



**DELTA HEALTH
ALLIANCE**

**Sunflower County
Head Start/Early Head Start
Needs Assessment**

Spring 2021

www.dhaheadstart.org

Table of Contents

Executive Summary	3
Introduction	3
Demographics and Population Trends	5
Social & Economic Status	15
Employment Patterns	23
Medical & Environmental Health Issues	27
Housing Patterns	35
Transportation Patterns	39
Public School Patterns and Childcare	43
References	47

Executive Summary

The Delta region and Sunflower County are unique geographically, historically, and demographically. Population loss combines with global economic changes and nationwide cultural issues like mass incarceration to exacerbate and preserve historic racial inequalities, so that almost all children in poverty are Black and most Black children are in poverty. Childcare is vital in the county to close health and education gaps and also to allow parents to work. Programming currently appears to be located where the children in need live, and including this program's sites, there is enough capacity to meet the need in the county.

Issues of special consideration include: flexible scheduling for children whose parents combine multiple service jobs with odd hours; coordination with or provision of transportation services, there being no public transportation infrastructure in the county and families being heavily reliant on cars; continued coordination with healthcare providers for screenings and services for participating children; continued provision of healthy meals, as many children live in food deserts on top of lacking money for fresh foods; recreation and exercise indoors or in safe, shaded areas, as children need play but the Delta environment is especially harsh to outdoor recreation and parents' awareness of crime can keep children indoors much of the time.

Methodology

In each section of this report, we move sequentially by topic. In each topic, we start with an overview of the service area (county) and how it compares with higher levels of geography, using public secondary data. We try to make connections between items and explain trends here where possible. Next, we examine breakdowns within the county using secondary data, by subgroup and by different geographical areas inside the county, including maps and charts. Finally, we include relevant program data where applicable. We add a summary and SWOT analysis for each section.

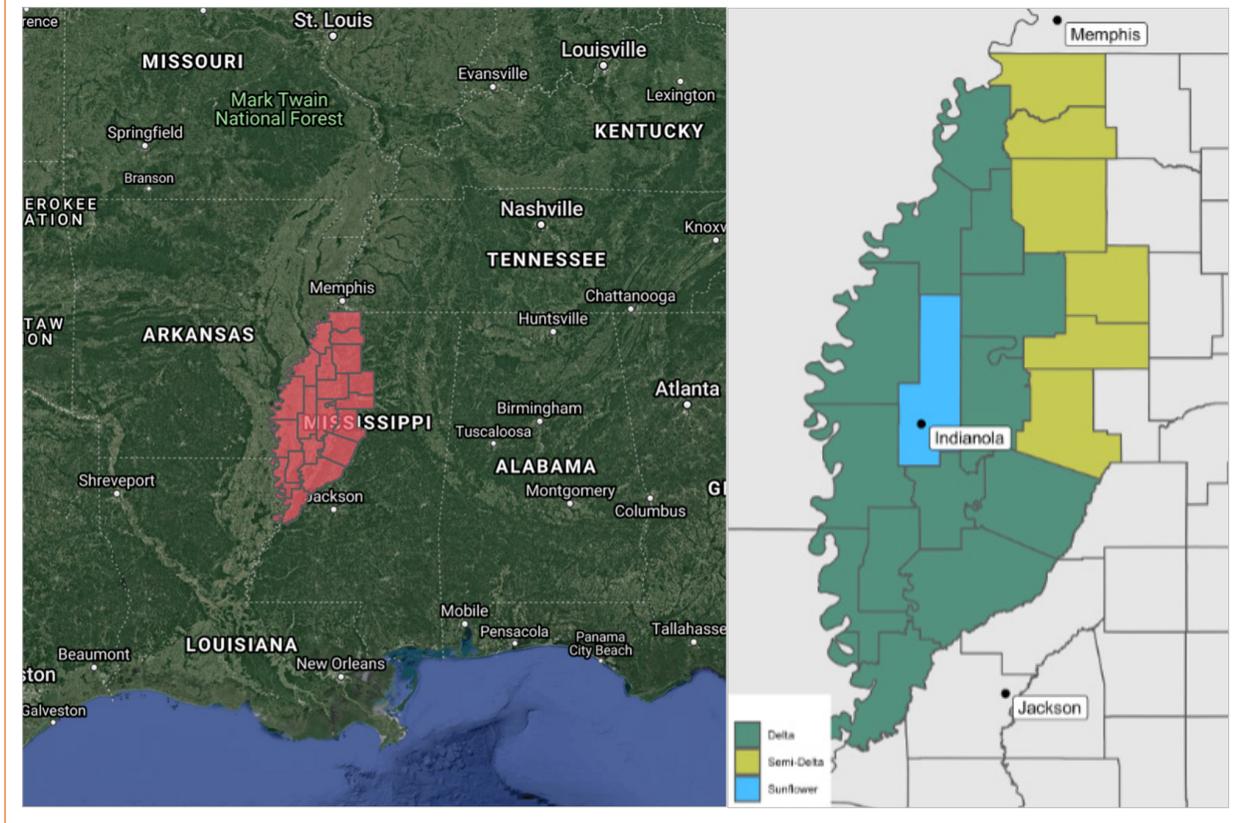
We begin with a quick historic, descriptive overview of the region and the communities in the service area. The next section examines socioeconomic trends in the region, including an analysis of local poverty and racial representation. After that comes employment patterns, with a focus on job opportunities and households with young children. Next is a section on health outcomes, healthcare access, and environmental risks in the county. Following that is a section on housing patterns for county residents and quality and nature of housing. Then, we examine transportation patterns and access in the county. Finally, the last section looks at the quality of schools in the county, the availability of childcare, and educational attainment in the population.

Introduction

Sunflower County, Mississippi is located near the geographic center of what is known as the Mississippi Delta region, a large alluvial plain in the northwest corner of the state of Mississippi. The Delta, covering about 7,000 square miles of land area, encompasses more land than four U.S. states and is around the size of the states of New Jersey and Massachusetts (Barry, 1997:96). The region has strong geographic borders, with the Mississippi River to the west and northwest and a series of bluffs to the east and southeast. Once comprised of primarily hardwood forests and cypress swamps, the landscape is now dominated by miles of flat, often uninterrupted farmland, with small towns scattered throughout.

The geography of the Delta strongly influenced the political economy that developed in the region following the dislocation of Creek tribes, who had used the land primarily for hunting and gathering from settlements on higher ground, and the westward expansion of U.S. settlers (Stahr, 2018). The labor and capital required to clear the forests and drain the swamps of the Delta made it unsuitable for independent, small hold farming, not to mention the hazards of seasonal floods of the Mississippi River and its tributaries (Baptist, 2016). But, for those with enough money and manpower to exploit economies of scale and withstand floods, the land was extremely fertile and became the most productive region in the world for growing cotton for several decades (*ibid.*). While much of the rest of the state of Mississippi was settled by small hold and tenant farmers of Scots-Irish, German, and Acadian descent, traveling southwest from Appalachia and northeast from Louisiana, the wealthy planters of the Delta region were primarily of English descent, from areas of coastal plains like Virginia, South Carolina, and Georgia (*ibid.*). And, because the enslaved were the largest source of wealth in the antebellum South, and performed the coordinated, large-scale labor required to drain Delta swamps and plant and pick vast sums of cotton, people of African descent soon became the largest demographic group in the region.

Figure 1. Mississippi Delta region.
Figure 2. Sunflower County within the region.



Since the early 20th century, the Delta region has been caught at the intersection of two major global and national trends: the depopulation and marginalization of rural areas, and the legacy and continuation of racial inequality (Cobb, 1992). Depopulation has come in waves. The First and Second Great Migrations happened during almost a century of Jim Crow exclusion of Black residents from economic and political life in the region. Since the Civil Rights Movement, the region has continued to lose population as rural communities nationwide have struggled to shift from agricultural to service, industrial, or tech economies, and locals have sought more secure livelihoods elsewhere (*ibid.*). At the same time, mass incarceration and episodic recessions have disproportionately affected communities of color nationwide and, as a result, have disproportionately affected areas like Sunflower County that are majority Black.

In this assessment, we examine local measures and historical trends to determine specific areas of strength and need in the community and identify local resources leveraging those strengths or meeting those needs. We do this to better understand the roles the Sunflower County Head Start/ Early Head Start (HS/EHS) and Early Head Start Child Care Partnership (EHSCCP) need to play as one more vital resource in the community meeting needs and increasing collaboration between other resources.

Demographics and Population Trends

Summary: The Mississippi Delta region is unique nationally for its racial makeup, rural character, and current trend of population loss. Sunflower County exhibits all of these qualities, along with high levels of segregation within its cities and towns. Because few white children in the county qualify for EHSCCP and HS/EHS programs, the funded sites lack racial diversity as well. EHSCCP and HS/EHS sites are reaching local populations, with the possible exception of Hispanic children.

Strengths: EHSCCP and HS/EHS sites have enrolled basically all qualifying Black children in the county, and all concentrations of children appear to have a site close by.

Weaknesses: The sites lack racial diversity, mostly corresponding to economic realities in the community.

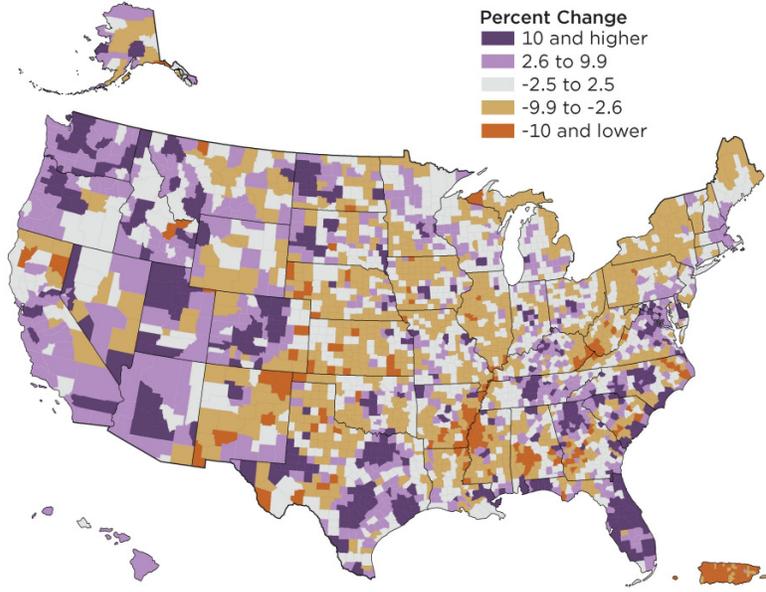
Opportunities: There appear to be a few Hispanic communities in need of services who are mostly unreached at this point.

Threats: Emigration and a declining birth rate mean fewer children to enroll each year. The lack of diversity in the service population could create “resentment” among other groups and cause extra risk for funding.

Sunflower County’s estimated population in 2019 of 25,110 (U.S. Census Bureau, 2019b) is spread out across about 700 square miles of land (U.S. Census Bureau, 2019a). Almost 10,000 people live within about 8.5 square miles in Indianola, the county’s largest city, with another 2,700 in Ruleville, 2,100 in Drew, and several other small towns with 1,000 to 2,000 people (U.S. Census Bureau, 2019a). The county is classified as RUCS code 7: nonmetro, not adjacent to a metropolitan area, small urban (2,500 to 19,999 population) by the USDA (2020b). This indicates both the relatively dense populations in the small towns but also the isolation of the county relative to any major metropolitan areas. The Jackson, MS metropolitan area is the closest, with Jackson being about 100 miles away. The Memphis, TN metropolitan area is the closest with a population of one million or more and is approximately 130 miles away. In the county, the land between the small towns is sparsely populated, mostly held by privately-owned, large-scale industrial farms. The Mississippi State Penitentiary holds 28 square miles (18,000 acres) at the northern edge of the county (Mississippi Department of Corrections, 2021).

The population in the county has decreased by 14.5% since 2010, from almost 30,000 to 25,000. Figure 3 shows population change in a national context, with Sunflower County as part of the orange group of counties that have lost at least 10% of their respective populations since 2010. The cluster in the northwestern corner of Mississippi almost perfectly delineates the Mississippi Delta region, and in combination with another smaller cluster on the west bank of the Mississippi River, in Arkansas, makes up possibly the largest cluster in the nation. This phenomenon, called “rural flight,” can leave rural areas struggling to sustain tax revenues, maintain community programs, and attract businesses (Pew Charitable Trusts, 2015).

Figure 3. U.S. population change by county.
Percent Population Change by County and Municipio: 2010 to 2019

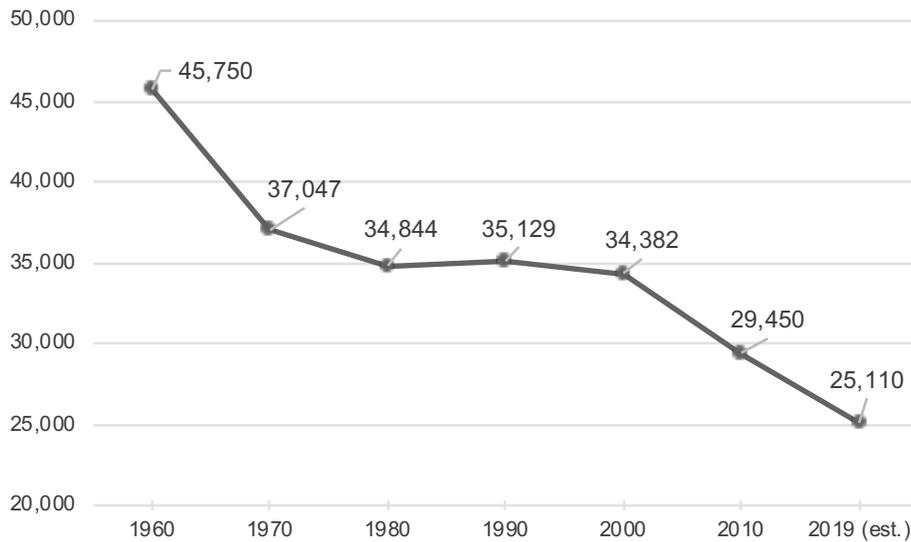


United States[®]
Census
 Bureau

U.S. Department of Commerce
 U.S. CENSUS BUREAU
 census.gov

Source: Vintage 2019 Population Estimates

Figure 4: Sunflower County Population, 1960-2019



The decline in population since 2010 has continued a trend started in 2000, shown in Figure 4. The population also dropped substantially at the height of the Civil Rights Movement, from about 46,000 in 1960 to 37,000 in 1970. Altogether, the county has lost almost half its population since 1960, a loss of more than 20,000 people. This dramatic shift in population has left Sunflower County with numerous business closures and vacant properties, problems only exacerbated by the economic impact of the coronavirus pandemic.

There are only two possibilities for a declining population: either the population is naturally decreasing (more deaths than births), or more people are moving away than moving in. At the 2000 Census, the last time migration patterns were captured on the 100% census, the heaviest net losses were to Shelby County, TN (Memphis), Washington County, MS (Greenville), and Lauderdale County, MS (Meridian), with Shelby County receiving almost double the amount of Sunflower County

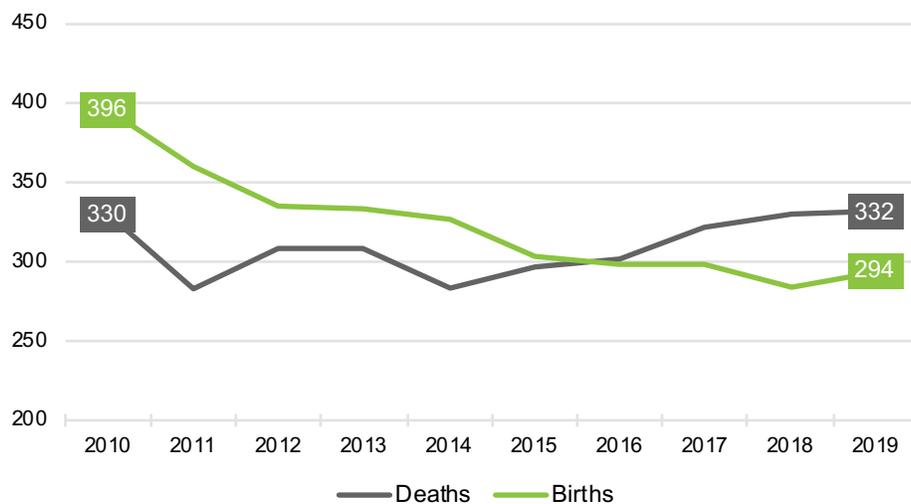
residents of any other county. Other common destinations included Marshall and Wilkinson counties in Mississippi and the Dallas, Houston, Milwaukee, and Atlanta metro areas. In the 2014-18 American Community Survey estimates, the most popular destination was Harrison County, MS (Gulfport), with large numbers also moving to Hinds (Jackson metro) and Washington counties in Mississippi (Table 1). Expectedly, a large number also moved to the Memphis, TN metro area, to Shelby County, TN and Marshall County, MS. A smaller but still substantial number moved to Wayne County, MI (Detroit) as well. Surprisingly, many also moved to tiny Lawrence County, AR, and the reasons for this are unclear as this county is both smaller in population than Sunflower County and is more than 200 miles away.

Even though Sunflower County has had net losses of residents to other counties, there have been new arrivals into the county as well. In the 2000 Census, Sunflower County received the most residents from the nearby counties of Bolivar, Washington, Leflore, Hinds, and Coahoma in Mississippi, but also has had a sizable influx of residents from Cook County, IL (Chicago) and Stone County, MS. In the 2014-18 ACS estimates, most residents who moved in came other from small counties in Mississippi. The reasons for residents' migration out of the county appear to be mostly motivated by jobs, with an inconsistent mixture of metropolitan and rural destinations. Besides having received residents from Chicago on the 2000 Census, migrants into the county come almost exclusively from even smaller and more rural counties in Mississippi. Very few new arrivals have come from outside the U.S.

Table 1. 2014-18 migration patterns (U.S. Census Bureau, 2020a)

Top 5 Emigration Destination Counties	Top 5 Migrant Origin Counties
Harrison, MS (Gulfport-Biloxi)	Leake, MS (Carthage)
Hinds, MS (Jackson)	Chickasaw, MS (Houston)
Lawrence, AR (Walnut Ridge)	Tallahatchie, MS (Charleston)
Marshall, MS (Holly Springs)	Carroll, MS (Greenwood)
Washington, MS (Greenville)	Rankin, MS (Jackson)

Figure 5: Sunflower County Crude Deaths and Births, 2010-19



Up until 2014, it appears the population loss in the county was due entirely to migration as the county maintained a natural increase each year (more births than deaths). Birth rates in the county have been low, around 11 per 1,000 since 2015 (Mississippi State Department of Health, 2021b), nearly matching the US birth rate in 2018 (11.6 per 1000) (CDC, 2021b). The crude death rate rose from 11.0 per 1000 in 2015 to 13.2 per 1000 in 2019, versus a national death rate of 8.6 per 1000 in 2018 (World Bank, 2021a). Since 2015, the number of deaths in the county has surpassed the number of births each year (Figure 5). This means that the population loss in Sunflower County is now due not only to migration, but also to natural decrease in the county. This trend will most likely be exacerbated even more in 2020 and 2021 due to the COVID-19 pandemic.

Like many counties in the Mississippi Delta region, Sunflower County has a majority minority population, with 74% of the 26,500 residents self-identifying as Black, non-Hispanic (U.S. Census Bureau, 2019a). About 24% of the county is classified as non-Hispanic white, with less than 2% of the population classified as Hispanic. The racial makeup of the county stands in stark contrast to the country overall, the Census-designated South region, and even the state of Mississippi (Table 2). The county is one of only 91 counties nationwide with a majority Black population, 13 of them in the Delta region.

Table 2. Race in national context.

Geography	% non-Hispanic Black	% non-Hispanic white	% Hispanic	% Other
Sunflower Co.	73.9%	23.9%	1.7%	0.5%
Mississippi	37.5%	56.8%	3.0%	2.7%
Census South	18.9%	57.2%	17.6%	6.3%
United States	12.3%	61.1%	17.8%	8.8%

Regionally and nationally, wealth accumulation has been hampered and by some measures prevented altogether for the population that makes up the racial majority in Sunflower County (Emmons, Kent, and Ricketts, 2019). Researchers debate the extent to which this has developed especially because of racial politics (Rothstein, 2017), but disparities remain nonetheless. Here, and below, we present race as distinct from poverty or social class, because Black poverty and white poverty can have different causes and effects in need of different remedies (Wilson, 2009). Race also matters for the benign or positive cultural traditions associated with it, such as wider kinship structures or stronger oral traditions for Black families (Lofton and Davis, 2015).

