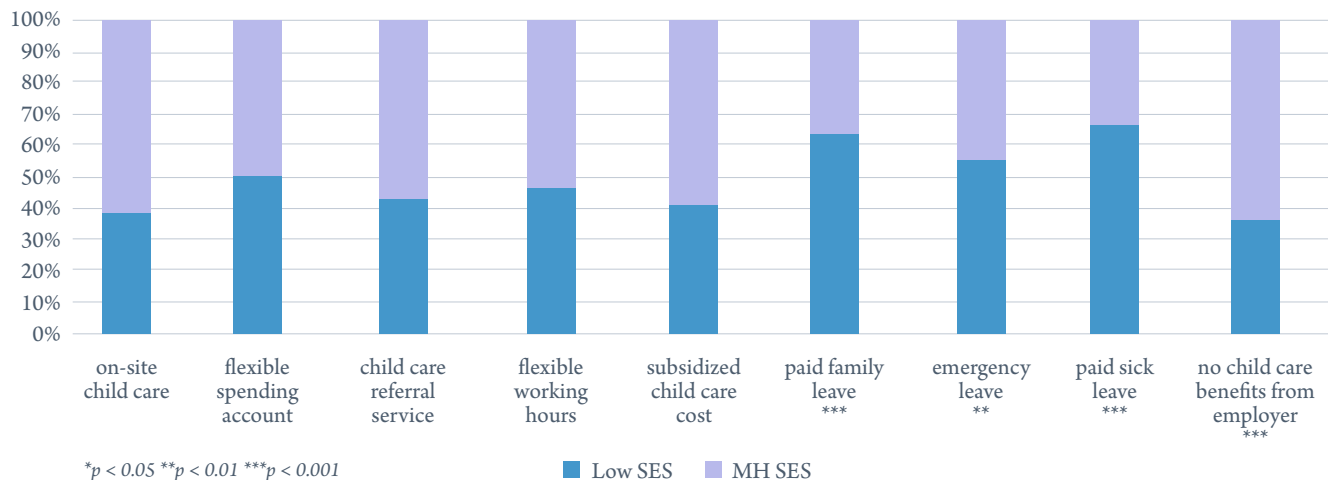
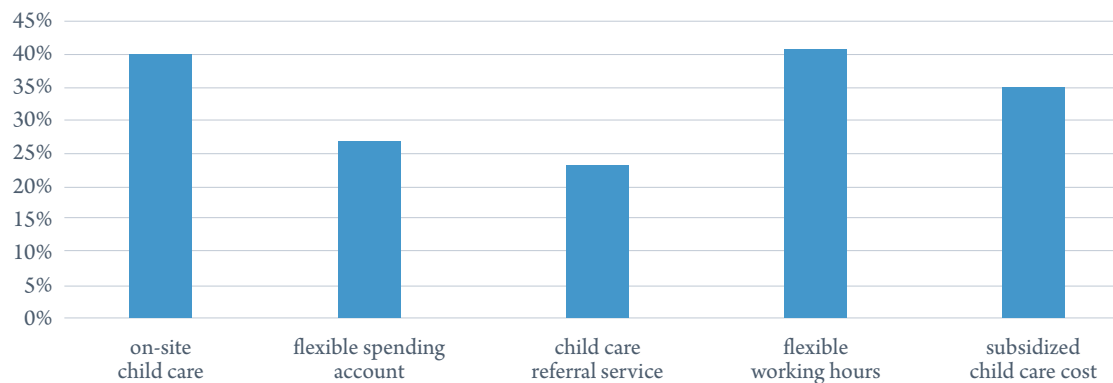


FIGURE 26. NCECF PARENT SURVEY: CHILD CARE BENEFITS PREFERENCE



Prior to the pandemic, 47% of working parents in low SES households used child care other than a caregiver/guardian (see Table 7). Compared to parents in mid/high households, they were less likely to use private, center-based, formal child care and more likely to participate in Head Start, as shown in Figure 27. Also, parents in low SES households were more likely to be going to school than parents in mid/high households and had no available regular child care. Lack of child care is an influencing factor for preferring to use child care by a relative, friend, or neighbor (see Figure 28).