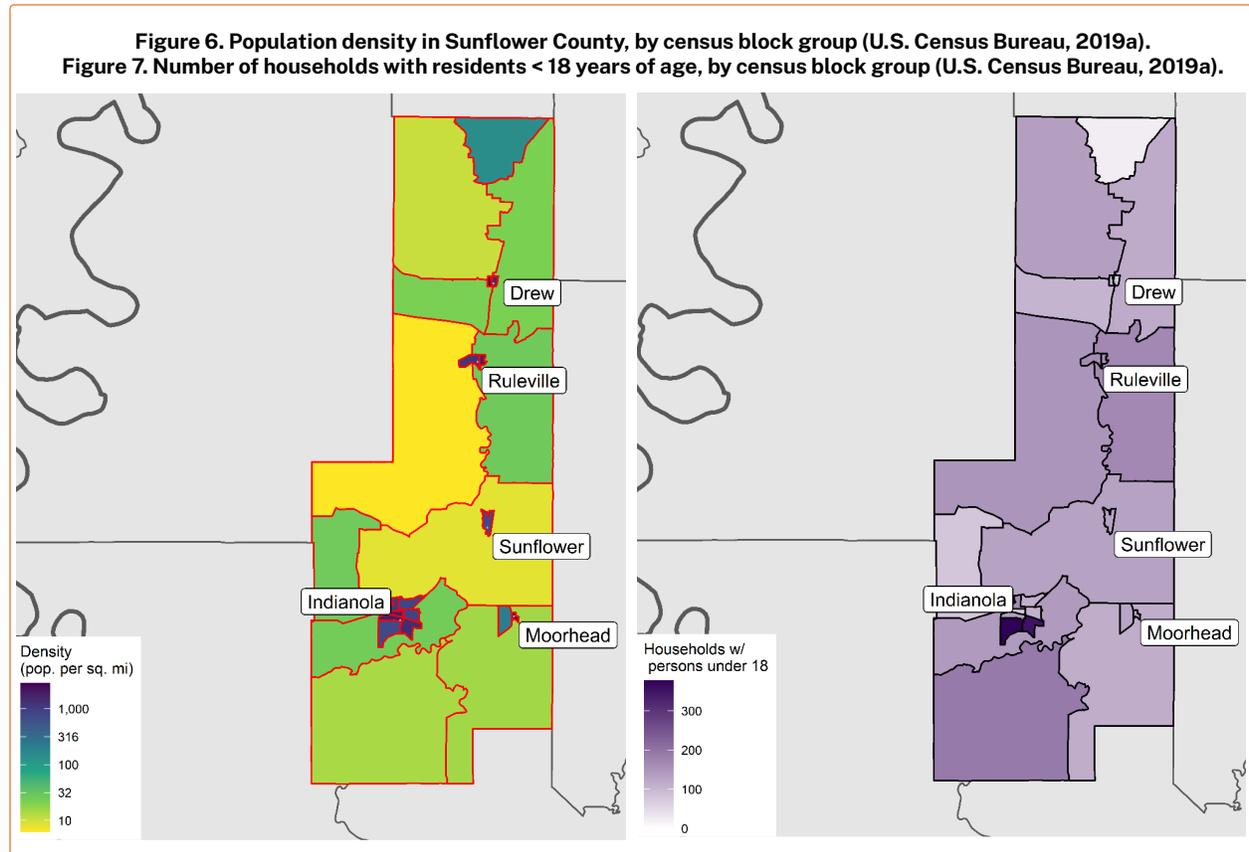
There are very few residents in the county who are not either non-Hispanic white or Black. The largest non-white, non-Black group is Hispanic, with an estimated 474 Hispanic residents in the county in 2019 (U.S. Census Bureau, 2019a). The land that is now Sunflower County was formerly the territory of the Choctaw tribe (Mississippi Band of Choctaw Indians, 2013), and there are Choctaw lands south of the county, but only 33 (+/-39) residents were classified as American Indian or Alaska Native in 2019 (U.S. Census Bureau, 2019a). There is also a tradition of ethnically Chinese people in the Mississippi Delta (Wilson, 2017), but were only 20 (+/-65) residents of Asian descent in the county in 2019. Less than 1% of the population reported speaking a language other than English at home (all Spanish), and none reported being limited English speakers. Ethnically, the Black residents in the county were entirely African-American in 2019, with no Black residents reported to have been born outside the U.S. (cite nativity table). Among white residents, the vast majority classified themselves as “American,” followed by English (659, +/-200), Irish (424, +/-151), Scots-Irish (108, +/-66), and Italian (105, +/-47) also having estimates of 100 or more (U.S. Census Bureau, 2019a). Although there is a very diverse ethnic, cultural and linguistic history in the region (National Park Service, 2017), little of this appears to have persisted in the way of a primary identity in Sunflower County, specifically.

The median age in the county is 35.3 years, with 22.9% of the population under age 18, 64.7% between age 18 and 65, and 12.4% 65 or older (U.S. Census Bureau, 2019a). The population is younger than the national average, as the national median age is 37.9 years, with 15.2% of the population 65 or older. This gives a dependency ratio in the county of 54.8, with a child dependency ratio of 35.5 and an old-age dependency ratio of 19.3. The dependency ratio is the ratio of those too young (under 18) or too old (65 and over) to work, divided by the working-age population (18 to 65) (*ibid.*). The higher these ratios are, the more overburdened the working age population is to support the older and younger groups. In Sunflower County, the ratios are much lower than in the state of Mississippi (64.3) and in the US overall (61.4), despite the declining birth rates and emigration of young adults pointed out above.

Spatial Context within the County

As noted above, Sunflower County is characterized by a small but dense county seat (Indianola) and several very small towns of fewer than 4,000 residents, with farms and scattered residences in between (Figure 6). The areas south and west of Ruleville are the most sparsely populated in the county. The rural area at the northern edge of the county, with the greatest density of any of the rural areas, is where the Mississippi State Penitentiary is located.

While Figure 6 shows where the population is most dense in the county, Figure 7 shows where children live. The southern portion of Indianola has a large concentration of households with children, with the southern edge of the county being the rural area with the most children. Ruleville and the areas surrounding it also have a decent number of households with children, despite being sparsely populated. The area housing the state penitentiary is reflected in having the lowest number of households with children.



Language within the County

According to the 2019 ACS, there were an estimated 119 households in the county in which a language other than English was spoken, with the vast majority of these households speaking Spanish in addition to English (U.S. Census Bureau, 2019a). About 70 of these households were split between the rural area around Sunflower and the rural area in the southwest corner of the county. Program leadership has observed several communities of migrant laborers corresponding to these areas. The ACS estimated only one household to be “limited English speaking,” in the community of Inverness in the southeastern corner of the county.

Racial Segregation

Figure 8 shows the racial distribution in the county, as the percent of the population that is Black, non-Hispanic in each census block group. (Recall that less than five percent of the population identifies as something other than Black or white, non-Hispanic.) All of the large, sparsely populated areas are between 55% and 80% Black (and 45% to 20% white) except the area surrounding the town of Sunflower, at 43%, and the two areas west and east of Ruleville, at 20% and 82%, respectively. The two rural areas with a whiter population are also the most sparsely populated in the county. Residential segregation is much more pronounced inside the towns. Drew, Ruleville, and Moorhead each have one yellow area alongside light green areas, with the yellow areas being 90% Black or higher, and the light green areas around 70%. In Indianola, the top two areas of light green are 84% and 71% Black, and the bottom three areas in yellow are almost 100% Black, with two blue areas in-between being around 30% Black.

Figure 8. Non-Hispanic Black population percentage, by census block group (U.S. Census Bureau, 2019a).

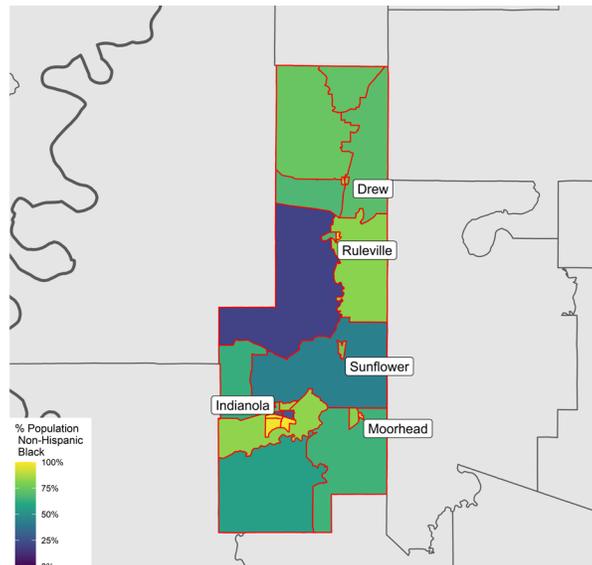


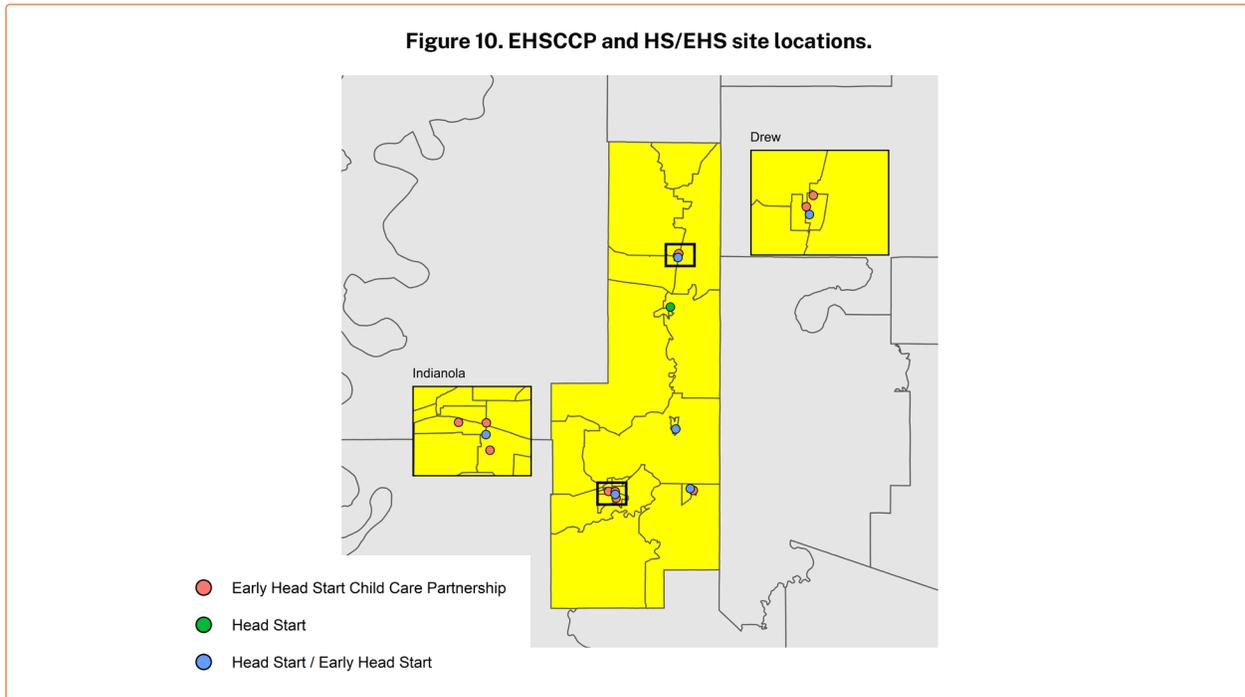
Figure 9 is a compilation of maps of the towns in the county from the Racial Dot Map project from the University of Virginia (Weldon Cooper Center for Public Service Demographics Research Group, 2017). These maps represent each person as one dot, with green dots representing Black residents, and blue, red, and orange representing white, Asian, and Hispanic residents, respectively. The blue swath through the middle of Indianola shows the whiter areas, but the most intense segregation is in the south side of town, with almost exclusively Black residents. The smaller communities appear slightly more integrated, with white residents skewing to the west in Drew and Sunflower and to the southwest in Moorhead. The densely populated area with a mixture of blue and green dots in Moorhead is Mississippi Delta Community College.

Males and females are distributed fairly evenly in the county, with the exception of the areas around the state penitentiary in the northern part of the county, which are heavily male.



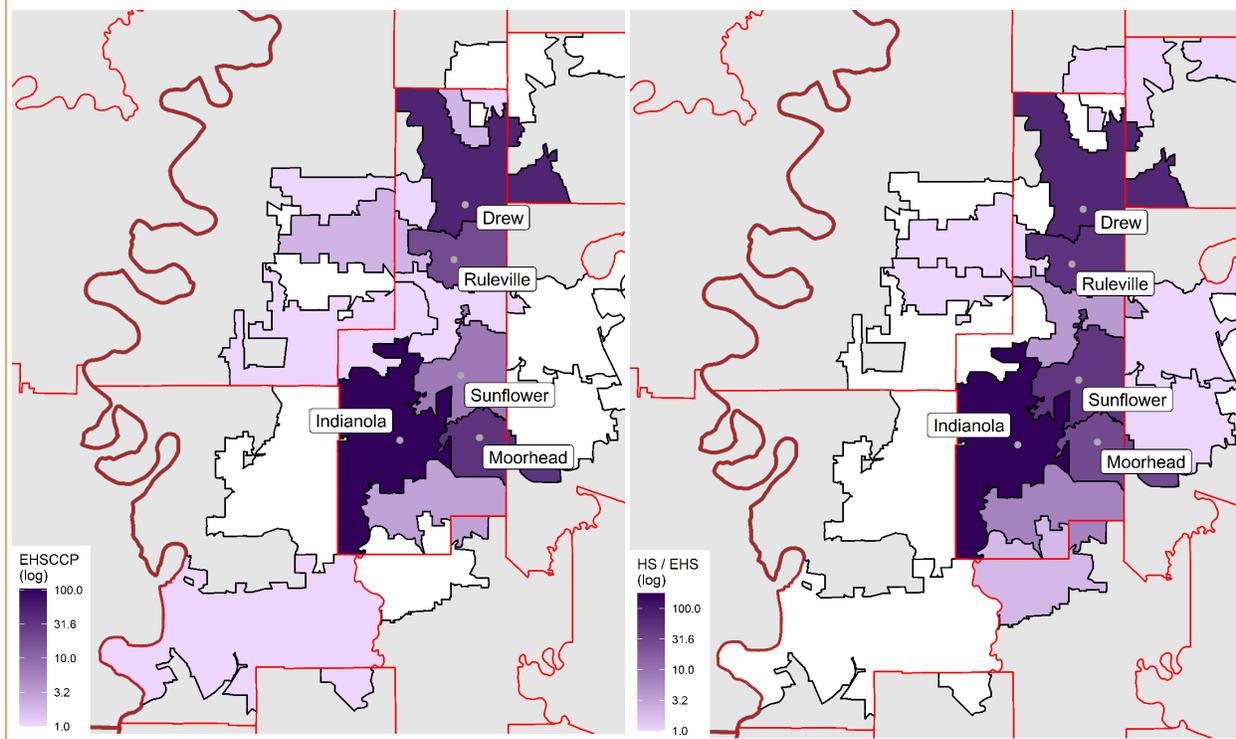
Participants

Delta Health Alliance (DHA) administrates two different groups of Head Start/Early Head Start programs: directly administered programs (HS/EHS) and the Sunflower County Early Head Start Child Care Partnership (EHSCCP), a community partnership. The six childcare providers in EHSCCP enrolled 227 children at some point in the 2019-20 school year, consistent with past years (242, 260, and 239 in 2016, 2017, and 2018, respectively). The Early Head Start and Head Start programs enrolled 396 children in 2019-20, their first year. Figure 10 shows the locations of EHSCCP and HS/EHS programs by type of site. All of the HS/EHS sites housed both Head Start and Early Head Start, except Ruleville HS which was Head Start only.



Figures 11 and 12 show the location of the participants in each group of programs, by ZIP code. The vast majority live in the area around Indianola, also the highest concentration of sites. The ZIP code surrounding Drew has the second-most participants for both EHSCCP and HS/EHS, a little less than half as many as in Indianola for each. For EHSCCP, the Ruleville and Moorhead ZIP codes have about 30 children each, and Sunflower has only seven, with individual children popping up in other scattered ZIP codes at the edge of, and even outside, the county. In the HS/EHS programs, about 50 children lived in the Ruleville and Sunflower ZIP codes, with 29 in and around Moorhead. A handful of children were located in Leflore, Tallahatchie, and Bolivar counties. Where the children live closely matches the locations of the sites of each group of programs: where EHSCCP has no site in Sunflower, it has few participants in that ZIP code, but the HS/EHS group had nearly 50 children from that area.

Figure 11. Density of EHSCCP participants by ZIP code (Indianola = 104).
Figure 12. Density of HS/EHS participants by ZIP code (Indianola = 177).



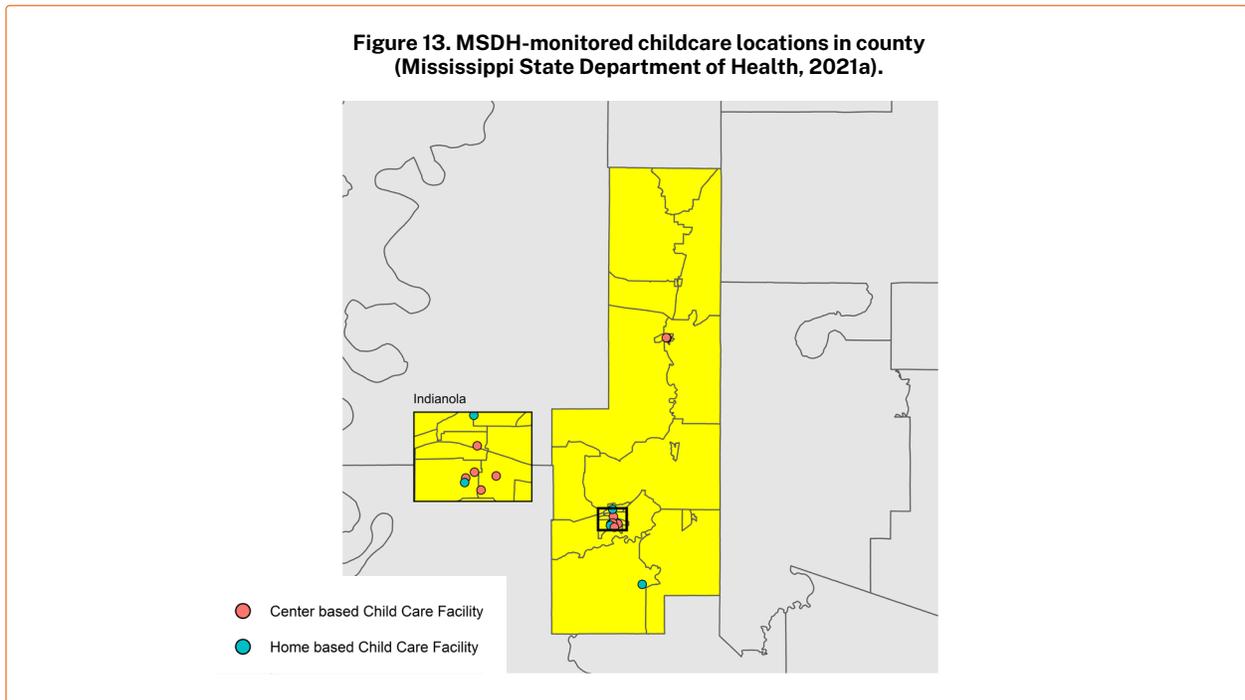
In 2019-20, there were only two non-Black enrollees at EHSCCP sites, out of 226 children (0.8%): one Hispanic and one “other” (one was unknown). At the HS/EHS sites, eight children were classified as “multi-racial” (2.0%) and nine as Hispanic (2.3%); another 376 were Black, non-Hispanic (three unknown). The children have been mostly evenly distributed by sex, 53% male for EHSCCP in 2019-20 and 54.5% female for HS/EHS.

Out of 225 EHSCCP participants with family assessments on file in 2020, three (1.3%) reported as migrants with work permits and eight (3.6%) were migrants who had obtained U.S. citizenship. One parent (0.4%) was fully bilingual and two (0.9%) were limited English speakers. The bilingual parent and one of the limited English parents had obtained U.S. citizenship. The other migrants reported no language issues while the other limited English speaker reported no immigration or citizenship issues. For HS/EHS, out of 389 children with family assessments, two parents (0.5%) were undocumented migrants and four (1.0%) were immigrants who had obtained citizenship. Two (0.5%) had fully bilingual parents, one (0.2%) had taken an ESL class and established a baseline of proficiency, one (0.2%) was literate in his/her primary language but limited in English, and one (0.2%) had limited abilities in any language. One of the undocumented migrant parents had no language deficiencies and the other was the parent who had taken an ESL class, and of the four who had obtained citizenship, two had no language issues, one was verbal in a native language but had limited English skills, and one had limited language skills in general. The fully bilingual parents had no immigration issues reported.

Inferences about eligible children not in program

In 2019-20, the DHA supported head start and early head start programs enrolled a total of 620 children in Sunflower County. In total, the ACS estimates the county has 1,823 children under 6 years of age, but all of these children would not meet the eligibility requirements to take spots in the programs (U.S. Census Bureau, 2019a). We discuss economic and social issues in the county in the next section, but using ACS poverty estimates for 2019, about 800 children in the county meet the income eligibility thresholds (< 130% federal poverty level) to participate. According to ACS estimates, EHSCCP and HS/EHS programs are reaching virtually all of the Black children in poverty in the county (*ibid.*). Estimates identify about 60 Hispanic and only about 10 white children in poverty in the county, respectively, and if accurate, these children would make up the majority of non-enrolled, eligible children. The ACS locates the white children in poverty inside Indianola, on the northern side of U.S. Highway 82, and puts the Hispanic children in poverty in the area in and around Sunflower and west, between Indianola and Ruleville (*ibid.*).

Figure 13 shows the locations of all the non-DHA supported, MSDH-monitored childcare providers in Sunflower County. There are seven sites in and around Indianola, with five of them being licensed centers and two being unlicensed home care providers. There is one home site in Inverness, and one home site and center each in Ruleville. There are no monitored providers in Drew, Moorhead, or Sunflower, aside from the DHA-supported sites.



Issues, Trends, and Concerns

ACS estimates show only 162 foreign-born residents in the county in 2019 (U.S. Census Bureau, 2019a). As a result, enforcement of federal immigration laws is not a salient concern for the community. For the most part, the heaviest population changes are people moving to larger urban areas in and outside the region and being “replaced” with people moving from other rural communities in the region. Consequently, overcrowding and inflated real estate prices are not the issue here; blight and vacant lots are.

Social & Economic Status

Summary: The Mississippi Delta region has had perhaps the most persistent poverty in the entire country, and poverty has increased for children in Sunflower County since 1990. Combined with crime and mass incarceration, social and economic conditions have been extremely challenging for qualifying families in the area.

Strengths: By enrolling almost all qualifying children, EHSCCP and HS/EHS in Sunflower County are keeping children safe and well-fed during the day and helping free parents to earn incomes and spend less of what they earn on childcare and food.

Weaknesses: EHSCCP and EHS/HS are connected to a social services collaborative through their parent organization, Delta Health Alliance. However, coordinating referrals and service provision is still extremely difficult with so much need and so many disjointed efforts to meet them.

Opportunities: Crime data is notoriously inconsistent, but crime rates appear to have fallen to around the level in the U.S. overall, after having been more than three times as high in the 1990s. While the COVID-19 pandemic has had mostly negative effects on everything and everyone, layoffs and working at home have given some parents more time with children, and aid payments have more than doubled the wages of some of the poorest families.

Threats: The COVID-19 pandemic has taken family members away from many Mississippians, reducing familial support for parents, and the recession has hit poorer areas extremely hard. Tightened tax revenues will create renewed scrutiny of all government spending, including on Head Starts.

County in Wider Context

The economic status of residents in the county are extremely stark. Shown in Table 3, the median household income in the county is less than half that of the United States, and is only 54% of the median for the South region and a little more than two-thirds (68.9%) the median income for the state of Mississippi, respectively (U.S. Census Bureau, 2019a). As a result, the poverty rate in Sunflower County is more than double the national and regional rates and is 57% higher than the rate in Mississippi, which is the worst in the country. One-third of the households in the county receive SNAP benefits, and almost half the children in the county live in poverty. Income differences are often countered with the assumption that a lower cost-of-living automatically offsets lower income in the area, and the cost-of-living in Mississippi is the lowest in the country (Missouri Economic Research and Information Center, 2021). But the cost-of-living in Mississippi is 85% of the cost-of-living in the U.S. as a whole, while household income is only 72% of income in the U.S., meaning the burden of paying the cost-of-living is much higher in Mississippi. Data for overall cost-of-living is not available at the county level, but housing burden (average cost of rent or mortgage relative to income) is and is included in the housing section below. It is important to note that in the cost-of-living data, housing is the cost category that makes Mississippi affordable more than any other, at 67% the cost in the U.S. as a whole. Other items required to live, like food, utilities, and transportation, all cost around 90% of what they cost elsewhere in the country (ibid.).

Table 3. County economic status in national context (U.S. Census Bureau, 2019a).

Geography	Poverty Rate	Childhood Poverty Rate	SNAP %	Median Household Income
Sunflower Co.	31.7%	45.2%	33.3%	\$30,029
Mississippi	20.3%	28.7%	16.5%	\$43,567
Census South	14.7%	20.9%	13.2%	\$55,299
United States	13.4%	18.5%	12.2%	\$60,293

Figure 14 shows Sunflower County's childhood poverty in a regional context. The area along the Lower Mississippi River in Mississippi, Arkansas, and Louisiana has the largest concentration of unbroken counties in poverty in the country. Sunflower County is near the geographic center of this area. Excluding municipios in Puerto Rico, Sunflower County ranks 63rd of all counties in the country in overall poverty rate and 80th for childhood poverty (U.S. Census Bureau, 2019a).

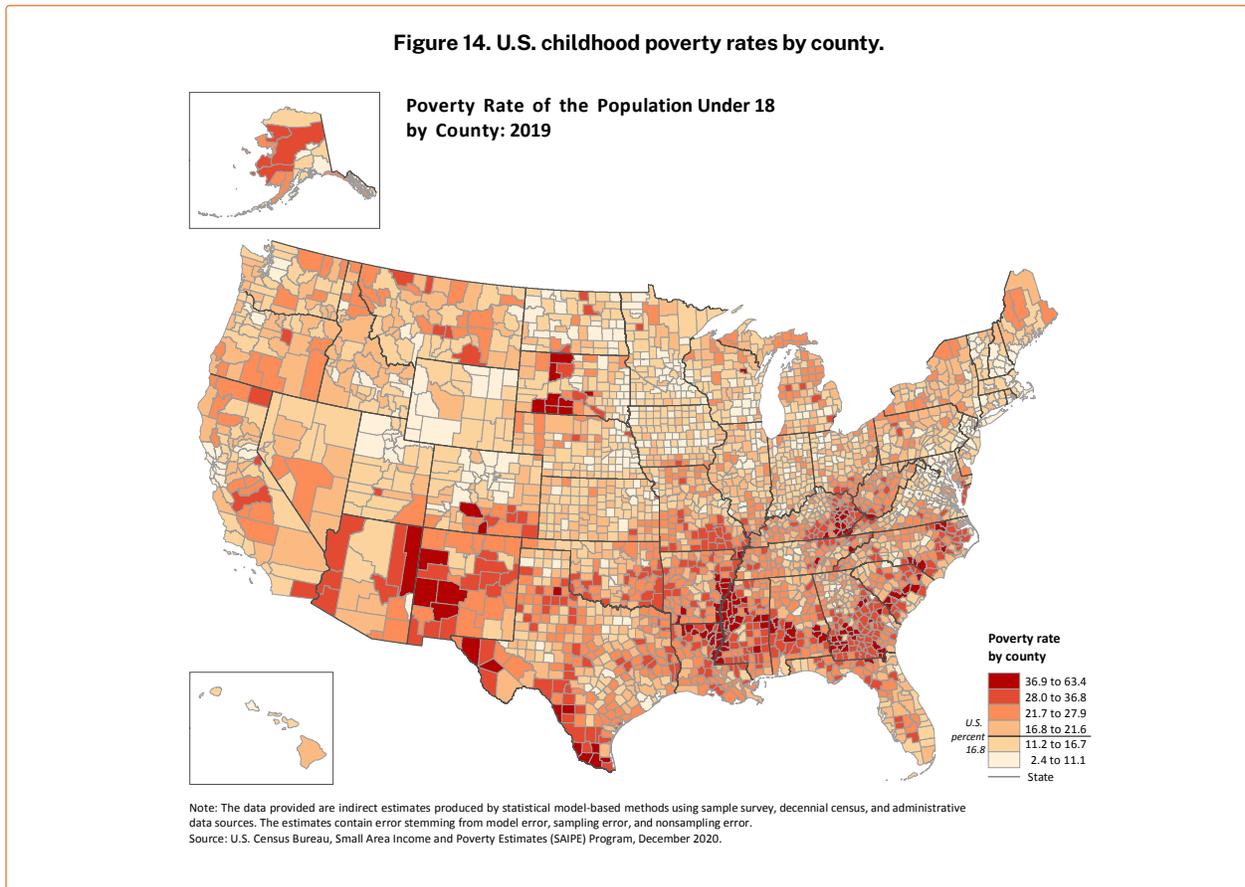


Figure 15 shows the county's poverty rates over time, relative to the country. Sunflower County's poverty rate fell by almost half from 1960 to 1980, and fell another ten percentage points by 2000, but has stayed above 30% since. The county has had one of the 100 highest rates of poverty in the United States since at least 1960 (U.S. Census Bureau, 2019a; U.S. Census Bureau, 2020b).

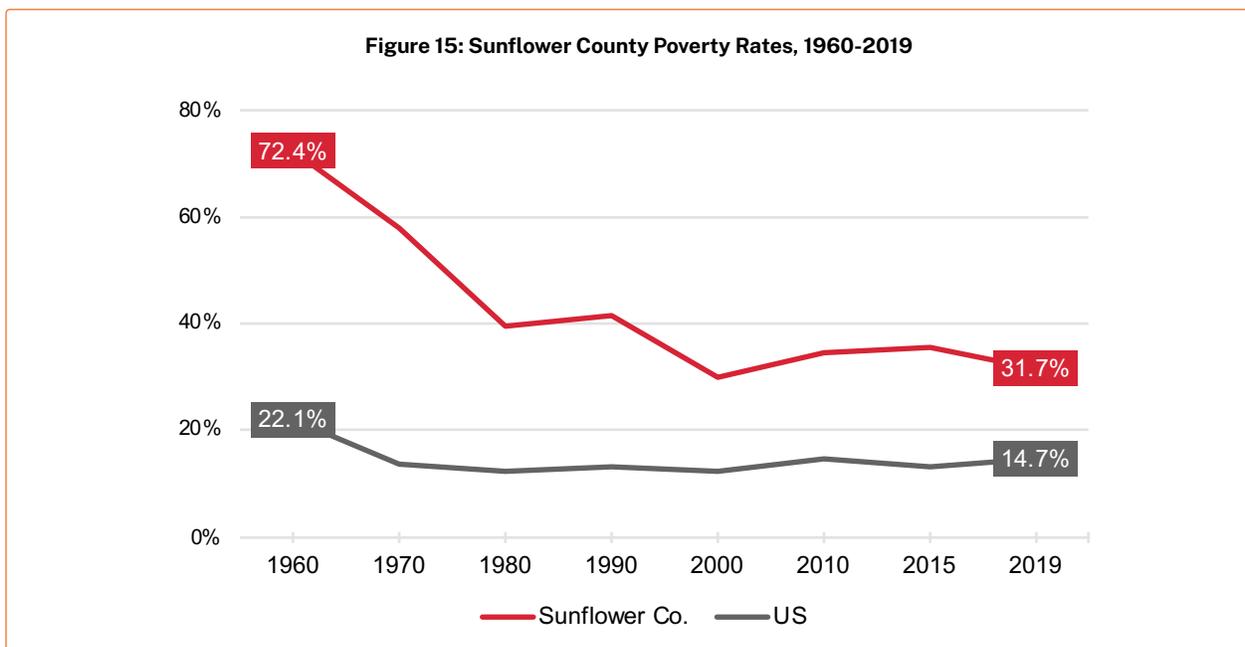
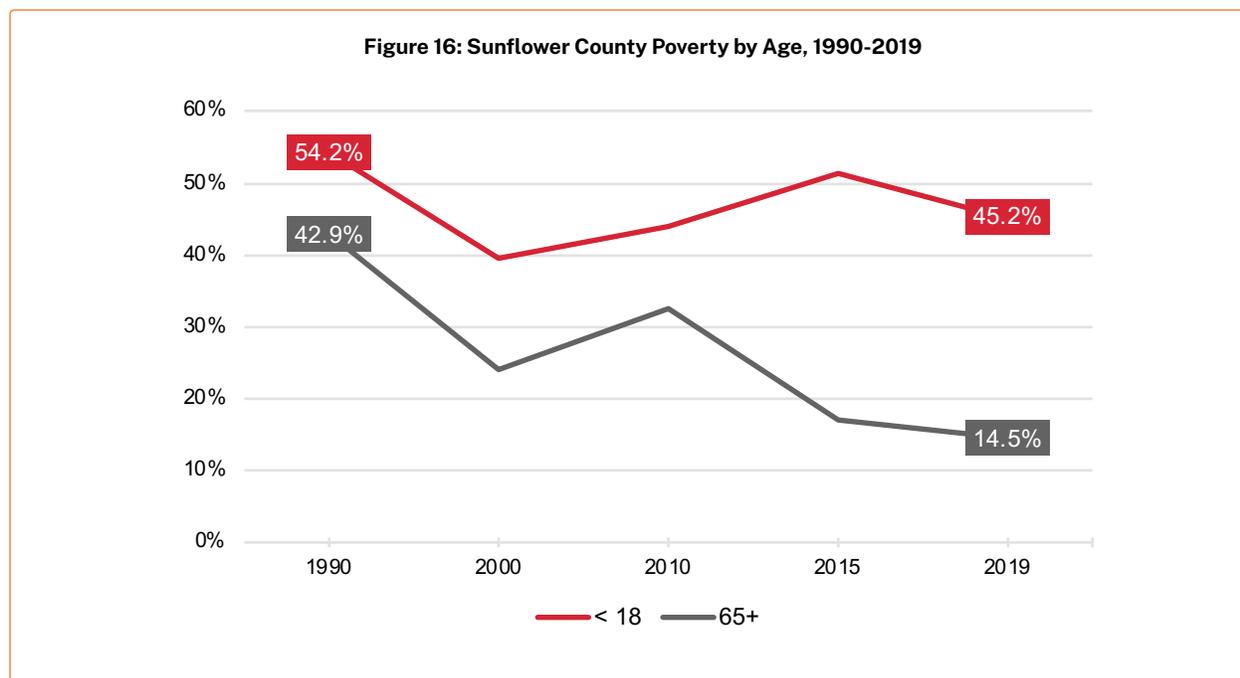


Figure 16 shows the poverty burden in the county by different age groups, over time. At the 1990 Census, more children lived below the poverty line than not, but the poverty rate for seniors was only about 11 percentage points lower than the rate for children (U.S. Department of Commerce, 1991). Childhood poverty has fallen by less than 10 percentage points since then, while the rate of seniors in poverty has dropped by more than half to 15%. Children now have a rate of poverty that is more than three times the poverty rate for seniors (U.S. Census Bureau, 2019a).



The poverty within the county is not distributed evenly across different racial groups. Table 4 shows the extent of the differences between Black, white, and Hispanic residents. The median income for white households is more than double that of Black and Hispanic households, who average a household income of about \$25,000 (U.S. Census Bureau, 2019a). Fully half of the Black children in the county live below the poverty line, versus about 40% of Hispanic children and only 5% of white children. Besides residential racial segregation, it is these income differences that create the conditions in which almost all qualifying Head Start and Early Head Start children in the county are Black.

Table 4. County economic status by race/ethnicity.

Race/Ethnicity	Poverty Rate	Childhood Poverty Rate	SNAP %	Median Household Income
Black, non-Hispanic	39.1%	52.1%	44.1%	\$25,235
White, non-Hispanic	7.4%	5.1%	6.4%	\$53,424
Hispanic/Latino	22.1%	39.7%	49.2%	\$25,086

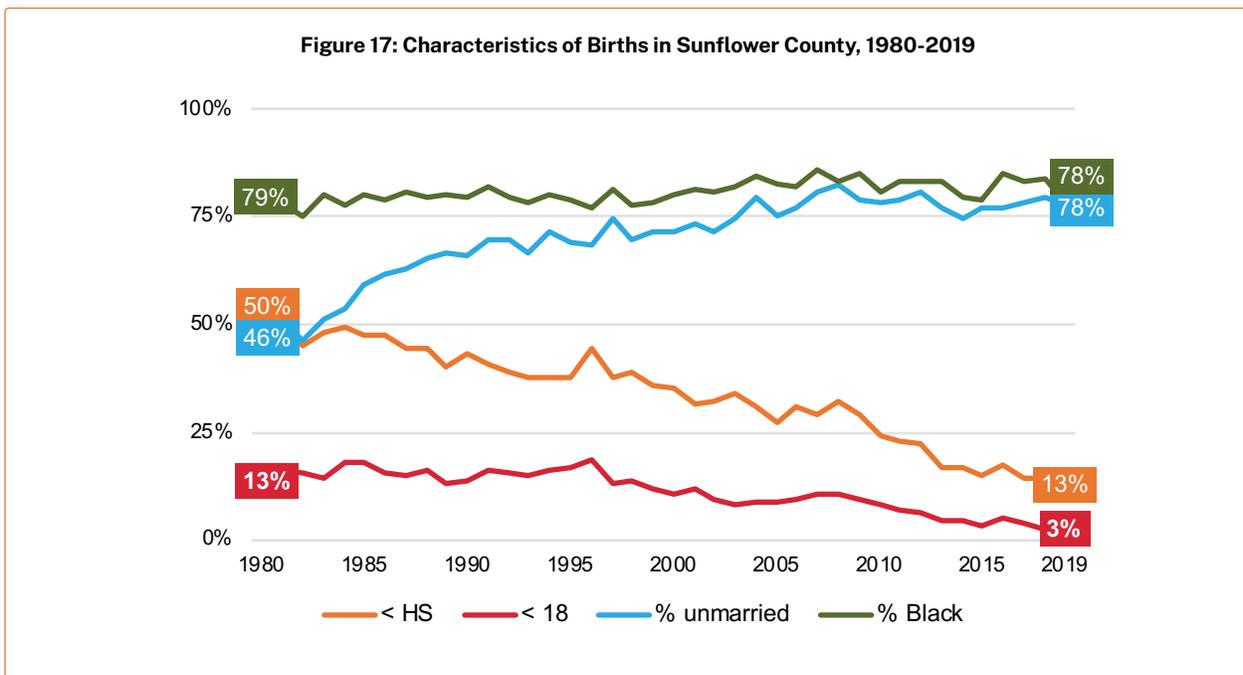
This amount of poverty expectedly has effects on the social fabric of the community. The percentage of children in families headed by single women in the county, at 55%, is almost three times the rate in the U.S. (Table 5). More than three-fourths of births in the county have been to unmarried mothers in every year since 2004, compared to around 40% in the U.S. (Mississippi State Department of Health, 2021b). At 78%, the rate of births to unmarried mothers is 43% higher than the rate of 54% in Mississippi, the highest rate of any state in the U.S. (Martin et al., 2019). Perhaps as a result of mothers being married, and despite poverty rates, almost 70% of women who have recently given birth are working or seeking work in the county, higher than the national rate.

Table 5. County family composition in national context (Mississippi State Department of Health, 2021b; CDC, 2021c).

Geography	% children in single-mother families	% nonmarital births	Average family size (# people)	% women w/ recent birth, in labor force
Sunflower Co.	54.9%	77.6%	3.41	69.1%
Mississippi	32.7%	54.1%	3.24	65.5%
Census South	23.7%	---	3.25	61.7%
United States	20.9%	39.6%	3.23	63.3%

In common parlance, poverty is often regarded as an effect of changes in traditional family structures, and not a cause. Scholars have long been divided on the subject (Garis, 1998), but a growing proportion now take the view that a strong family structure is usually the result of a stable economic foundation, and not its cause (Alexander, Entwisle, and Olson, 2014). Figure 17 shows the percentage of births to unmarried mothers in Sunflower County every year since 1980, alongside the rate of births to teens under 18, mothers who have not graduated from high school, and the percentage born to Black mothers. 1982 was the last year in which fewer than half of all births were to unmarried mothers, rising to 67% by 1989 and then steadily rising to 83% in 2008 and staying between 75% and 80% since (Mississippi State Department of Health, 2021b). Meanwhile, the rate of births to mothers younger than 18 has plummeted by 85% from a high of 18.6% in 1996 to 2.7% in 2019, and has not been higher than 5% since 2012. In 1981, 53% of all births were to mothers who had not graduated from high school, but by 2019 this rate had dropped by 76% to 12.9%, its lowest rate to date.

As shown in Figure 15, the poverty rate in Sunflower County has been mostly flat during the period from 1980 to 2019, dropping by about 8 percentage points, or 0.4 percentage points per year. Also note from Figure 16 that childhood poverty has actually increased by 30% since 1990 and children make up a much larger proportion of those in poverty than they did in 1980. If poverty were the result of irresponsibility or lack of preparation on the part of women, we should expect the rate of births to uneducated, young mothers to at least stay the same while poverty increases, if not rise alongside it, but we definitely should not expect those rates to plummet, in the case of teen births to near zero. We reject racist notions of “culture” being the cause of poverty on principle, but even if we were to allow ourselves to consider this, the racial makeup of births in the county has not changed. From these trends, it seems much more likely to the authors that economic and other social instabilities (e.g. mass incarceration, below; employment opportunities, housing, healthcare, and educational policy in subsequent sections) are the cause of both the poverty and family instability in the community. At any rate, fewer and fewer children are being born to uneducated, young mothers, but the vast majority are still entering the world without married parents, and without the household economic resources to succeed.



Crime and Incarceration

The most recent reporting shows crime on the decline in Indianola and Sunflower County. Table 6 shows violent and property crime rates and clearance rates for the Sunflower County Sheriff's Office and the Indianola Police Department, the two largest jurisdictions in the county by a large margin, for the most recent year for which they have reported data. Crime rates are much lower in the county than in the city, and county clearance rates were 100% for the last three years reported (2015-17). According to the reports, crime has decreased drastically in the county. The county averaged 18 violent crimes and 9 property crimes per year over that period, whereas in 2008-09 it averaged 127 and 108, respectively. The crime rates in Indianola were more comparable to the state and country in 2015, except for a low clearance rate for violent crimes. Crime was higher in Indianola in the years leading up to 2015. For 2012-14, the average violent crime rate was 962.3 with property crime at 6,550.8. The highest rates in recent years were in 1998 in Indianola, when there were 161 violent crimes and 1,332 property crimes (versus 36 and 223 in 2015).