TABLE 7. CHILD CARE PREFERENCES PRE-COVID-19

	Full Sample — N (%)	Low SES — N (%)	MH SES — N (%)	Sig. Diff. <i>p</i> Value
Used non-guardian child care before COVID-19	412 (51.37)	194 (47.09)	218 (52.91)	0.007**

p* < 0.05 *p* < 0.01 ****p* < 0.001

FIGURE 27. NCECF PARENT SURVEY: SES BY TYPE OF NON-GUARDIAN CHILD CARE BEFORE COVID-19

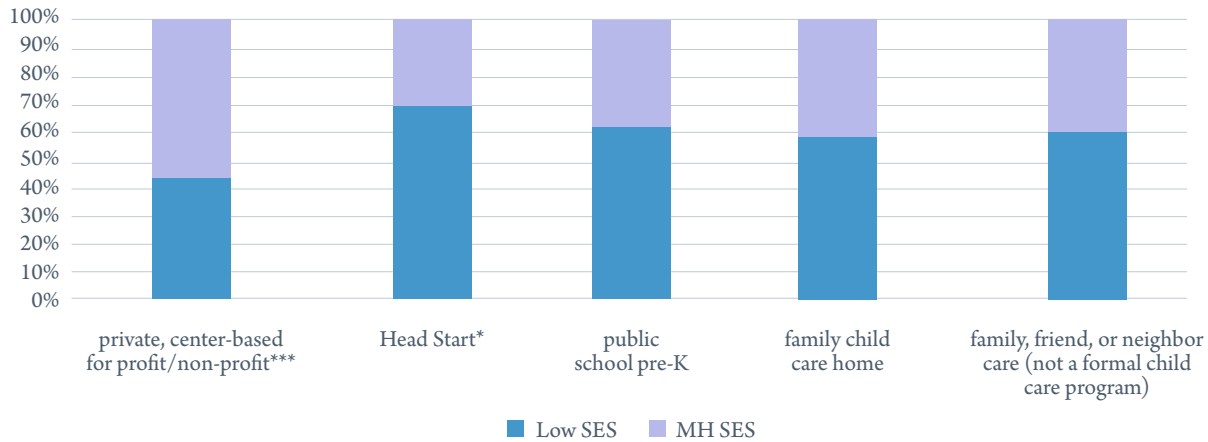
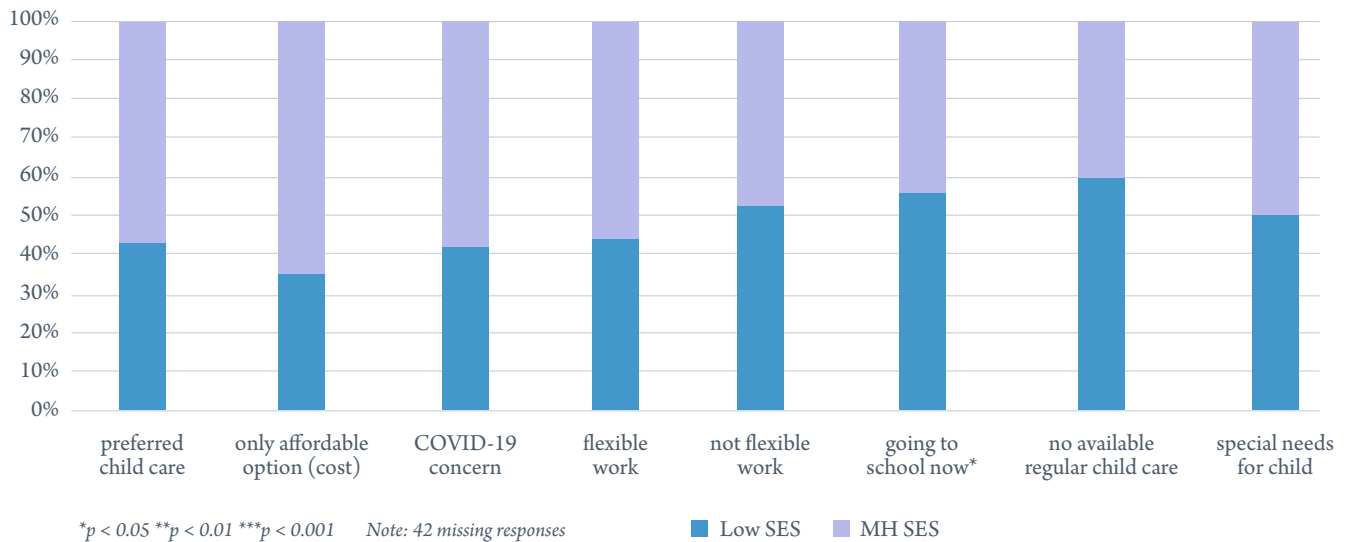