Table 6. Violent and property crime rates among major law enforcement agencies in service area (FBI, 2021; FBI, 2020).

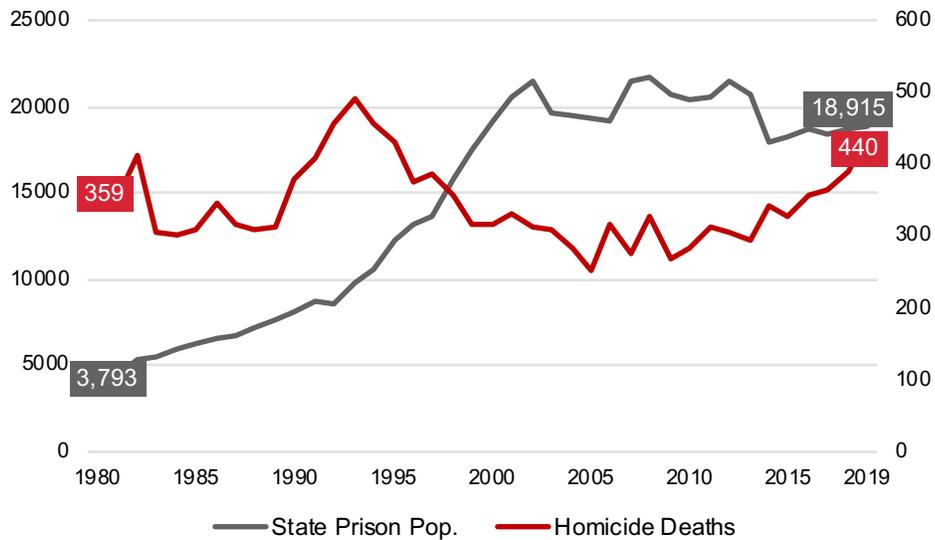
	Sunflower County Sheriff's Office	Indianola Police Department	Mississippi	United States
Rate, violent crimes (per 100,000)	177.1 (2017)	362.3 (2015)	277.9 (2019)	379.4 (2019)
% violent crimes cleared	100% (2017)	19.4% (2015)	N/A	45.5% (2018)
Rate, property crimes (per 100,000)	88.6 (2017)	2,244.1 (2015)	2,375.8 (2019)	2,109.9 (2019)
% property crimes cleared	100% (2017)	20.6% (2015)	N/A	17.6% (2018)

There were nine homicide deaths in the county in 2019, versus five in 2018, eight in 2017, ten in 2016, and six in 2015 (Mississippi State Department of Health, 2021b). Homicide deaths were much higher throughout the 1990s. Violent crime appears often on the pages of the local newspapers and crime risk is often heavy on the minds of locals (e.g., Thomas, 2021; Enterprise-Tocsin, 2021).

Mississippians are incarcerated at the 3rd highest rate of any state, at 1,039 prisoners per 100,000 residents, 49% higher than the national rate (698 per 100,000; Wagner and Sawyer, 2018). Correctional facilities in the state hold a total of 32,305 prisoners, and the rate of citizens in state prisons is also the 3rd highest in the country at 626 per 100,000 (Sentencing Project, 2020a). Another 37,000 are on probation or parole, and 11,575 were in local jails in 2013, with 6,378 of them being held there in lieu of state prisons (Aiken, 2017). The Black imprisonment rate for state prisons was 1,052 per 100,000 in 2014, three times higher than the white imprisonment rate of 346 per 100,000, representing 13,407 and 4,469 people, respectively. Nationally, Black men are six times more likely to be incarcerated than white men, and about 1 in 12 Black men in their 30s is in prison or jail on any given day (Sentencing Project, 2020b).

Figure 18 shows the Mississippi state prison population over time, alongside the number of deaths due to homicides. The number of people in state prisons almost quadrupled from 1980 to 2000, peaking at 21,698 in 2008. At the same time, deaths due to homicide in the state basically stayed flat, hitting an all-time high of 491 in 1993 but dropping to 252 in 2005 and then rising again in recent years. The lines do not appear to be correlated because, as of 2019, 38% of the prison population was incarcerated for non-violent or drug offenses, and these offenses represented 73% of new admissions in the 2018-19 fiscal year (Mississippi Department of Corrections, 2020). Like the risk of imprisonment, the risk of death due to homicide is not spread evenly across the population, with the rate of death due to homicide being 4 to 5 times higher than the white rate throughout the period.

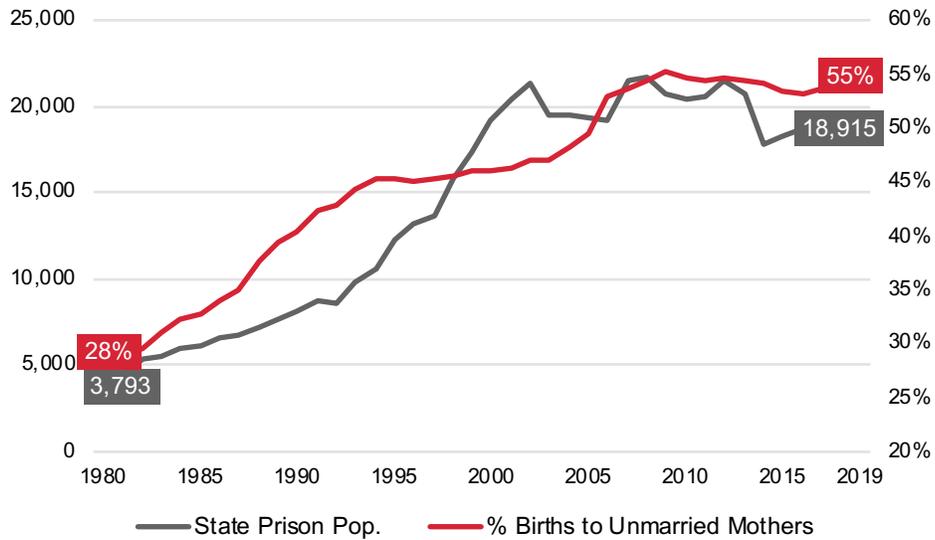
Figure 18: MS State Prison Population & Homicide Deaths, 1980-2019



Nationally, the lifetime likelihood of being imprisoned for Black men is one in three (Bonczar, 2003). The rate of felony disenfranchisement in the state reflects this. Fully 16% of the Black adults in the state were disenfranchised in 2020 (Sentencing Project, 2020a). If we assume that the disenfranchised are made up of the same proportion of men to women as the incarcerated population in the state (93% men), that would mean 29.8% of the Black male population is disenfranchised. This may be inflated slightly, but even 25% would mean that one in four Black men in the state cannot vote, cannot own firearms, and are forced to report felonies when seeking employment. This also does not include those affected by incarceration, fines and other fees, or flagging due to background checks of lesser offenses, which would most likely include vastly more of the population and disproportionately include Black men. As noted above, 73% of new admissions to Mississippi prisons in the 2018-19 fiscal year were for non-violent offenses, and that only includes the prison population, not local jails. As of 2021, failing to pay or appear in court for minor traffic citations can result in bench warrants in Mississippi, which are then misdemeanors that can result in arrests, incarceration, and even felony charges (Holley, 2019). Advocates against mass incarceration call these laws a criminalization of poverty (Human Rights Watch, 2017).

These interactions with the criminal justice system often create a cycle of dysfunction and disruption that make gainful employment and normal family life practically impossible (Goffman, 2014; Lopoo and Western, 2005; Western, Kling, and Weiman, 2001). Where incarceration happens, such interactions harm the entire Black community through increased mental and physical health risks to Black men, their families, and others with whom they interact, especially when the rates of incarceration are as high as one in four (Nowotny and Kuptsevych-Timmer, 2018). Mass incarceration also contributes greatly to social instability even for those who are not directly or even secondarily affected by it. Where mating markets are segmented by race, age, and location, as they are almost everywhere in the United States, every departure from “equilibrium” in heterosexual markets (one male for one female) affects the likelihood of relationships being established, with whom they will be established, and even the stability of relationships and quality of interactions once they are established. Charles and Luoh (2010) demonstrated the quantitative effects of Black male incarceration, specifically that rising rates of incarceration accounted for between 18% and 27% of the drop-in overall marriage rates for Black women from 1980 to 2000, but also that these effects were concentrated in communities affected more by incarceration spatially and by age. They also demonstrated that incarceration increased the “bargaining power” of Black males who had not been incarcerated, thus forcing women to improve their “marketability” in competition with one another, driving up college participation and employment for Black women (Charles & Luoh, 2010). Schneider, Harknett, and Stimpson (2018) used longitudinal data from 1969 to 2013 to test this hypothesis further and found that while declining income and employment security explained about one-fifth of the delay in marriage for men across the time period, they were almost unaffected by incarceration, state-level incarceration rates accounted for 29% of the delay in first marriage for Black women and 28% of the delay for women of all races without a high school diploma. Dauria et al. (2015) observed these processes on the ground, including pressure on Black women to engage in more frequent and sometimes riskier sexual activity to please men where they are scarce. Figure 19 shows births to unmarried mothers in the state alongside the prison population from 1980 to 2019.

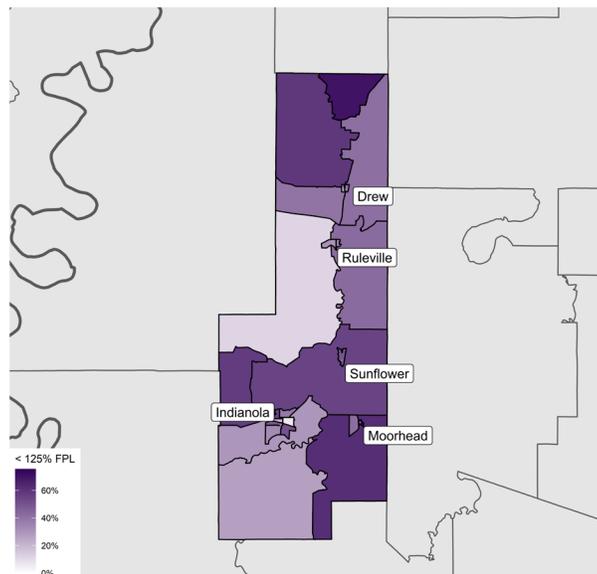
Figure 19. MS Prison Pop. & Births to Unmarried Mothers, 1980-2019



Spatial Context within the County

Figure 20 shows Sunflower County’s poverty rates by block group, as the percentage of the population below 125% of the federal poverty line (FPL; enrollment cutoffs are around 130% FPL). The small spot on the east side of Moorhead has the highest rate, at 75.5%, and also has the highest percentage below 100% FPL (57.9%) and second-most below 50% FPL (33.1%). At 70.4%, the area at the northern edge of the county has the second-highest percentage below 125% FPL, but that area includes very few non-institutionalized people as the state penitentiary is there, and none of the residents there are below 100% FPL. The larger area around Moorhead is the only other area with more than 60% of its people below 125% FPL, at 62.2%, and 35% are below 100% FPL there. The area with the highest concentration of intense poverty, people below 50% FPL, is the northwestern corner of Indianola. Fifty-six percent of the population is below 125% FPL, but almost all of those are below 100% FPL (54.9% of total), and 46.2% are below 50% FPL. This is the highest rate below 50% FPL by far, with the eastern part of Moorhead and the large area around Sunflower being the only others with more than 30% of their populations below that level. The areas with the lowest rates of poverty were the eastern half of Indianola, just north of U.S. 82, and the large area west of Ruleville.

Figure 20. Sunflower County poverty by census block group.



The ACS estimates 70 children in foster care in the county, 17 in the areas in or around Ruleville, 21 in or around Sunflower, and 32 in the southwestern corner of the county.

Participant Status

In 2019, four out of 367 (1.1%) enrollments in the HS/EHS program reported being in foster care. None of the 224 EHSCCP enrollees were in foster care. Table 7 shows the income breakdown of participant families at enrollment in 2019. More than 45% of the participants in both programs had incomes below 25% of the federal poverty line.

Table 7. Income level at enrollment in 2019.

Group	0-24% FPL	25-74% FPL	75-100% FPL	101-120% FPL	121-130% FPL	130%+ FPL
HS/EHS (n=367)	46.0%	29.7%	11.7%	4.6%	3.0%	4.9%
EHSCCP (n=224)	46.9%	38.4%	9.4%	2.7%	0.4%	2.2%

The parents of only 6% of EHSCCP and 10% of HS/EHS participants have said that their income is adequate all the time. Thirty-one percent of EHSCCP participants' parents reported an income that is sufficient for their families most of the time, and another 31% reported being employed, but having an insufficient income. In HS/EHS, one quarter each report having an income that is sufficient most of the time and being employed with insufficient income. Thirteen percent of EHSCCP and 19% of HS/EHS participants' parents report not working but having income from disability, TANF, or child support. Finally, about 20% of children's parents in each program reported having no legal income.

Parents of 55% of EHSCCP and 51% of HS/EHS children reported that their incomes provided adequate or optimal food for their families. Forty-five percent of EHSCCP and 49% of HS/EHS participants' parents reported using government assistance for food. None recorded being worried about or running out of food.

Program assessments show that, despite more than two-thirds of children resulting from unplanned (but accepted) pregnancies and the resource deficiencies in the households, the large majority of children have parents who are nurturing, supportive of their development, and use age-appropriate discipline, if often inconsistent. About 80% of children's parents in each program have supportive family relationships and at least a few close friends they can count on for support. About 40% in each program have fathers or a mother's partner who is very involved and supportive, another quarter are emotionally distant but supportive, and another quarter are either hostile or not involved at all.

Employment Patterns

The county is part of a larger regional economy still transitioning from post-industrial agriculture to information and services. Employment in the county is characterized by high unemployment and low wages, especially for Black residents, despite their higher labor force participation rates. About half the program parents report stable employment, half again of those with adequate wages.

Strengths: Programs being located throughout the county gives parents flexibility where work and home may not be in the same place.

Weaknesses: About one-fifth of EHSCCP and two-fifths of HS/EHS parents report needing employment and/or job skills. Less than 10% each report working in their career of choice.

Opportunities: According to the ACS, almost all mothers of young children are in the labor force, underscoring the continuing need for affordable childcare services. Job growth is projected, and coordination with and referrals to local agencies could be fruitful. The emergence of remote work during COVID-19 could give parents more opportunities outside the immediate area.

Threats: Jobs appear to be fairly decentralized and skewed toward the public sector, which is less susceptible to large shocks from single actors (one company leaving, etc.). Still, the COVID-19 pandemic has fundamentally altered work and the economy, making projections extremely uncertain.

County in Wider Context

As of the 2019 ACS, the unemployment rate in the county was 16.0% overall, twice as much as the rate in the state, and almost four times the U.S. rate (Table 8; U.S. Census Bureau, 2019a). For those who never completed high school, the unemployment rate was almost 30%, again twice the rate in the state and more than three times the U.S. rate. The rate was higher in Sunflower County than in the state, region, or country at every education level.

The employment situation may be even worse in the county than the unemployment rate indicates. The labor force participation rate of 46.1% means that more than half the residents in the county had abandoned the labor market altogether, versus participation around 60% in the state and country. The presence of the prison population probably makes this rate a little lower than it otherwise would be, but the fact that unemployment was so high with only 46% in the labor force is alarming. Among those who were working, about two-thirds were employed full-time, all year, matching state and national rates. Even those who were working faced difficulties, as one third were receiving SNAP benefits for their families, more than double the state rate and almost three times the national rate. All of these rates have likely been exacerbated by the COVID-19 pandemic and subsequent economic recession.

Table 8. County employment patterns in national context (U.S. Census Bureau, 2019a).

Geography	Labor Force Participation Rate	Unemployment Rate	Unemployment Rate, < High School Education	Workers Employed Full-Time, Year-Round	Percentage of Working Families Receiving SNAP
Sunflower Co.	46.1%	16.0%	29.4%	65.7%	33.3%
Mississippi	57.4%	8.2%	14.8%	67.6%	15.7%
Census South	61.9%	6.0%	8.7%	67.5%	13.2%
United States	63.3%	4.7%	9.0%	65.6%	11.8%

In the county, differences by race are stark. Slightly fewer white residents participate in the labor force than Black residents, both below 50%, with only a quarter of Hispanic residents in the labor force (Table 9). This may indicate work “off the books” for Hispanics and maybe the other groups as

well. Of those in the workforce, only 3.5% of white residents are unemployed, versus 20.2% for Black residents and 23.4% for Hispanic residents. As wages are heavily affected by the availability of labor, these fully segmented markets probably explain much of the difference in pay received by the racial groups. Or, conversely, the fact that employers are willing to pay white residents double the income of Black residents while so many Black workers are seeking work unsuccessfully underscores the intensity of segregation in the region.

Table 9. County employment patterns by race (U.S. Census Bureau, 2019a).

Race	Labor Force Participation Rate	Unemployment Rate
Black, non-Hispanic	48.1%	20.2%
White, non-Hispanic	42.1%	3.5%
Hispanic	25.7%	23.4%

Table 10 shows employment patterns in the county by sex. Fewer than half the men in the county are in the labor force, again probably deflated somewhat by the prison population. The rate for women in the county is 20 percentage points higher, or 43% higher in relative terms, driven by the labor force participation of women with young children at 90.2%. This means only one in ten women with young children are not working or seeking work, a vivid illustration of the effects of both marriage rates in the county and “welfare reform” in the 1990s (Matthews, 2016). More than a third of these women seek work unsuccessfully. Despite this, the unemployment rate for women is still 30% lower than the rate for men.

Table 10. County employment patterns by sex (U.S. Census Bureau, 2019a).

Sex	Labor Force Participation Rate	Unemployment Rate
Male	46.3%	17.8%
Female	66.2%	13.6%
Female w/ Child < 6 Years	90.2%	34.0%

The major employment sectors in Mississippi are healthcare, manufacturing, retail, leisure, and education (Table 11). Wages differ strongly across and within these sectors. Almost 60,000 healthcare workers work at hospitals, paying an average of about \$50,000, with another 55,000 working in “ambulatory services” paying an average of \$59,000, but 32,000 work in nursing and residential care earning an average of only \$28,000. Numbers of employees by individual firm are not published officially by the BLS, but the largest employer in this sector is probably Sta-Home Health and Hospice, with a reported 17,000 employees (Zippia, 2021). The University of Mississippi Medical Center has a reported 10,000 employees, as well (CareerOneStop, 2021).

The manufacturing sector is large and spread out across multiple industries, with about 28,000 jobs in transportation equipment, mostly tied to the Nissan plant in Canton, MS (Nissan, 2021). These jobs pay an average of \$62,000. The next largest subsector is food manufacture, mostly animal slaughter and processing, with 24,000 employees earning an average of \$34,000. There are several catfish processors in the region and one large Tyson processing plant in Carthage, east of the Delta (CareerOneStop, 2021). Furniture production is another large industry in the state, employing 18,000 people at an average salary of \$36,000. This includes an Ashley Furniture factory in northeastern Mississippi, the largest upholstery producer in the world (Mississippi Development Authority, 2021), and an appliance manufacturer in nearby Greenwood (Greenwood Leflore Carroll Economic Development Foundation, 2021).

In retail, a plurality of jobs is in general merchandise (35,000) earning an average of \$23,000, with Walmart reporting 23,000 associates in the state, likely the state’s largest single employer (Walmart, 2021). There are 18,000 employed at automotive and parts dealers in the state earning \$42,000 on average, and another 18,000 working in food sales, mostly grocers, earning just \$20,000 on average. The state has a large accommodation and food service sector, with 97,000 employees working in food service, mostly restaurants, and earning very low wages, \$15,000 on average. The accommodation subsector pays \$27,000 on average and includes casinos, with several in the Delta in Tunica, Lula, Greenville, and Vicksburg. The vast majority of education jobs in the state (77,000) are in local schools at the elementary and secondary level, paying an average of \$36,000. Community and junior colleges employ another 8,000 at an average of \$40,000, and colleges and universities employ 22,000 in the state at \$63,000 on average.

Table 11. Major employment sectors, Mississippi (Mississippi Department of Employment Security, n.d.).

Sector (by NAICS Group)	# Employees	# Firms	Mean Yearly Wage
Healthcare & Social Assistance	178,400	7,509	\$43,287
Manufacturing	146,901	2,398	\$50,040
Retail	135,904	11,469	\$26,466
Accommodation & Food Service	128,372	5,757	\$17,867
Education	109,646	1,420	\$41,545

Healthcare is also the largest sector of employment in Sunflower County (Table 12). Eight hundred employees are in the “general hospital, psychiatric, & specialty” subsector, earning an average of \$44,000. This would include South Sunflower County Hospital, which reports 350 employees (South Sunflower County Hospital, n.d.) and likely includes many employed at Indianola Family Medical (Indianola Family Medical Group, 2017). The others are employed in social assistance, likely home health aides, making an average of \$16,000, and assisted living facilities making an average of \$26,000.