FIGURE 28. NCECF PARENT SURVEY: SES BY REASON FOR CHILD CARE BY A RELATIVE, FRIEND, OR NEIGHBOR



COVID-19, EMPLOYMENT, AND CHILD CARE: FOCUS ON MOTHERS

As shown in Figure 29, women make up nearly half of the local regional population. However, 75% (n=593) of the NCECF survey respondents were women, among whom 60% were in low SES households. Table 8 summarizes their key characteristics. Furthermore, women in low SES household were **more likely to be students**, compared to women in mid/high SES households.

FIGURE 29. NC FEMALE POPULATION

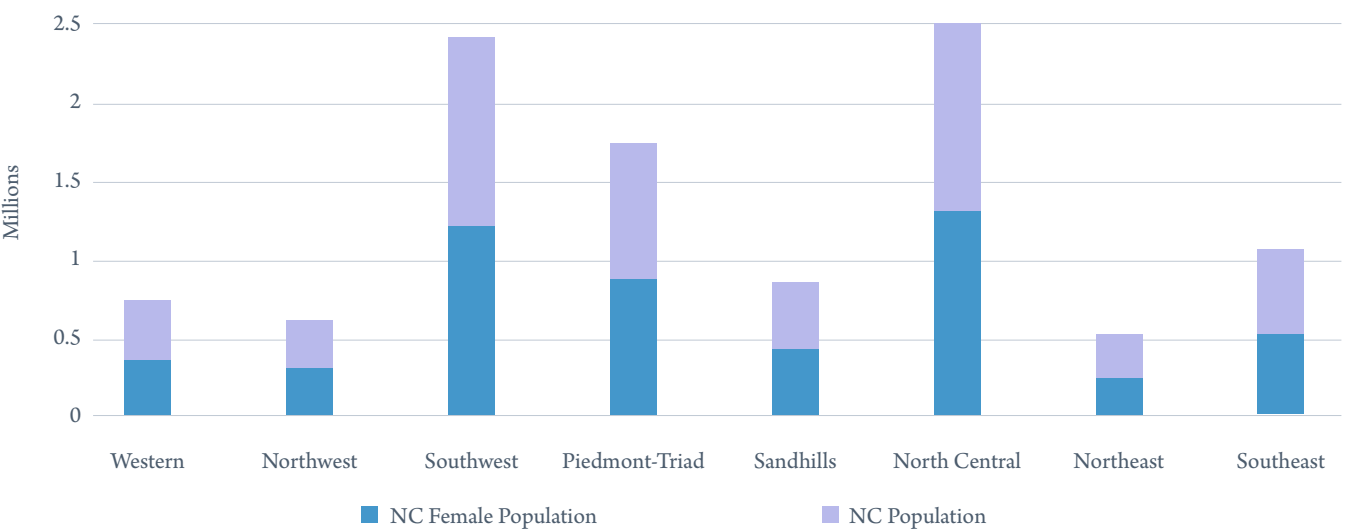


TABLE 8. NCECF PARENT SURVEY: LOW-SES FEMALES

Demographics	<ul style="list-style-type: none"> Have higher odds of living in rural areas.
Employment	<ul style="list-style-type: none"> Are more likely to be unemployed and/or have an unemployed spouse. Are more likely to be a student and/or not working outside of the home. Anticipate more often that they will be unemployed related to pandemic and child care difficulties. Are less likely to receive employer-provided child care benefits.
Child Care Utilization	<ul style="list-style-type: none"> Are less likely to utilize private, center-based, or for profit/non-profit child care methods although this is the preference. Are more likely to use family, friends, and neighbor care because of flexible hours.