The public administration sector is very large compared to other similar counties. This is probably due to the presence of the penitentiary. With a reported 700 employees, the penitentiary is likely the largest employer in the county (Mississippi Department of Corrections, 2021). One thousand employees are listed in the educational sector, earning an average of \$35,000. Two hundred seventy-seven are employed by the Sunflower County Consolidated School district at an average of \$46,551 (Mississippi Department of Education, n.d.). This number represents full-time equivalent employees, so the number of individual employees is likely higher. Other sites of employment include Mississippi Delta Community College in Moorhead, several private schools, and Head Start and other childcare sites.

Besides public administration, the other atypically large sector in the county is transportation and warehousing, with 886 employees earning about \$40,000 on average. The largest of these is probably the Dollar General Distribution Center, with others including the Staplcoth and Supervalu warehouses. Retail employment includes 287 employed in “general merchandise” at an average of \$24,000; this includes Walmart and multiple discount stores in the county. Gas stations employ 143 people at an average wage of \$15,000.

Table 12. Major employment sectors, Sunflower County (Mississippi Department of Employment Security, n.d.).

Sector (by NAICS Group)	# Employees	# Firms	Mean Yearly Wage
Healthcare & Social Assistance	1,583	71	\$33,576
Public Administration	1,314	11	\$33,332
Education	1,005	22	\$34,674
Transportation & Warehousing	886	41	\$39,599
Retail	803	83	\$22,580

Table 13 shows predicted growth for chosen sectors and subsectors as projected by the Mississippi Department of Employment Security (Mississippi Department of Employment Security, n.d.). The table includes the regions covered by Mississippi Delta Community College and Coahoma Community College, including Bolivar, Coahoma, Humphreys, Issaquena, Leflore, Sharkey, Sunflower, and Washington counties. The healthcare sector is predicted to have the most total jobs and the most job growth across its subsectors, with more than 3,000 jobs projected to be added in the time period. Manufacturing and public administration, two large sectors in the region, projected modest growth of about 10%. Restaurants and bars, and utilities, were projected to be the fastest growing subsectors, with a 45% increase in jobs in each. For utilities, a small sector, this only represents 130 jobs added. Retail and education were projected to be the largest sectors after healthcare, each with at least 15% growth and more than 1,000 jobs added. Agriculture is included for historical significance. The sector is still sizable and was projected for modest growth by 2026.

Table 13. Projected regional growth of NAICS subsectors, 2016-26 (Mississippi Department of Employment Security, n.d.).

Subsector	Sector Group	Jobs Added	% Change	# Projected 2026
Restaurants & Bars	Accommodation & Food Service	1,790	+45%	5,790
Education	Education	1,760	+23%	9,270
Retail Trade	Retail Trade	1,190	+15%	9,320
Social Assistance	Healthcare & Social Assistance	880	+40%	3,100
Hospitals	Healthcare & Social Assistance	870	+31%	3,700
Ambulatory Services	Healthcare & Social Assistance	740	+31%	3,120
Manufacturing	Manufacturing	620	+9%	7,380
Nursing & Residential Care	Healthcare & Social Assistance	580	+33%	2,330
Public Administration	Public Administration	530	+8%	7,200
Agriculture	Agriculture	500	+10%	5,690
Utilities	Utilities	130	+45%	420

Participant status (strengths & needs)

Almost two-fifths of HS/EHS participants' parents were reported as "unemployed, unskilled, or having no work experience" on Life Skills assessments, along with 29% of EHSCCP participants' parents (Table 14). Recalling that 90% of mothers of young children in the county were in the labor force and either working or seeking jobs, almost all of these women are probably seeking and unable to find work. About half the participants' parents in each program have a stable job, with about half of those paying "adequately." Only 8.2% of HS/EHS and 2.2% of EHSCCP participants' parents report working in their "career of choice."

Table 14. Participant employment status.

Program	Unemployed or Unskilled	Juggles Part-Time Jobs	Stable Low-Income Job	Stable Adequate-Income Job	On Chosen Career Path
HS/EHS (n=354)	37.3%	4.5%	24.9%	23.7%	8.2%
EHSCCP (n=224)	29.0%	10.7%	31.2%	25.4%	2.2%

Medical & Environmental Health Issues

Sunflower County has poor health outcomes on nearly every metric, culminating in very poor summary outcomes like life expectancy and birth weight. Outcomes appear to be worse than healthcare access or behaviors would predict them to be. Mental health provider access is low, but few participants report mental health issues. The county is not as polluted as much of the country but does have challenges related to the climate.

Strengths: Staff report that almost all participants can and are accessing care in a proactive, healthy manner. Rates of reported mental health and substance abuse issues are low, matching secondary data sources.

Weaknesses: Highly positive observations may be the result of under-reporting and could indicate a need for more sensitive instruments or a lack of parent confidence in the ability of staff to meet their needs or maintain their confidentiality.

Opportunities: Having a single coordinator of Head Starts in the community, to align their services and solidify their network with local healthcare providers, creates a unique opportunity for ensuring the health of children moving forward and tracking them as they matriculate. Two HS/EHS sites and the majority of EHSCCP sites are located in food deserts, giving them the opportunity to lessen fresh food access barriers for children.

Threats: Healthcare access is mostly positive (relative to other challenges in the county), but program families almost entirely use Medicaid, which is constantly under threat by the state legislature. After refusing federal funds to expand Medicaid, the unemployed have extremely low rates of insurance relative to the rest of the country. A specific threat is poor women lacking healthcare for themselves, and then having poor birth outcomes despite being proactive in pregnancy due to lacking preconception care.

County in Wider Context

Mississippi often ranks at or near the bottom of health and quality of life metrics nationwide, and Sunflower County is among the worst areas in the state. Table 15 shows life expectancy and obesity and diabetes rates for Sunflower County, Mississippi, and the U.S. Sunflower County's life expectancy lags 7.4 years behind the rest of the country, a difference of 10%. Obesity rates are difficult to compare because they come from three different sources that do not overlap, but the rate in Sunflower County is much higher than state or national rates at more than half the adult population. Almost one-fourth of the adults in Sunflower County are estimated to be diabetic by the CDC, double the state rate and 2.6 times the U.S. rate.

Table 15. Health indicators in national context (CDC, 2021a; CDC, n.d.; County Health Rankings, 2021; Hales, Carroll, Fryar, and Ogden, 2020; World Bank, 2021b).

Geography	Life Expectancy*	Adult Obesity Rate+	Adult Diabetes Rate^
Sunflower Co.	71.1	53.5%	24.1%
Mississippi	74.9	40.8%	12.4%
United States	78.5	42.4%	9.1%

Figure 21 shows life expectancy across the country by Census tract, in quintiles. Tracts in the bottom quintile are shaded red, and two regions stand out for a concentration of red tracts: Eastern Kentucky and West Virginia, and the alluvial plains around the Mississippi River.

Figure 21. U.S. life expectancy by census tract, 2010-15 (Tejeda-Vera, Bastian, Arias, Escobedo, and Salant, 2020).

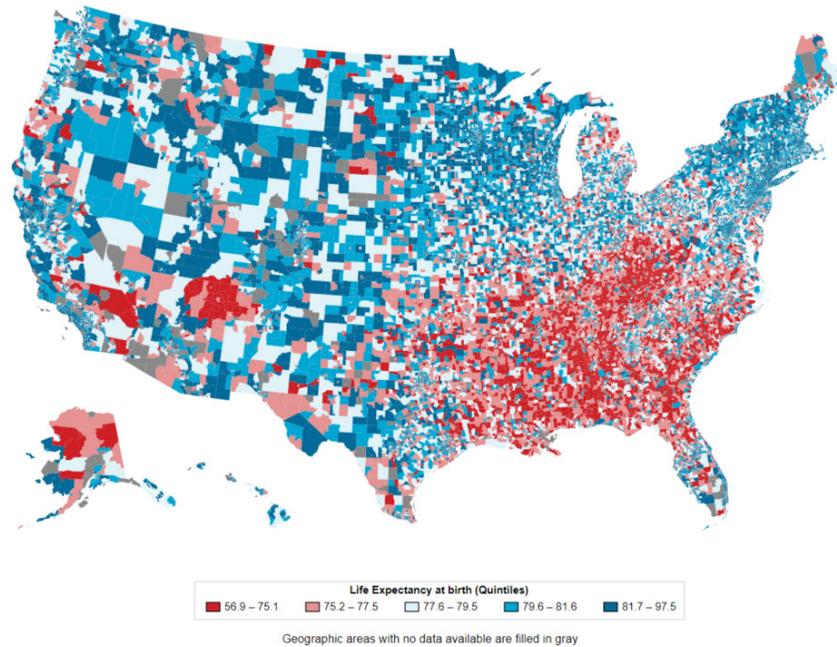
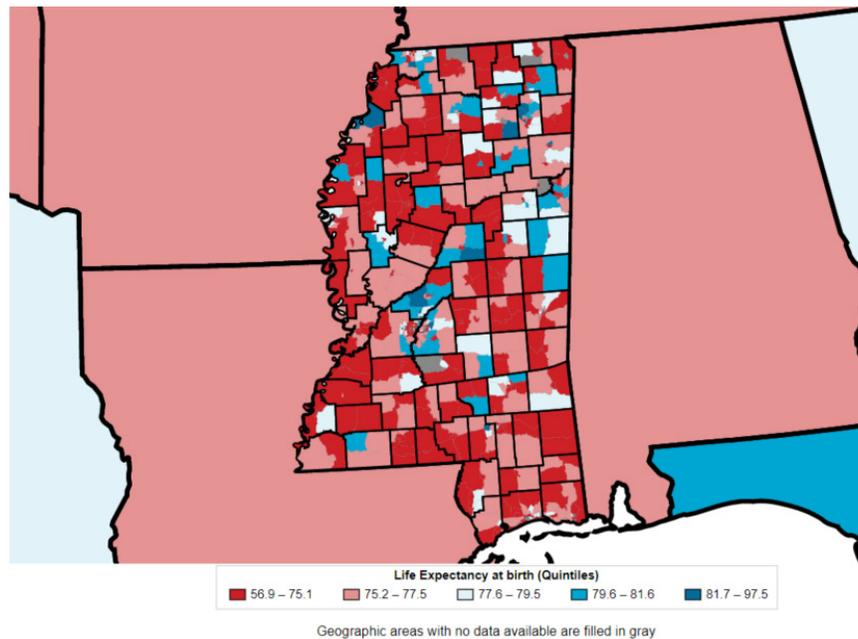


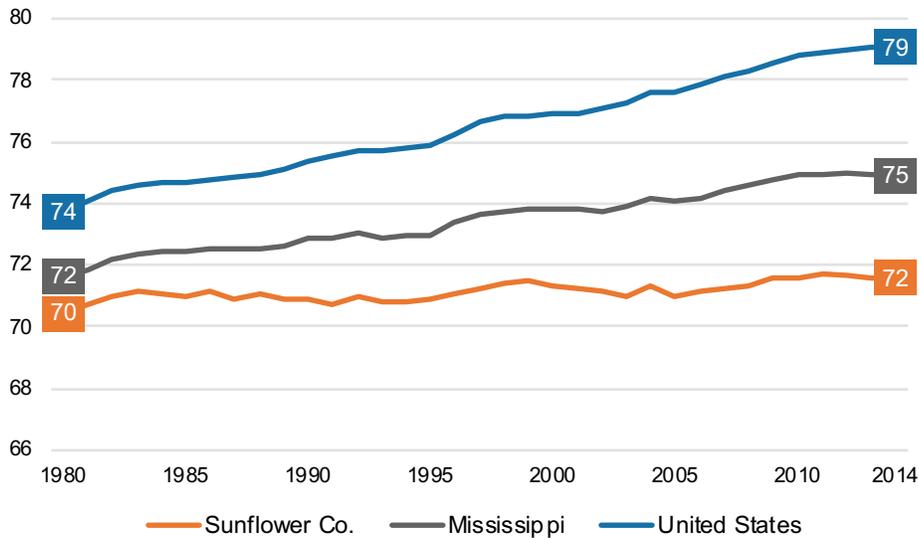
Figure 22 offers a tighter view of Mississippi. Mississippi is the only state in which the overall life expectancy puts the whole state in the bottom quintile. In Sunflower County the only tracts that are not red are the sparsely populated northern edge, where the penitentiary is located, and the southeastern corner. Leflore County, to the east, is entirely red, and Washington County, to the west, has only one tract that is not in the 4th or 5th quintiles, also sparsely populated.

Figure 22. Mississippi life expectancy at birth by census tract, 2010-15 (Tejeda-Vera et al., 2020).



Interestingly, life expectancy in the county was much closer to the state and nation 40 years ago (Figure 23). In 1980, Sunflower County's life expectancy was about three years lower than the rest of the country and only one year lower than life expectancy in the state. Since then, life expectancy in the county has increased by one year while the U.S. has gained more than five years and the state has gained more than three.

Figure 23. Sunflower Co. Life Expectancy at Birth, 1980-2014



Mississippi also routinely ranks at the bottom of all states for birth outcomes and Sunflower County’s rates are worse than the state’s (Table 16). The infant mortality rate is double the rate in the country, and the rates of early and low weight births are each at least 50% higher than the U.S. If Sunflower County were a country, its infant mortality rate of 11.9 per 1,000 would give it the same rate as Colombia, Iran, Mexico, and Moldova (World Bank, 2021c). As with economic and social outcomes, the risks of poor outcomes are not spread evenly across racial groups (Table 17).

Table 16. Birth outcomes in national context (Collier et al., n.d.; Ely and Driscoll, 2020; Martin, Hamilton, Osterman, and Driscoll, 2021; Mississippi State Department of Health, 2021b).

Geography	Infant Mortality Rate (per 1,000)	Pre-term Birth Rate	Low Birth Weight Rate
Sunflower Co.	11.9*	15.0%	13.9%
Mississippi	11.6	14.6%	12.3%
United States	5.7	10.0%	8.3%

*For Mississippi public health region III, 2015

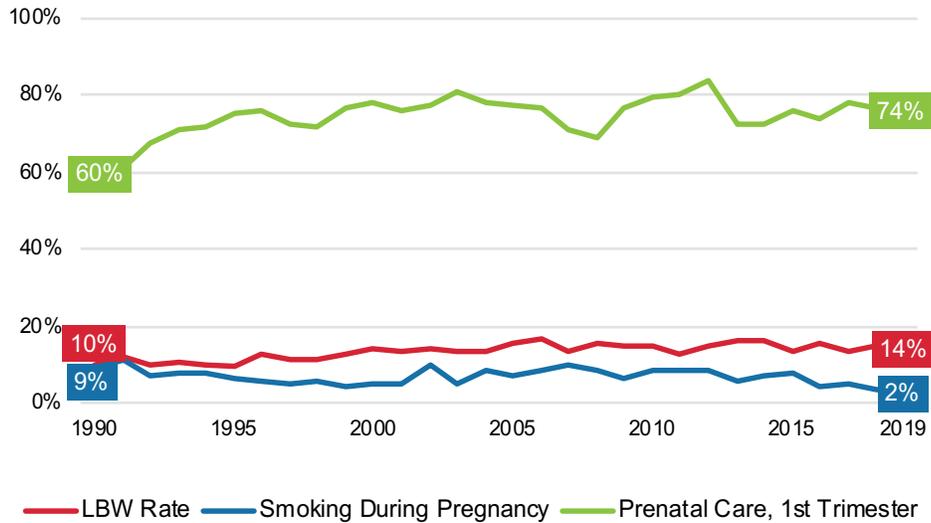
Table 17. County birth outcomes by race, 2019 (Mississippi State Department of Health, 2021b).

Race	Infant Mortality Rate (per 1,000) *	Pre-term Birth Rate	Low Birth Weight Rate
Black, non-Hispanic	11.8	16.6%	15.2%
White, non-Hispanic	6.4	7.9%	9.5%
Other	7.9	0.0%	0.0%

*Infant mortality rate for Mississippi; Department of health sources do not disaggregate county infant mortality statistics.

Figure 24 places Sunflower County’s low birth weight trend alongside some health behaviors found in the same source. About three-fourths of women receive prenatal care in the first trimester, down from a peak of 84% in 2012 but up 20% from where it was in 1989. Meanwhile, smoking during pregnancy has dropped dramatically, from a peak of 11.1% in 1991 to 2.4% in 2019. Recall from Figure 17 in the social and economic section that the percentage of births to teenagers and women who have not graduated from high school have also dropped by more than half since 1980. Despite these trends, the rate of low weight births has not improved, but has increased. Between 1995 and 2006, the rate rose by 75% from 9.5% to 16.6%, the highest rate recorded. The rate has stayed at 13% or higher every year since.

Figure 24. Low Birth Weight Rate & Behaviors, Sunflower County, 1989-2019
(Mississippi State Department of Health, 2021b)



Sunflower County also has challenges in terms of healthcare access (Table 18). The rate of insurance for young children is very high, even relative to the country, at 97.5%. The rate of insurance overall is much lower, at 83.7%, eight percent lower than the national rate of 90.6%. The largest point of departure in coverage is for the unemployed. In Sunflower County, only 40% of the unemployed are covered, versus 70% in the U.S. Recall from Table 8 and Table 10 that the unemployment rate overall in Sunflower County was 16% and the rate for mothers of young children was 34%, pre-COVID. These differences in coverage are due to differences in Medicaid eligibility (Kaiser Family Foundation, 2019). Mississippi is one of twelve states to oppose Medicaid expansion and one of seven to request a work requirement provision (Commonwealth Fund, 2021). Work requirements would not cover ineligible mothers of young children who are unable to find work, 90% of whom are already in the labor force. There are slightly more primary care providers per capita in Mississippi than in the U.S. overall. But, there are about half as many in Sunflower County as there are in the state making the entire county a designated Health Professional Shortage Area (HPSA). Including licensed counselors and general therapists, there are only six providers in the county, working out to 23.3 per 100,000. There are almost seven times as many providers per 100,000 in the state, and almost 10 times as many nationally.

Table 18. Healthcare access in national context (County Health Rankings, 2021; Hing and Hsiao, 2014; Larson, Patterson, Garberson, and Andrilla, 2016; U.S. Census Bureau, 2019a).

Geography	% Insured	% Insured, Age < 6	% Insured, Unemployed	Primary Care Providers (per 100,000)	Mental Health Providers (per 100,000)
Sunflower Co.	83.7%	97.5%	39.8%	27.0	23.3
Mississippi	87.3%	96.2%	49.1%	52.9	158.7
Census South	87.6%	94.8%	59.6%	---	---
United States	90.6%	95.8%	70.3%	46.1	221.2

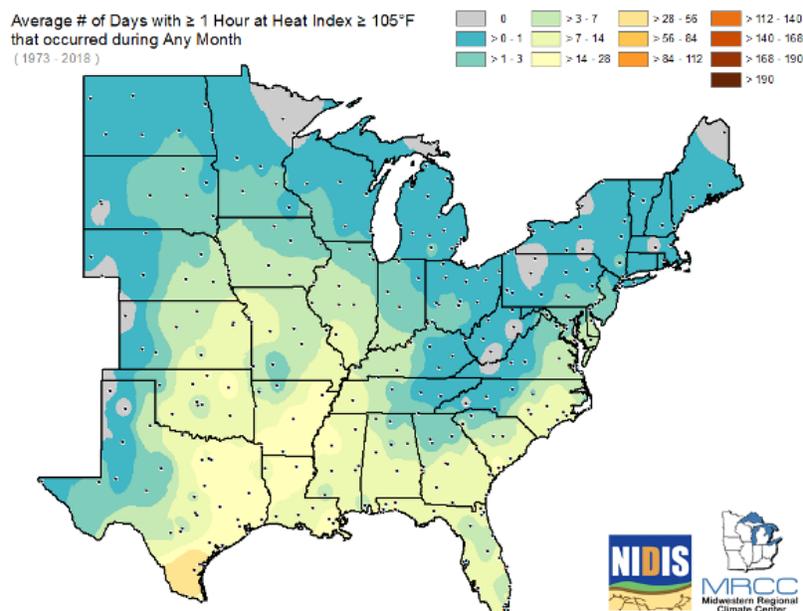
Environmental Concerns

Like the rest of the state, Sunflower County has a humid subtropical climate, with hot, humid summers with high temperatures above 90 degrees Fahrenheit almost every day and occasionally above 100 degrees. Summer lasts from the end of May until the end of September. Mild, relatively short winters have daily high temperatures that average in the 50s Fahrenheit and rarely dip below freezing. The county averages 53 inches of rainfall each year, with late summer and autumn being slightly dryer than the rest of the year (NOAA, 2021). Severe thunderstorms and flash floods are common during spring and early summer, as are tornadoes.

Geologically, the Delta region consists almost entirely of alluvial floodplain. The flora originally included mixed deciduous forest and cypress swampland that has been cleared and drained for farming. The land is very flat and is now only rarely broken by stands of trees. Sunflower County (and the town of Sunflower) takes its name from the Sunflower River, one of the main drainages of the Delta region, that flows through the county from north to south (Mississippi Department of Environmental Quality, n.d.). The Sunflower takes on multiple tributaries in the county, including the Hushpuckena River and Black Bayou west of Parchman, Mound Bayou west of Drew, Dougherty and Burrell bayous near Ruleville, Jones Bayou near Sunflower, and the Quiver River between Moorhead and Indianola, before emptying into the Yazoo River about 60 miles below Indianola, a few miles before the Yazoo's confluence with the Mississippi. All of these low-lying rivers and streams are susceptible to flooding (FEMA, 2014). The weather and topography of the region mean that flooding happens both as a result of swelling rivers, including the Mississippi River, and high local rainfall. 2018 and 2019 were two of the six wettest years on record for the county (NOAA, 2021). Tornadoes and severe thunderstorms are another major risk in the county. In 1971, a major regional tornado outbreak killed 28 and injured 342 in the county (NOAA, n.d.; Reed, 1971). Tornadoes were most recently recorded in the county in January 2020, but the county was affected by severe weather as recently as March 2021 (Weather Channel, 2021).

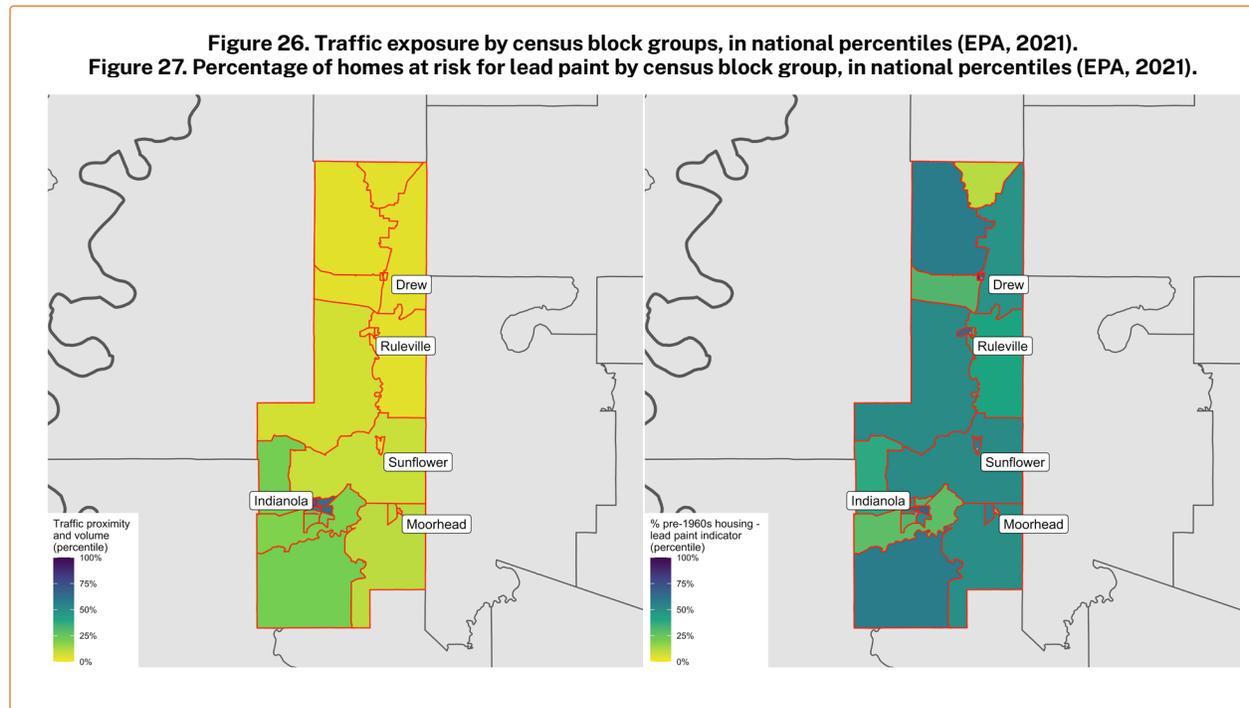
Other natural hazards in the county include often extreme heat indices due to high heat and humidity in the summer, high UV indices in the summer, and periodically high dust, dander, and pollen exposures. The two most recent weather-related deaths in the county were from extreme cold in 2017 and extreme heat in 2000 (NOAA, n.d.). Figure 25 shows heat indices in the Delta in a subnational context. The northwestern corner of Mississippi has as many days (14-28) with a heat index of 105 degrees Fahrenheit or higher as anywhere else in the eastern half of the country except southern Texas. The hot days in summer place everyone at higher risk of heat exhaustion, limit the time children can spend outdoors, and make air conditioning a necessity. The average UV index in the county is moderate or higher (3+) in every month except November, December, and January, and very high (8) from late May to mid-August (EPA, 2020). High UV exposure can cause skin cancers, cataracts and immune system damage (World Health Organization, 2021), and the EPA recommends protection for exposure at level 3 or higher (EPA, 2004). Finally, in their annual report of “asthma capitals” (the most challenging places to live with asthma), the Asthma and Allergies Foundation of America ranked Jackson, MS 15th and Memphis, TN 29th worst on a list of 100 metropolitan areas (Asthma and Allergy Foundation of America, 2019). Both Jackson and Memphis ranked in the top 10 for asthma-related deaths, with Jackson having the worst death rate in the country. Further, Memphis ranked 10th highest for people affected by pollen, and Jackson had the highest rate of long-term asthma controller medication use nationwide. It seems most of the asthma problems in the region are due to human causes, as Jackson and Memphis rank above average for seasonal allergy exposure (ibid.).

Figure 25. Heat index map, eastern United States (Midwestern Regional Climate Center, 2021).



Indianola and the surrounding areas have decent air quality readings from the EPA, in a national context (EPA, 2021). Air particulate and diesel exposure readings are around the 60th percentile or lower for every census tract in the county. Particulate exposures may be more time sensitive in the Delta than in other areas, potentially resulting from field burns and/or occasional droughts instead of industrial pollution or seasonal allergens.

Traffic exposure is one item that does show elevated risk in the county. The areas in Indianola around U.S. Highway 82 are all in the 60th to 70th percentiles nationally for traffic volume (Figure 26). However, these areas still rank low for particulate matter from diesel exhaust despite the high traffic.

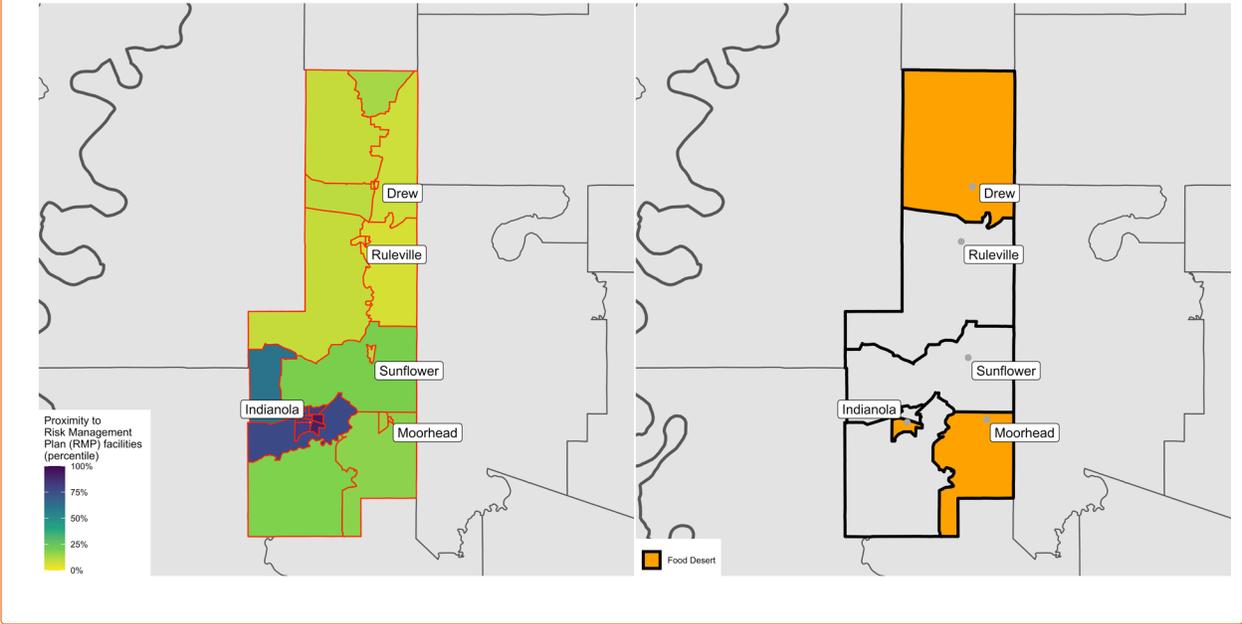


The groundwater source in the region is the Mississippi Alluvial Aquifer. Recent studies have found some household risk of contamination but none in the overall water source (Fratesi, 2018; Otts and Janasie, 2017). Water quality can vary widely, however, because water is provided by a number of independent cooperatives in Mississippi (University of Wisconsin Center for Cooperatives, n.d.).

Figure 27 shows the percentage of housing built before 1960 by Census block group as a proxy for lead paint (and pipe) exposure. Drew has the highest risk and is around the 90th percentile nationally. The west side of Ruleville and the central portions of Indianola are also above the 60th percentile. The larger rural areas are mostly in the 50th percentile or below.

There are no superfund sites in the county, but there are many sites with risk management plans (RMP), sites that have hazardous materials with plans for their disposal and emergency action plans should they lose containment. Figure 28 shows the national percentile of Census block groups for RMP sites per kilometer. All of Indianola and the area surrounding it are in the 90th percentile or higher. The rest of the county is in the 20th percentile or lower. This is likely an effect of warehousing, pesticide and fertilizer storage, and medical sites in Indianola.

**Figure 28. Proximity to sites with an EPA Risk Management Plan for hazardous materials by census block group, in state percentiles (EPA, 2021).
Figure 29. Food desert census tracts (USDA, 2020a).**



Food access is of particular importance to health, especially obesity rates, and can be highly localized. Figure 29 highlights the census tracts in the county that classify as food deserts. Here, a tract counts as a food desert if it is a) low income (poverty rate higher than 20%) and b) at least one-third of the population would have to travel more than one mile to find fresh produce in a densely populated area (Indianola tracts), or ten miles in a sparsely populated area (all other tracts). This is the most exclusive criteria the USDA uses to identify food deserts. By this definition, the southern half of Indianola, the northern third of the county including Drew, and the southeast corner including Moorhead all classify as food deserts.

Participant Status

More than 90% of parents of participants in each program report being insured (Table 19). Sixteen percent of EHSCCP children’s parents had private coverage, compared to 6% for HS/EHS. Yet, more HS/EHS participants’ parents reported having a stable medical home, 83.3% to 78.5%.

Table 19. Parent healthcare access.

Program	% Insured	% with Private Insurance	% with Medical Home
HS/EHS	93.5%	5.9%	83.3%
EHSCCP	92.9%	16.1%	78.5%

The vast majority of children were reported by their parents to have a stable medical home, dental home, and be up-to-date on vaccinations (Table 20). Very few used the E.R. for their child’s medical care or neglected care altogether.

Table 20. Child healthcare access.

Program	% with Medical Home	% with Dental Home	% Up-to-Date Immunizations	% Uses E.R. or Neglects Care for Illnesses
HS/EHS	89.9%	96.4%	95.5%	5.6%
EHSCCP	92.0%	87.5%	98.7%	3.5%

Rates of reported, diagnosed depression are very low for parents in both programs (Table 21). Staff identified low self-esteem in parenting for about 10% of the children in each program. The rate of binge drinking or using illegal substances was only 5.5% at EHSCCP, but it was twice as high for the HS/EHS program.

Table 21. Parent mental health & substance use.

Program	% with Diagnosed Depression	% Uses No Drugs or Alcohol	% Binge Alcohol or Illegal Substance Use	% Low Parental Self-Esteem
HS/EHS	2.8%	80.5%	12.5%	10.2%
EHSCCP	1.1%	92.7%	5.5%	9.5%

Housing Patterns

Rents and home values are low in a national context. Few are homeless, but many live with extended family. Housing quality is a concern, as much of the housing stock is aging and few have modern utilities like wired internet.

Strengths: Almost all participant families report stable housing.

Weaknesses: The spatial distribution of wired internet probably illustrates stark contrasts in housing quality that correspond to race.

Opportunities: Referrals to financial literacy programs have been touted as effective by program staff. Connecting these families to reliable real estate lenders while land values are low could be a way to help families create wealth.

Threats: The lack of new construction restricts housing markets, as does racial segregation that segments those markets. There is a spatial correlation between new construction and heating with propane, suggesting that many new structures are manufactured housing in remote areas. These structures would have higher risk of storm damage, fire, and carbon monoxide poisoning for children.

County in Wider Context

Historically, housing in the region has been characterized by large landholders building often temporary housing for their renting agricultural laborers (Cobb, 1992). These trends continue into the current day, with low homeownership rates, low rents, and less incentive to build new housing stock relative to the rest of the country.

Low housing cost is one of the advantages for families in the Delta region. The median rent in Sunflower County is \$626, just 58% of the median cost nationally (Table 22). However, the quality of housing is also different in the Delta. Less than 10% of the housing stock in Sunflower County was built since 2000, about half as much as the national percentage and only 38% as much as in the South overall. Building has all but stopped since 2014, with only one percent of the housing structures having been built since then, but the rate for the state and country is about the same at 1.5%. Only 15% of the residences in the county are multi-unit structures, compared to one-fourth nationally. Finally, half as many households in Sunflower County have wired internet in comparison to the country overall. In the county, two households do not have wired internet for every household that does. For the country overall, these odds are flipped.

Table 22. Housing in national context (U.S. Census Bureau, 2019a).

Geography	Median Rent	% Multi-Unit Residences (Apartments)	% Housing Stock Built Since 2000	% Homes Without Utility Heating (Gas or Electric)	% Homes With Wired Internet
Sunflower Co.	\$626	15.4%	9.2%	11.1%	33.5%
Mississippi	\$706	13.7%	22.6%	13.1%	46.8%
Census South	\$966	21.1%	24.3%	6.9%	64.3%
United States	\$1,071	25.6%	18.5%	12.3%	67.9%

Home values are also very low in Sunflower County (Table 23). The median value of a mortgaged home in the county is only \$78,000, about one-third of the median value nationally. As a result, the majority of these homes are worth less than twice the household's yearly income, despite the low incomes in the region. At 61.6%, this rate is almost double the national rate of 37.6%. The homes that are owned outright, with no mortgage, are also worth far less than they are nationally. Sixty-eight percent of the homes owned outright in Sunflower County were worth less than \$100,000, more than double

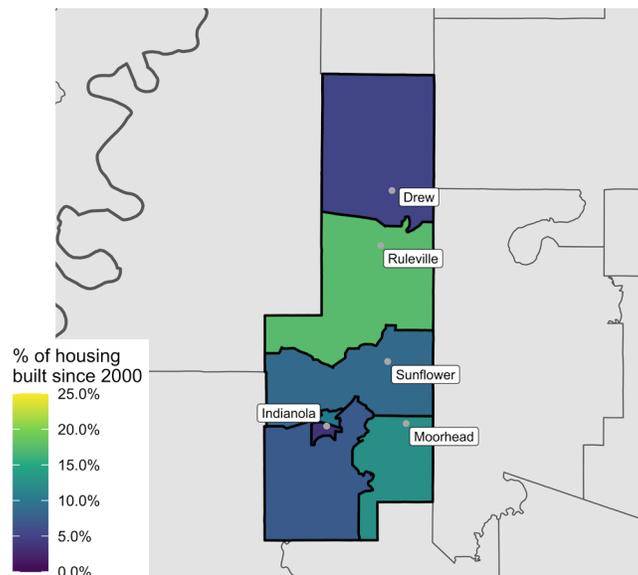
the national rate of 31.1%. Real estate is the main source of wealth for the vast majority of American households (Rothstein, 2017), and these lower values mean less wealth for households in the county. They also represent a lower cost of entry for homebuyers, but this is not translating into higher rates of homeownership with only 55% of the households in the county being owner-occupied, 14% lower than the national rate and 20% lower than the rate in the state of 68.2%.

Table 23. Homeownership in national context (U.S. Census Bureau, 2019a).

Geography	Median Mortgaged Home Value	% Owner-Occupied	% Mortgaged Home Value < 2x Yearly Household Income	% Owned Outright Worth <\$100k
Sunflower Co.	\$78,000	54.9%	61.6%	67.7%
Mississippi	\$138,500	68.2%	51.8%	54.2%
Census South	\$191,600	65.0%	41.9%	38.1%
United States	\$226,900	63.8%	37.6%	31.1%

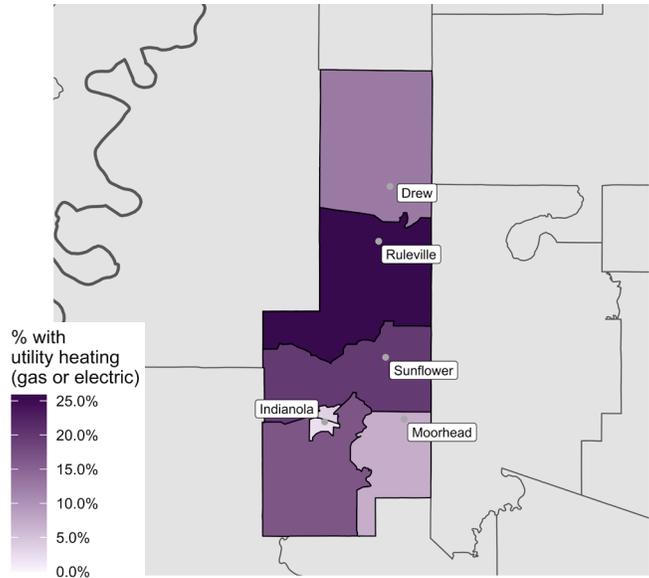
Figure 30 shows the percentage of housing structures built since 2000 by census tract. The tract including and surrounding Ruleville is the only one above 15%, at 17.5%. Ten percent of the homes in the northern half of Indianola and 13% in the southeastern corner of the county were built since 2000. The southern half of Indianola had the lowest rate of any area, at 3.7%. The tracts including Ruleville and Sunflower were the only tracts with any construction since 2014 in the ACS.

Figure 30. Percentage of housing built since 2000 by census tract (U.S. Census Bureau, 2019a).



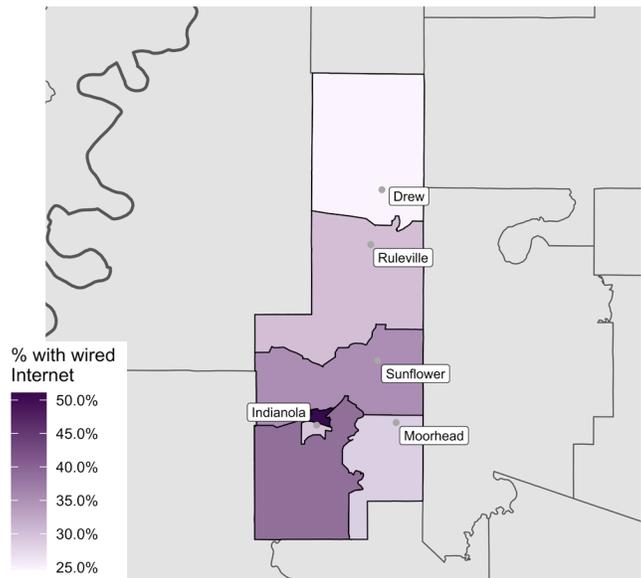
Nationally, 12.3% of households are heated without utility gas or electric. In the Sunflower County, the rate is 11.1%. Figure 31 shows non-utility heating by census tract. This rate is only about three percent in Indianola but 26% in the tract including Ruleville. Nationally, about six million each use propane and fuel oil or kerosene, with another two million using wood. In Sunflower County, almost all of these households use propane for heating.

Figure 31. Percentage of homes with no utility heating (gas or electric) by census tract (U.S. Census Bureau, 2019a).



The northern half of Indianola is the only area where more than half the households have wired internet, at 51% (Figure 32). In the southern half the rate is 29%. The rate in the tract including Moorhead is also 29%, and the only tract with a lower rate is the tract including Drew, at 25%.

Figure 32. Percentage of homes with wired Internet by census tract (U.S. Census Bureau, 2019a).



Participant Status

From internal surveys, the majority of participants' parents in each program owned or rented their own home (Table 24). Almost 40% of the participants in each program had parents who lived and shared expenses with extended family. Three participants in HS/EHS and seven in EHSCCP (about 3%) were reported to be homeless.

Table 24. Participant housing status, 2019

Program	% Own or Rent Own Home	% Lives with Extended Family	# Homeless
HS/EHS	56.2%	39.3%	3
EHSCCP	60.3%	37.0%	7

Transportation Patterns

Personal cars are far and away the primary mode of transportation for Sunflower County residents. There are several private and nonprofit partnerships trying to fill a public transit need in the area with buses for commuting. Besides driving, buses are the only way to leave the county, as well.

Strengths: The small-town character of Indianola and the types of roads create shorter commutes for county residents than are typical in the rest of the country.

Weaknesses: About 1/3 of program parents borrow cars or are unlicensed and ride with others.

Opportunities: Different groups are collaborating to try to create reliable mass transit in the community. EHSCCP and HS/EHS could help expand their network.

Threats: There are few options for travel outside the county without a car. Passenger rail used to exist decades ago; if access to bus lines was cut, residents would have no way out without a personal car.