IMPLICATIONS

While COVID-19 has impacted all North Carolinians, the impacts are felt differently based on one's social and economic standing.

While COVID-19 has impacted all North Carolinians, the impacts are felt differently based on one's social and economic standing. **North Carolina's continued economic recovery from COVID-19 will require sustained attention to regional variations in child care availability and access to ensure robust workforce participation¹⁷ and educational attainment,¹⁸ especially among families with low SES,^{19,20} and working women in low SES households.²¹**

It is expected that due to differential economic and social conditions across the state, the impact and hence recovery from COVID-19 may vary; however, there is a need to ensure that vulnerable regions with structural inequities (e.g., poverty, housing, transportation) must be especially attended to.

Regional differences aside, there is a need for ensuring a robust child care system that is available and accessible to meet the diversity of families' needs, especially for parents of infants and toddlers. Furthermore, this report highlights the role of employers to ensure families with young children have employer-sponsored benefits, such as flexible working hours, on-site child care, flexible spending account, and encouragement for families to use available benefits (e.g., paid family leave, emergency leave, child care referral service).

To complement the findings of the report herein, future data collection and research on child care is needed to better understand:

- Supplemental household assets including other adults and older adolescents, living in the home, who can assist with child care and finances.²²
- Existing child care arrangements for children with special needs.
- Flexible child care preferences of those working non-standard shifts or hours, including evenings and weekends.²³
- Parental need for multi-age child care; care and workplace policies in the first months of life for newborns;²⁴ and extended, on-site child care to accompany federal and state subsidized preschool programs, such as Head Start and early Head Start.²⁵

APPENDIX A: METHODS

NCECF PARENT SURVEY

SAMPLE

Our analysis uses NCECF survey data of 802 working parents of children aged up to 5 in North Carolina. The representative sampling frame covers all working parents with young children across the state. The survey was administered in October 2020 and therefore relates to families experiencing high rates of community infection from the coronavirus. Across 96% of the 802 respondents, at least one family member within each household is working or looking for work. Overall, working parents with young children are distinct from the general working population in terms of age and education: they are younger than the working population; and have higher education levels. The characteristics of the survey respondents correspond closely to state-wide characteristics [1].

CONSTRUCTING LOW SOCIOECONOMIC STATUS VARIABLE

Several measurements are included to characterize low-SES, including the federal poverty level set by the Census Bureau, use of public assistance, and highest education level as high school graduate or less. The parent survey collected information on 2019 annual income and 2020 half year's income. Poverty levels were then created for both 2019 and 2020 and averaged.

PUBLIC DATA SOURCES

COMMUNITY PROFILE DATA

Distress Tiers

The county distress tiers data from NC Department of Commerce were reported in December 2020. It uses 4 factors to calculate average unemployment rate, median household income, percentage growth in population and adjusted property tax base per capita. <https://www.nccommerce.com/grants-incentives/county-distress-rankings-tiers>

Social Determinants of Health

The data are from US Census American Community Survey 5 Year Estimates, 2016-2020, as reported by the NC Department of Health and Human Services. The Social Determinants of Health (SDOH) are the economic, social and environmental conditions, which affect a wide range of health outcomes. The mean z-scores reported is the average of all county z-scores in each prosperity zone. Z-scores were multiplied by negative one to make the interpretation easier of figure easier. A lower score represents a worse outcome.

COVID-19 Rates

The data are from Johns Hopkins University & Medicine in October 2020. The COVID-19 total case percentages were calculated by the ratio of number of infected people and the total population. The COVID-19 related death percentages were calculated by the ratio of number of COVID related deaths and the total population.