County in Context

The Mississippi Delta region is characterized by wide open, flat spaces connected by straight highways with high speed limits. Two U.S. Highways cross in Indianola, U.S. 49W and U.S. 82. Highway 82 is a major divided four-lane route connecting Greenville, on the Mississippi River in Washington County to the west of Sunflower County, with Greenwood and then Interstate 55 to the east. There is no interstate access in the county. U.S. 49W is a graded two-lane highway, like many state highways in the region. U.S. 278/61 crosses through Bolivar and Washington counties to the west and is another four-lane divided highway.

Because of the low density of most of the communities in the region, there is not much in the way of reliable public transit infrastructure. Some regional entities have their own bus or shuttle systems, but most municipalities do not. Delta Rides is a collaborative of several nonprofits providing public transit (Delta Rides Regional Coordinated Group, n.d.). This includes one east-west bus route from Greenwood, through Indianola, to Greenville on weekdays (Delta Rides, n.d.). Another Delta Rides partner is the Bolivar County Council on Aging, who offers transportation to the general public by request for certain needs (Bolivar County Council on Aging, Inc., 2017). There are two regional bus lines with stops in the city. Delta Bus Lines will take passengers from Indianola south to Jackson, or west to Greenville where they can go north to Memphis or south to Baton Rouge (Delta Bus Lines, n.d.). There is also a Greyhound bus stop in the city that connects residents to its network throughout the country. There is no light rail in the region, and there are also very few taxi services. As of April 2020, both Uber and Lyft are operable in Sunflower County, but wait times may be extreme as Lyft support is based out of Oxford, a two-hour drive away. There is an Amtrak station in Greenwood with a north-south route through Memphis and Jackson to Chicago and New Orleans. Residents can travel by air through a regional airport in nearby Cleveland, and larger international airports are in Memphis and Jackson.

Figure 33. Regional roads and airports (Mississippi Development Authority, 2021b).

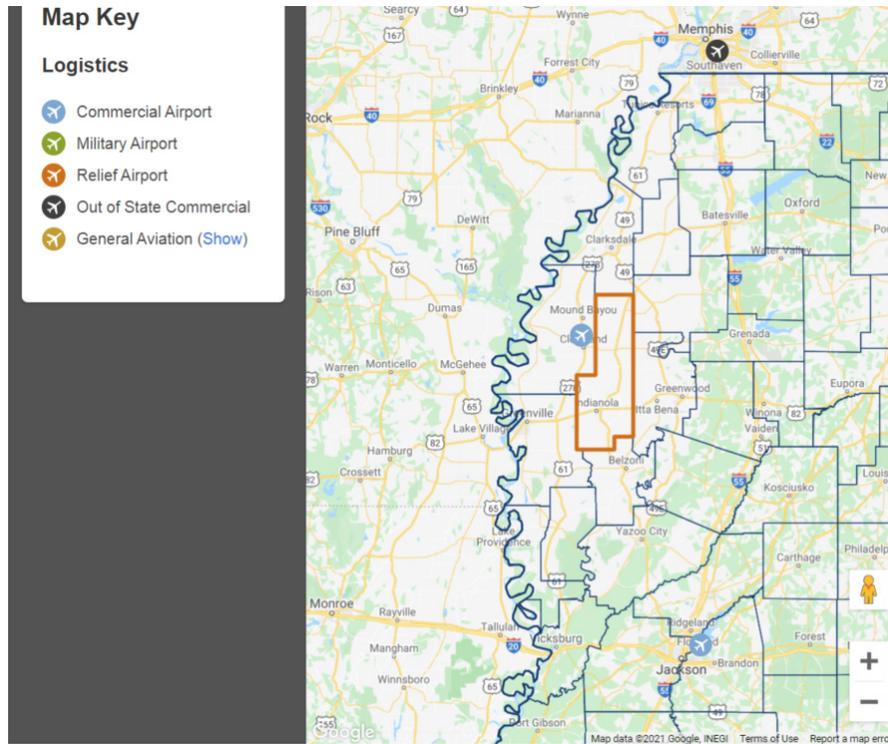


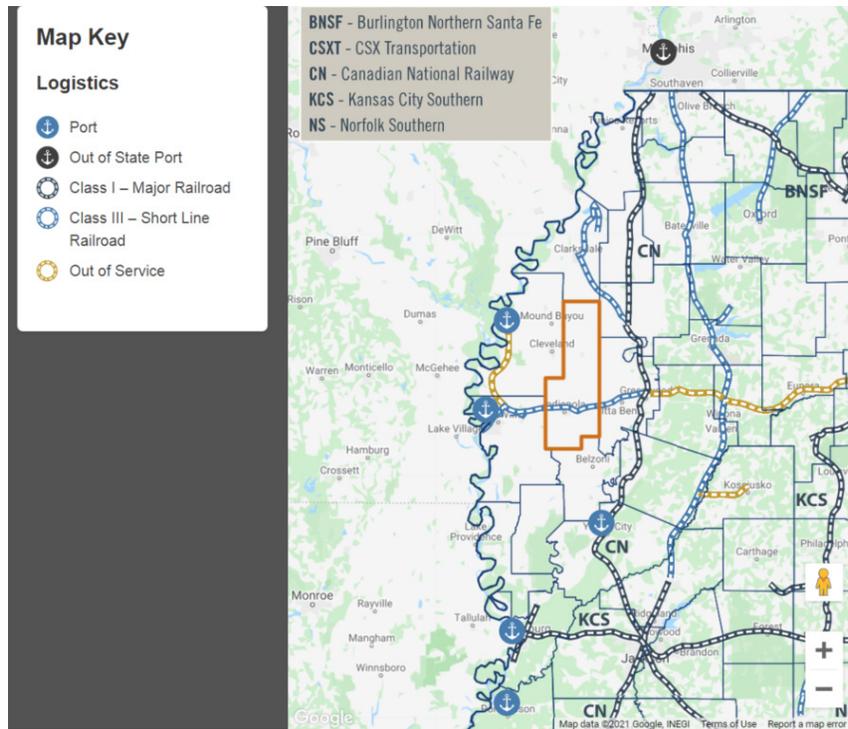
Table 25 shows the extent to which workers in the county are dependent on cars for travel to work. More than 80% drive their own car alone to work, with a full third driving to work outside the county. Both of these rates are higher than national rates but lower than state rates. Only 3.4% used public transit, walked, or biked to work, with almost all of these walking. Despite the high rates of working outside the county, almost two-thirds have a commute that is less than 20 minutes in length, much higher than the U.S. rate of 40%. Despite the necessity of a car in the county, 12% reported not having access to a personal vehicle, almost double the rate in Mississippi overall. Only 1.3% reported working at home, compared to 5% in the U.S. At this point, we do not know how this rate has been affected by the COVID-19 pandemic.

Table 25. Commuting in national context (U.S. Census Bureau, 2019a).

Geography	% Drove Own Car Alone to Work	% No Vehicle Available	% Worked Outside County	% Used Public Transit, Walked, Biked	% Travel Time to Work <20 Minutes	% Worked at Home
Sunflower Co.	82.2%	11.8%	33.3%	3.4%	64.5%	1.3%
Mississippi	85.3%	6.5%	36.7%	1.8%	46.9%	2.3%
Census South	80.2%	6.6%	29.7%	4.3%	40.5%	4.7%
United States	76.4%	8.7%	27.7%	8.3%	40.4%	4.9%

Figure 34 shows regional infrastructure for commercial and industrial shipping through railroads and ports (Sunflower County highlighted in orange). There are river ports to the west, in Greenville and Rosedale, and there is a major railway to the east that passes through Greenwood. Sunflower County has neither ports nor major railways, but lies at an intersection of the two, with decent highway infrastructure. As a result, trucking and warehousing have become major industries in the county and may continue to be in future years.

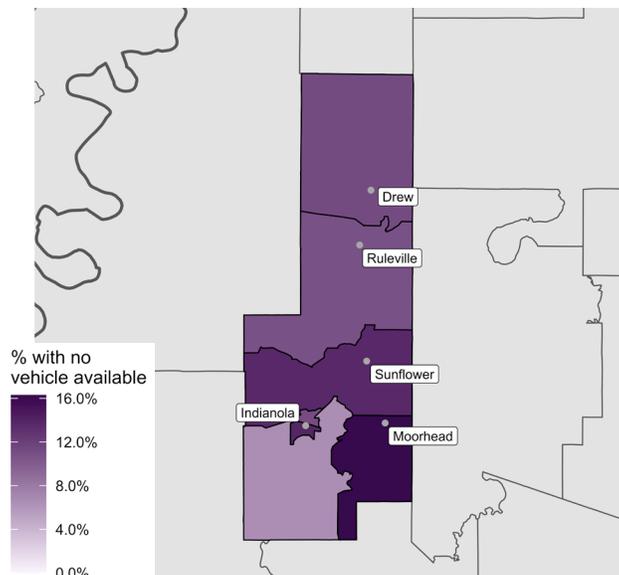
Figure 34. Regional railroads and ports (Mississippi Development Authority, 2021b).



Tracts

At least 10% of the residents lacked access to a vehicle in every census tract in the county except the southwest corner of the county, at 6.4% (Figure 35). The tract including Moorhead had the highest percentage at 16.3%, likely influenced by students residing at Mississippi Delta Community College in Moorhead.

Figure 35. Percentage with no vehicle available by census tract (U.S. Census Bureau, 2019a).



Participant Status

About two-thirds of the participants' parents in each program drive their own licensed, insured car. Another 18% in HS/EHS and 16% in EHSCCP have access to a car if they need it and are licensed drivers. Almost 20% of HS/EHS and 14% of EHSCCP participants' parents ride with others or have to share vehicles without a license. Altogether, about 36 EHSCCP and 82 HS/EHS participants have parents without adequate transportation, excluding licensed drivers who borrow the cars of others.

Table 26. Participant transportation characteristics.

Program	Drives Own Car, Licensed & Insured	Licensed to Drive, Borrows Car	Rides with Others or Drives Without License
HS/EHS (n=354)	62.5%	17.8%	18.6%
EHSCCP (n=224)	68.8%	16.1%	13.8%

Public School Patterns & Childcare Programs

Educational attainment is very low in the county. This is partly due to the many factors listed in the above sections but is also a function of brain drain, with those who do attain a higher education level leaving. Educational outcomes are highly segmented by race, as are the schools themselves. Younger children in the district are slightly outperforming the state, but graduation rates are very low and while graduates enroll into higher education at high rates, they are not finishing. In the face of enormous need, childcare and early childhood education seems to be a strong positive in the community and is probably a large factor in why children are doing well in school in the early grades.

Strengths: Childcare capacity is high in the county, programs appear to be well-located, and children are outperforming state norms in early grades.

Weaknesses: Pre-K enrollment seems lower than it should be, given enrollment rates for preschool, Head Start, kindergarten, and 1st grade.

Opportunities: Using EHSCCP and HS/EHS to align children with pre-K programs could help increase enrollments and help children outperform the state even further in early grades.

Threats: The above problems, including the lack of good career openings and strife in the community, create a scenario where the community does not always reap the rewards of investing into the education of its children because they leave. Early childhood programs appear to have great momentum in the county right now, but the political will could evaporate, and people could lose their enthusiasm if the community is not able to see the early childhood successes spill over into other successes.

County in Context

Until recent decades, leaders in the Delta region benefited from maintaining a poorly educated Black labor force (Baptist, 2016; Cobb, 1992). Since the 1960s, federal oversight, civil rights activism and New South boosterism have pushed the educational system forward (Cobb, 1992). One way this is illustrated is through the relatively large network of community colleges in the state (Mississippi Community College Board, 2019). Still, the state is far behind the nation in educational outcomes and the schools in the Delta region remain highly segregated.

Table 27 shows the percentage of Sunflower County residents at different education levels from the ACS. Twenty-seven percent of residents age 25 or older never graduated high school or obtained a GED, more than double the national rate of 12.4%. Sixty-one percent of the national population has obtained at least some college credit, 39% more than in Sunflower County where only 43% have. Finally, only 15.4% of Sunflower County residents have obtained a bachelor's degree, half the rate of the U.S. population overall. The prison population in Sunflower County likely accounts for some of the low educational attainment but cannot account for such large differences between the county, state, and country.

Table 27. Educational attainment in national context (U.S. Census Bureau, 2019a).

Geography	% < High School (Age 25+)	% < High School (Age 25-34)	% Some College Credit (or More)	% Bachelor's Degree (or More)
Sunflower Co.	27.1%	26.0%	43.4%	15.4%
Mississippi	16.1%	12.9%	53.6%	21.8%
Census South	13.5%	10.7%	58.3%	29.4%
United States	12.4%	9.7%	60.5%	31.5%

There are large educational differences by subgroup within the county. At 24%, twice as many white residents have bachelor's degrees than Black or Hispanic residents (Table 28). Women in the county are more than twice as likely to have bachelor's degrees than men, at 21% to 10.5%. This difference

is even more pronounced among the Black population, where 18.4% of Black women have bachelor's degrees versus only 7.2% of Black men. Thirty percent of white women in the county have bachelor's degrees, the most educated group in the county by race and sex.

Table 28. County educational attainment by race, sex (U.S. Census Bureau, 2019a).

Group	% High School or More	% Bachelor's or More
Black, non-Hispanic	70.2%	12.4%
White, non-Hispanic	80.5%	24.0%
Hispanic	63.4%	12.1%
Male	71.9%	10.5%
Female	78.3%	21.0%

Tracts

Educational attainment in the county, by the percentage who have attended college, ranges from 31% in the tract including Drew to 62% in the northern half of Indianola (Figure 36). The southern half of Indianola has the second-lowest rate, at 42.4%.

Figure 36. Percentage with some college credit or more (U.S. Census Bureau, 2019a).

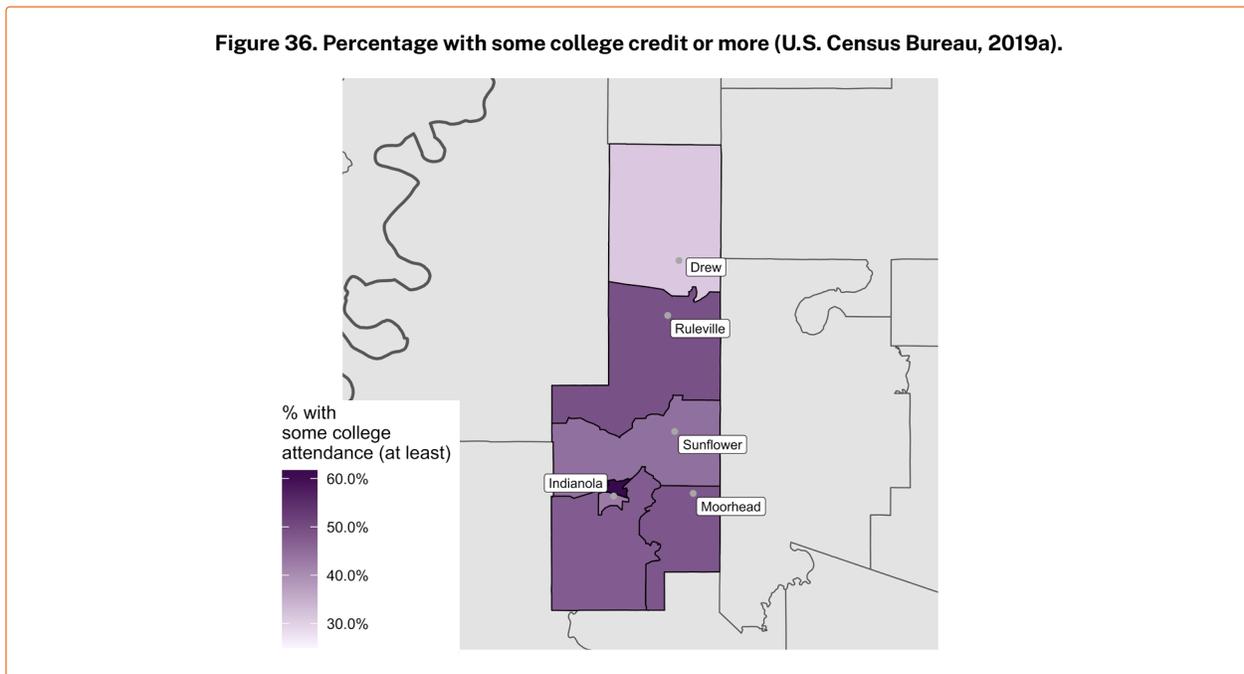


Table 29 shows the demographics for the Sunflower County Consolidated School District, the public school district for all the participants in the HS/EHS and EHSCCP programs. The district had 3,455 students in 2019 but only 234 kindergarteners, with declining numbers for younger grades. More than 95% of the students in the district are Black, non-Hispanic. The low racial and ethnic diversity in the district relative to the county's population is the result of white students attending almost exclusively white private schools, namely Indianola Academy, which had two Black students out of 436 in the 2009-10 school year (the most recent year for which they provided data), and North Sunflower Academy in Drew, with two Black students out of 139 in 2017-18 (National Center for Education Statistics, n.d.).

Table 29. Sunflower County School District demographics, 2019-20 (Mississippi Department of Education, 2021).

Total Enrollment	Kindergarten Enrollment	% Black	% White	% Hispanic	% Male	% Female
3,455	234	95.6%	2.1%	2.0%	50.2%	49.8%

Only 21.4% of students from the district have earned a degree or certificate within five years of graduating, but this matches the rate for students in the state (Table 30). Post-secondary enrollment is high, at 70%, five percentage points higher than the state average, and the percentage of children passing the state’s high stakes literacy test in 3rd grade on their first try was also higher than the state average, at 78.3%. But the district lags far behind in four-year graduation rates and enrollment in AP courses. Only 73% of the district’s students graduate in four years, 14% lower than the state rate, and less than a quarter of the students in the district take advanced placement classes, at 24% exactly half the rate in the state.

Table 30. Sunflower County School District performance, 2018-19 (Mississippi Department of Education, 2021).

District	Graduation Rate	Post-Secondary Enrollment	Earned Degree or Certificate w/ in 5 Years	Passed High-Stakes 3rd Grade Lit Test	AP Course Enrollment	Mean Kindergarten Entry Score
Sunflower Co.	72.9%	69.9%	21.4%	78.3%	24.1%	512
Mississippi	85.0%	64.9%	21.5%	74.5%	48.2%	502

Participants

Fewer than ten percent of the participants in each program have parents who have not graduated high school or finished a GED (Table 31). About 21% of HS/EHS participants’ parents have received a degree or certificate or are working on one, 24% for EHSCCP. About six percent of participants in each program had parents who had earned a bachelor’s degree or were working through a degree program.

Table 31. Educational attainment of program parents.

Program	Received High School Diploma or GED	Earned or Is Seeking Tech Training Certificate	Earned or Is Seeking Comm. College Degree or Certificate	Earned or Is Seeking Bachelor’s Degree
HS/EHS (n=341)	90.9%	5.6%	9.1%	6.7%
EHSCCP (n=216)	93.1%	7.4%	10.6%	6.0%

Early Childhood Education

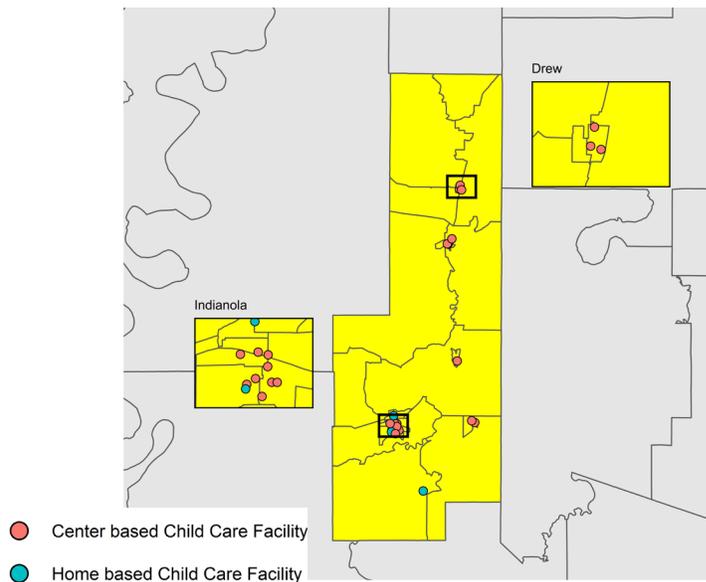
We briefly show childcare sites and mention how many women with young children are in the labor force in earlier sections, but we reiterate that here to emphasize how intense the need for affordable childcare is in the county. The proportion of young children in single mother households is almost 50%, almost double the rate in the U.S. overall. The percentage of young children in households with incomes below the federal poverty line is also more than double the rate of the U.S. But almost every woman with a child younger than 6 is in the labor force in Sunflower County, compared to 73% in Mississippi and 71% in the U.S. As a result, the rate of attending school for 3- and 4-year-olds is about 10% higher than it is in the U.S. overall. Altogether, women with young children in the county are single more often, working more often, and in poverty more often than their counterparts in the state and country.

Table 32. Childcare need in national context (U.S. Census Bureau, 2019a).