Labor Market Fit

- The data on “unable to work due to covid” was pulled from the Current Population Survey (CPS) COVID related program. It is a national sampling program so not every prosperity zone is available. We used the data collected in October 2020.
- The unemployment rate was defined as the ratio of unemployed to the civilian labor force expressed as a percent, i.e., 100 percent unemployed/labor force. Unemployed persons included are all persons who had no employment during the reference week, were available for work, except for temporary illness, and had made specific efforts to find employment some time during the 4-week period ending with the reference week. The data were from Local Area Unemployment Statistics (LAUS) and collected in October 2020.
- The sector employment percentages are from NC Department of Commerce and they are 2020 annual estimates. The sectors are government and non-government or categorized by agriculture, goods, services and self-employed. It was calculated by the ratio of employment in that sector and the total employment.

COMMUNITY PROFILE DATA

North Carolina Early Childhood Education

These data are from NC Department of Health and Human Services, Early Childhood Education (NC ECE) and they were collected in December 2020. It was calculated as an annual frequency.

APPENDIX B: TABLES

Tables available upon request.

Table 1.	Demographics of working parent respondents to NC ECF survey	Table 12.	Logistic regressions of job impacted by COVID-19, controlling for low SES and race-white, variation across prosperity zones (odds ratios)
Table 2.	Logistic regressions of parental education level, controlling for low SES and race-white (odds ratios)	Table 13.	Child Care Impacts on Employment Before COVID-19 Pandemic
Table 3.	Logistic regressions of parenting arrangement, controlling for low SES and race-white (odds ratios)	Table 14.	Logistic regressions of child care impacts on employment before COVID-19, controlling for low SES and race-white (odds ratios)
Table 4.	Logistic regressions of locale, controlling for low SES and race-white (odds ratios)	Table 15.	Employer-provided child care benefits
Table 5.	SDOH categories and subcategories by prosperity zone (mean z-scores)	Table 16.	Child Care Benefits Preferences
Table 6.	2020 Distress tiers by prosperity zone (county mean)	Table 17.	Logistic regressions of employer-provided benefits, controlling for low SES and race-white (odds ratios)
Table 7.	Current and anticipated employment status	Table 18.	COVID-19 case, death, and vaccination rates by prosperity zone
Table 8.	Logistic regressions of respondent's current employment status, controlling for low SES and race-white (odds ratios)	Table 19.	Unemployment by prosperity zone
Table 9.	Logistic regressions of respondent's anticipated employment status, controlling for low SES and race-white (odds ratios)	Table 20.	Labor market sector employees by prosperity zone
Table 10.	Logistic regressions of respondent's anticipated employment status as working on-site, controlling for low SES and race-white, variation across prosperity zones (odds ratios)	Table 21.	Child Care Preferences Pre-COVID-19
Table 11.	Impacts on employment in the COVID-19 pandemic	Table 22.	Child Care Preferences Before COVID-19
		Table 23.	Child Care Preferences During COVID-19
		Table 24.	Child Care Types by Prosperity Zone
		Table 25.	Child Care Deserts by Prosperity Zone

APPENDIX C: NC CHILD CARE LANDSCAPE²⁶

WHAT PUBLIC LEARNING OPTIONS ARE AVAILABLE?

FIGURE A. NC PUBLIC LEARNING OPTIONS

Program	What	# Served	# Eligible
Smart Start	NC's statewide infrastructure for birth through five child development	N/A	N/A
Child Care Subsidy	Affordable child care for working families	70,201 (current)	50,742 waiting list ~305,000 eligible
Early Head Start	Comprehensive child development and family support services to low-income infants and toddlers and their families, and to pregnant women	4,214	~80,100
Head Start	Preschool for 3- and 4-year-olds	17,845	~ 63,300
NC Infant and Toddler Program	Promotes development of birth - 3 with special needs	20,353 (2016/2017)	N/A
Preschool Exceptional Children	Promotes the development of preschool-age children with special needs	16,107	N/A
Exceptional Children	Ensure that students with disabilities develop in the least restrictive environment	187,935	N/A
NC Pre-K	Prekindergarten for at-risk 4-year-olds	28,365 (2017)	4,690 waiting list ~ 63,900 eligible
K - 3rd Grade	Public education	1,072,959 (2015/2016) K-8 incl. charter	N/A

WHO OVERSEES PUBLIC EARLY LEARNING?

North Carolina Department of Health and Human Services (DHHS) and the Department of Public Instruction (DPI) oversee public early learning. Both Departments have additional programs that support children's early learning. For example:

- DHHS regulates child care facilities, oversees the Child and Adult Care Food Program which services child care centers and homes, and manages School Health Consultants.
- DPI develops and implements the Kindergarten Entry Assessment, oversees implementation of Read to Achieve, and manages Early Learning Sensory Support and Title I Preschool.

The federal government oversees Head Start programs in the state.

FIGURE B. OVERSIGHT OF NC PUBLIC LEARNING

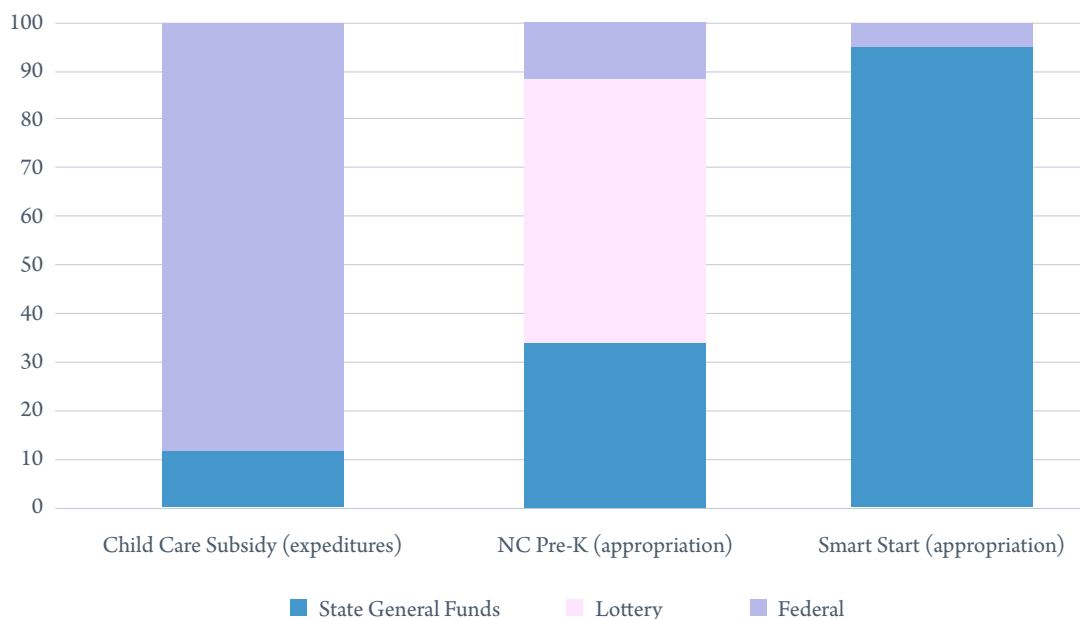
Department of Health and Human Services	Department of Public Instruction	Federal Government
Child Care Subsidy	K-12 System	Early Head Start**
Smart Start*	Preschool Exceptional Children	Head Start**
NC PreK	Exceptional Children	
NC Infant and Toddler Program		

*While funds flow through the Department of Health and Human Services, Smart Start is administered by The North Carolina Partnership for Children

**Funds flow from the Federal government directly to local grantees

HOW DOES PUBLIC EARLY LEARNING FUNDING FUNCTION?

FIGURE C. PUBLIC EARLY LEARNING FUNDING FOR FY 2016-17



North Carolina government spending in the state is approximately \$51 billion annually (including federal funds). In North Carolina—and in most states—the federal government is a significant source of birth-through age five funding sources. State funding for birth-through-five and K-12 education make up the smallest and largest proportions of the NC budget respectively.

Child care subsidies in NC are provided to eligible families through a regionally administered voucher system. Each NC county receives an allocated amount of funding determined by legislation annually and a local representative may determine whether or not to accept that amount. Some counties may choose not to receive and distribute funds for tax implications.

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The NC Early Childhood Foundation promotes understanding, spearheads collaboration, and advances policies to ensure each North Carolina child is on track for lifelong success by the end of third grade.

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