Geography	% Single-Mother Families, Children < 5	% Women in Workforce w/ Children < 6	% Below FPL, Children < 5	% 3-4-Year-Olds in School
Sunflower Co.	46.4%	90.2%	44.2%	58.1%
Mississippi	31.9%	73.3%	31.1%	51.7%
Census South	23.3%	64.8%	24.1%	46.1%
United States	20.8%	71.2%	21.5%	47.9%

The Center for American Progress (CAP) has defined a “childcare desert” as any place where the ratio of children under five years of age to childcare provider capacity is higher than three-to-one (Malik et al., 2018). In Sunflower County, the ACS estimates 1,559 children under 5, and the Mississippi Department of Health lists a capacity of 1,115 childcare slots across 21 childcare providers, a ratio for the county of 1.40:1, a capacity that is more than double what would be considered a childcare desert. Figure 37 shows the locations of these sites throughout the county. Because the sites are well spread out and capacity is high, most of the communities show adequate supply from CAP (Center for American Progress, 2020). The only parts of the county where childcare is considered mildly scarce are Sunflower, Inverness, and sparsely populated rural areas throughout the county. By CAP’s definition, childcare is plentiful in the county. It should be noted, however, that with so many mothers of young children in the labor force and in poverty (Table 10), acceptable childcare capacity in Sunflower County may be closer to the 1.4:1 child to slot ratio the county currently has than the 3:1 ratio that CAP sets as their threshold of a childcare desert.

Figure 37. MSDH-monitored childcare locations in county (Mississippi State Department of Health, 2021a).



There has been a growing effort to increase Pre-Kindergarten enrollment in Mississippi (e.g., WLBT-3, 2013). As of March 2020, there were seven schools in Sunflower County with a total of ten classrooms participating in the state-funded Early Learning Collaborative program, all but two of these being HS/EHS sites (Mississippi Department of Education, n.d.). In 2019-20, these sites had a total Pre-K enrollment of 100 children, with only 63 in 2020-21, which was affected by the pandemic. Lacking numbers for the population of every single integer age, we estimate from the population under 5 that there are about 312 4 year-olds in the county. This would mean that only 32% of 4 year-olds in the county attended Pre-K in the public district in 2020, when enrollment was higher. Compared another way to account for the many children who attend private schools or other childcare sites instead of pre-K, 234 and 238 children enrolled in kindergarten and 1st grade in the district, respectively, more than twice as many children as attended Pre-K. By any metric, enrollment seems low and could indicate a need for outreach and awareness more than an increase in capacity.

References

- Aiken, J. (2017, May 31). Era of mass expansion: Why state officials should fight jail growth. *Prison Policy Initiative*. www.prisonpolicy.org/reports/jailsovertime_table_5.html.
- Alexander, K., Entwisle, D., and Olson, L. (2014). *The long shadow: Family background, disadvantaged urban youth, and the transition to adulthood*. Russell Sage Foundation.
- Asthma and Allergy Foundation of America. (2019). *Asthma capitals 2019: The most challenging places to live with asthma*. <https://www.aafa.org/media/2426/aafa-2019-asthma-capitals-report.pdf>.
- Baptist, E. E. (2016). *The half has never been told: Slavery and the making of American capitalism*. Basic Books.
- Barry, J. M. (1997). *Rising tide: The Great Mississippi Flood of 1927 and how it changed America*. Simon & Schuster.
- Bonczar, T. P. (2003, August 17). *Prevalence of imprisonment in the U.S. population, 1974-2001*. Bureau of Justice Statistics. <https://www.bjs.gov/index.cfm?ty=pbdetail&iid=836>.
- Bolivar County Council on Aging, Inc. (2017). *Transportation provided*. <https://bccoatransit.org/services>.
- CareerOneStop. (2021). *State profile: Largest employers*. <https://www.careerinfonet.org/oview6.asp?soccode=&st-fips=28&from=State&id=11&nodeid=12>.
- CDC. (2021a, March 31). *Adult obesity prevalence maps*. <https://www.cdc.gov/obesity/data/prevalence-maps.html>.
- CDC. (2021b, March 2). *Births and natality*. <https://www.cdc.gov/nchs/fastats/births.htm>.
- CDC. (2021c, February 8). *Percent of babies born to unmarried mothers by state*. <https://www.cdc.gov/nchs/pressroom/sos-map/unmarried/unmarried.htm>.
- CDC. (n.d.). *Diagnosed diabetes. United States Diabetes Surveillance System*. <https://gis.cdc.gov/grasp/diabetes/DiabetesAtlas.html>.
- Center for American Progress. (2020). *U.S. child care deserts [interactive map]*. <https://www.childcaredeserts.org/>.
- Charles, K. K. and Luoh, M. C. (2010). *Male incarceration, the marriage market, and female outcomes*. *Review of Economics and Statistics*, 92(3), 614-627.
- Cobb, J. C. (1992). *The most southern place on earth: The Mississippi Delta and the roots of regional identity*. Oxford University Press.
- Collier, C., Johnson, R., Stinson, M., Robinson, M., Vargas, R., and Zhang, L. (n.d.). *Infant mortality report: 2016*. Mississippi State Department of Health. https://msdh.ms.gov/ms-dhsite/_static/resources/7027.pdf.
- Commonwealth Fund, The. (2021, April 8). *Status of Medicaid expansion and work requirement waivers*. https://www.commonwealthfund.org/publications/maps-and-interactives/2021/apr/status-medicaid-expansion-and-work-requirement-waivers?redirect_source=/publications/maps-and-interactives/2020/oct/status-medicaid-expansion-and-work-requirement-waivers.
- County Health Rankings. (2021). *Mississippi*. <https://www.countyhealthrankings.org/app/mississippi/2020/measure/outcomes/147/data>.
- Dauria, E. F., Oakley, L., Arriola, K. J., Elifson, K., Wingood, G., and Cooper, H. L. F. (2015). *Collateral consequences: Implications of male incarceration rates, imbalanced sex ratios and partner availability for heterosexual Black women*. *Culture, Health & Sexuality*, 17(10), 1190-1206. <http://dx.doi.org/10.1080/013691058.2015.1045035>.
- Delta Bus Lines. (n.d.). *Route map*. <https://deltabuslines.net/routemap.html>.
- Delta Rides. (n.d.). *MVSU schedule*. https://www.mvsu.edu/sites/default/files/routing_schedule.jpg.
- Delta Rides Regional Coordinated Group [@Dgreee]. (n.d.). *Home [Facebook page]*. Facebook. Retrieved April 15, 2021 from <https://www.facebook.com/Dgreee/>.
- Ely, D. M. and Driscoll, A. K. (2020, July 16). *Infant mortality in the United States, 2018: Data from the Period Linked Birth/Infant Death File*. *National Vital Statistics Reports*. <https://www.cdc.gov/nchs/data/nvsr/nvsr69/NVSR-69-7-508.pdf>.
- Emmons, W. R., Kent, A. H., and Ricketts, L. R. (2019, October 9). *Just how severe is America's racial wealth gap?* <https://www.stlouisfed.org/open-vault/2019/october/how-severe-america-racial-wealth-gap>.
- Enterprise-Tocsin, The. (2021, January 7). *Sunflower county man makes MDP's first Mississippi's most wanted list*. <https://www.enterprise-tocsin.com/front-page-slideshow-news-most-recent-crime/sunflower-county-man-makes-mdps-first-mississippi-most#sthash.c2aXSEyk.dpbs>.
- EPA. (2021, March 31). *EJSCREEN: Environmental justice screening and mapping tool*. <https://www.epa.gov/ejscreen>.
- EPA. (2020, November 10). *Sun safety monthly average UV index*. <https://www.epa.gov/sunsafety/sun-safety-monthly-average-uv-index>.
- EPA. (2004, May). *A guide to the UV Index*. <https://www.epa.gov/sites/production/files/documents/uviguide.pdf>.
- FBI. (2021). *Crime in the United States: 2018*. <https://ucr.fbi.gov/crime-in-the-u.s/2018/crime-in-the-u.s.-2018/top-ic-pages/violent-crime>.
- FBI. (2020, September 28). *Crime data explorer*. <https://crime-data-explorer.fr.cloud.gov/>.
- FEMA. (2014, May 1). *Discovery report: Big Sunflower watershed, MS. Report number 03*. http://geology.deq.ms.gov/floodmaps/projects/riskmap/docs/reports/BigSunflower_DiscRep.pdf.
- Fratesi, M. A. (2018). *Community-based research methods to inform public health practice and policy: The case of lead in the Mississippi Delta*. [Undergraduate honors thesis]. Center for Population Studies, University of Mississippi. <http://thesis.honors.olemiss.edu/1292/>.
- Garis, D. (1998). *Poverty, single-parent households, and youth at-risk behavior: An empirical study*. *Journal of Economic Issues*, 32(4), 1079-1105.
- Goffman, A. (2014). *On the run: Fugitive life in an American city*. The University of Chicago Press.
- Greenwood Leflore Carroll Economic Development Foundation. (2021). *Major employers*. <https://greenwoodedf.com/?community-data/workforce/major-employers>.
- Hales, C. M., Carroll, M. D., Fryar, C. D., and Ogden, C. L. (2020, February). *Prevalence of obesity and severe obesity among adults: United States, 2017-2018*. *NCHS Data Brief*, No. 360. U.S. Department of Health and Human Services. <https://www.cdc.gov/nchs/data/databriefs/db360-h.pdf>.
- Hing, E. and Hsiao, C. (2014, May). *State variability in supply of office-based primary care providers: United States, 2012*. *NCHS Data Brief*, No. 151. U.S. Department of Health and Human Services. <https://www.cdc.gov/nchs/data/databriefs/db151.pdf>.
- Holley, J. (2019, September 24). *New Mississippi law carries heftier punishment for ignored traffic tickets*. *WMC Action News 5*. <https://www.wmcactionnews5.com/2019/09/24/new-mississippi-law-carries-heftier-punishment-ignored-traffic-tickets/>.
- Human Rights Watch. (2017, October 4). *Criminalization of poverty as a driver of poverty in the United States*. <https://www.hrw.org/news/2017/10/04/criminalization-poverty-driver-poverty-united-states>.

- Indianola Family Medical Group. (2017). Indianola, MS health-care facility. <http://www.indianolafamilymedical.com/>.
- Kaiser Family Foundation. (2019, October). Medicaid in Mississippi. <https://files.kff.org/attachment/fact-sheet-medicaid-state-MS>.
- Larson, E. H., Patterson, D. G., Garberson, L. A., and Andrilla, C. H. A. (2016, September). Supply and distribution of the behavioral health workforce in America. Data Brief No. 160. WWAMI Rural Health Research Center, University of Washington. https://depts.washington.edu/fammed/rhrc/wp-content/uploads/sites/4/2016/09/RHRC_DB160_Larson.pdf.
- Lofton, R. and Davis, J. E. (2015). Toward a Black habitus: African Americans navigating systemic inequalities within home, school, and community. *The Journal of Negro Education*, 84(3), 214-230. doi:10.7709/jnegroeducation.84.3.0214
- Lopoo, L. M. and Western, B. (2005). Incarceration and the formation and stability of marital unions. *Journal of Marriage and Family*, 67, 721-734.
- Malik, R., Hamm, K., Schochet, L., Novoa, C., Workman, S., and Jessen-Howard, S. (2018, December 6). America's child care deserts in 2018. Center for American Progress. <https://www.americanprogress.org/issues/early-childhood/reports/2018/12/06/461643/americas-child-care-deserts-2018/>.
- Martin, J. A., Hamilton, B. E., Osterman, M. J. K., and Driscoll, A. K. (2021, March 23). Births: Final data for 2019. *National Vital Statistics Reports*, 70(2). <https://www.cdc.gov/nchs/data/nvsr/nvsr70/nvsr70-02-508.pdf>.
- Martin, J. A., Hamilton, B. E., Osterman, M. J. K., and Driscoll, A. K. (2019, November 27). Births: Final data for 2018. *National Vital Statistics Reports*, 68(13).
- Matthews, D. (2016, June 20). "If the goal was to get rid of poverty, we failed": The legacy of the 1996 welfare reform. *Vox*. <https://www.vox.com/2016/6/20/11789988/clintons-welfare-reform>.
- Midwestern Regional Climate Center. (2021). Calendar year totals for the eastern half of the United States. *Climatologies: Heat Index*. <https://mrcc.illinois.edu/clim/heatIndex/index.jsp#>.
- Mississippi Band of Choctaw Indians. (2013). *Treaty with the Choctaws, 1830*. <http://www.choctaw.org/aboutmbci/history/treaties1830.html>.
- Mississippi Community College Board. (2019). *College directory*. <https://www.mccb.edu/colleges>.
- Mississippi Department of Corrections. (2021). *State prisons*. <https://www.mdoc.ms.gov/Institutions/Pages/State-Prisons.aspx>.
- Mississippi Department of Corrections. (2020). *FY 2019 annual report*.
- Mississippi Department of Education. (2021, March 2). *Accountability data*. <https://msrc.mdek12.org/entity?EntityID=0000-000&SchoolYear=2019>.
- Mississippi Department of Education. (n.d.). *Early learning collaborative site list*. <https://mdek12.org/EC/Early-Learning-Collaboratives>.
- Mississippi Department of Education. (n.d.). *Instructional personnel number and average salary, SY 2019-2020*. https://www.mdek12.org/sites/default/files/Offices/MDE/SSE/2020-AnnRep/16_2019-2020_inst-personnel-numbers_and_average_salaries.xlsx.
- Mississippi Department of Environmental Quality. (n.d.). *Sunflower County Mississippi. RiskMAP*. <https://geology.deq.ms.gov/floodmaps/Projects/RiskMAP/?county=Sunflower>.
- Mississippi Department of Employment Security (n.d.). *Mississippi community college districts*. <https://www.mdes.ms.gov/media/8597/communitycollege.pdf>.
- Mississippi Department of Employment Security. (n.d.). *Covered employment & wages: Annual 2019*. <https://mdes.ms.gov/media/228906/2019cew.pdf>.
- Mississippi Development Authority. (2021a). *Ashley furniture celebrates phase 13 expansion in Ecrú*. <https://mississippi.org/news-room/ashley-furniture-celebrates-phase-13-expansion-in-ecru-miss/>.
- Mississippi Development Authority. (2021b). *Infrastructure map*. <https://mississippi.org/map/>.
- Mississippi State Department of Health. (2021a). *Child care provider search*. <https://www.msdc.provider.webapps.ms.gov/ccsearch.aspx>.
- Mississippi State Department of Health. (2021b). *Mississippi statistically automated health resource system*. <https://mstahrs.msdc.ms.gov/>.
- Missouri Economic Research and Information Center. (2021). *Cost of living data series*. <https://meric.mo.gov/data/cost-living-data-series>.
- National Center for Education Statistics. (n.d.). *Search for private schools. Private School Universe Survey*. <https://nces.ed.gov/surveys/pss/privateschoolsearch/>.
- National Park Service. (2017, November 16). *History and culture of the Mississippi Delta region*. <https://www.nps.gov/locations/lowermsdeltaregion/history-and-culture-of-the-mississippi-delta-region.htm>.
- Nissan. (2021). *Canton vehicle assembly plant: Building our future*. <https://nissan-canton.com/en>.
- Nowotny, K. M. and Kuptsevych-Timmer, A. (2018). *Health and justice: Framing incarceration as a social determinant of health for Black men in the United States*. *Sociology Compass*, 12, 1-15. <https://doi.org/10.1111/soc4.12566>.
- NOAA. (2021, May 7). *County time series. Climate at a glance*. https://www.ncdc.noaa.gov/cag/county/time-series/MS-133/pcp/12/12/1895-2020?base_prd=true&begbase-year=1901&endbaseyear=2000.
- NOAA. (n.d.). *Storm events database*. https://www.ncdc.noaa.gov/stormevents/listevents.jsp?eventType=ALL&beginDate_mm=11&beginDate_dd=01&beginDate_yyyy=1950&endDate_mm=11&endDate_dd=30&endDate_yyyy=2020&county=SUNFLOWER%3A133&hailfilter=0.00&tornfilter=0&windfilter=000&sort=DT&submit-button=Search&statefips=28%2CMISSISSIPPI.
- Ottis, S. and Janasie, C. (2017, December). *How safe is the water? An analysis of lead contamination risks of public water supplies in the Mississippi Delta*. *National Sea Grant Law Center; University of Mississippi School of Law*. <https://nsglc.olemiss.edu/projects/lead-contamination/files/howsafeiswater.pdf>.
- Pew Charitable Trusts. (2015, August 20). *States try to counter rural flight*. <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2015/08/20/states-try-to-counter-rural-flight>.
- Reed, Roy. (1971, February 23). *A town's luck ends as tornado hits*. *The New York Times*. <https://www.nytimes.com/1971/02/23/archives/a-towns-luck-ends-as-tornado-hits-a-towns-luck-ends-as-tornado-hits.html>.
- Rothstein, R. (2017). *The color of law: A forgotten history of how our government segregated America*. Liveright Publishing Corporation.
- Schneider, D., Harknett, K., and Stimpson, M. (2018). *What explains the decline in first marriage in the United States? Evidence from the Panel Study of Income Dynamics, 1969 to 2013*. *Journal of Marriage and Family*, 80, 791-811. doi:10.1111/jomf.12481.
- Sentencing Project, The. (2020a). *State-by-state data*. <https://www.sentencingproject.org/the-facts/#detail?state1Option=Mississippi&state2Option=0>.

- Sentencing Project, The. (2020b). Fact sheet: Trends in U.S. corrections.
- South Sunflower County Hospital. (n.d.). About us. <https://www.southsunflower.com/about>.
- Stahr, B. A. (2018, April 19). "Treaties of Doak's Stand, Dancing Rabbit Creek and Pontotoc Creek." Mississippi Encyclopedia. <https://mississippiencyclopedia.org/entries/doaks-stand-dancing-rabbit-creek-and-pontotoc-creek-treaties-of/>.
- Tejeda-Vera, B., Bastian, B., Escobedo, L. A., and Salant, B. (2020, March 9). Life expectancy estimates by U.S. census tract, 2010-2015. National Center for Health Statistics. <https://www.cdc.gov/nchs/data-visualization/life-expectancy/>.
- Thomas, R. (2021, January 1). 19 year-old fighting for his life after being shot eight times. The Enterprise-Tocsin. <https://www.enterprise-tocsin.com/19-year-old-fighting-his-life-after-being-shot-eight-times#sthash.R7Man8BT.srXjNxAt.dpbs>.
- University of Wisconsin Center for Cooperatives. (n.d.). Water. Research on the Economic Impacts of Cooperatives. <http://reic.uwcc.wisc.edu/water/>.
- U.S. Census Bureau. (2019a). American Community Survey. <https://data.census.gov/cedsci/>.
- U.S. Census Bureau. (2019b). Annual estimates of the resident population: April 1, 2010 to July 1, 2019. <https://data.census.gov/cedsci/table?g=0500000US28133&tid=PEPPOP2019.PEPANNRES&hidePreview=false>.
- U.S. Census Bureau. (2020a, August 27). County-to-county migration flows. <https://www.census.gov/topics/population/migration/guidance/county-to-county-migration-flows.html>.
- U.S. Census Bureau. (2020b, July 18). Historical county level poverty estimates tool. <https://www.census.gov/library/visualizations/time-series/demo/census-poverty-tool.html>.
- USDA. (2020a, December 18). Food access research atlas. <https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/>.
- USDA. (2020b). Rural-Urban Continuum Codes. <https://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx>.
- U.S. Department of Commerce. (1991). Poverty in the United States: 1990. Current Population Reports, Series P-60, No. 175.
- Wagner, P. and Sawyer, W. (2018, June). States of incarceration: The global context 2018. Prison Policy Initiative. <https://www.prisonpolicy.org/global/2018.html>.
- Walmart. (2021). Location facts. <https://corporate.walmart.com/our-story/locations/united-states/mississippi>.
- Weather Channel, The. (2021, March 24). Severe weather outbreak spawned tornadoes across the South on St. Patrick's Day. Tornado Central. <https://weather.com/storms/tornado/news/2021-03-17-severe-weather-outbreak-forecast-south-tornadoes-damaging-winds>.
- Weldon Cooper Center for Public Service Demographics Research Center. (2017). The Racial Dot Map. <https://demographics.coopercenter.org/racial-dot-map>.
- Western, B., Kling, J. R., and Weiman, D. F. (2001). The labor market consequences of incarceration. *Crime & Delinquency*, 47(3), 410-427.
- Wilson, C. R. (2017). Chinese in Mississippi: An ethnic people in a biracial society. *Mississippi History Now*. <http://mshistorynow.mdah.state.ms.us/articles/86/mississippi-chinese-an-ethnic-people-in-a-biracial-society>.
- Wilson, W. J. (2009). *More than just race: Being Black and poor in the inner city*. W. W. Norton & Company.
- WLBT-3 [tv station]. (2013, July 25). A glance at bills in the Mississippi legislature. <https://www.wlbt.com/story/21527713/a-glance-at-bills-in-the-mississippi-legislature/>.
- World Bank. (2021a). Death rate, crude (per 1,000 people) – United States. <https://data.worldbank.org/indicator/SP.DYN.CDRT.IN?locations=US>.
- World Bank. (2021b). Life expectancy at birth, total (years) – United States. <https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=US>.
- World Bank. (2021c). Mortality rate, infant (per 1,000 live births). <https://data.worldbank.org/indicator/SP.DYN.IMRT.IN>.
- World Health Organization. (2021). Ultraviolet radiation. https://www.who.int/health-topics/ultraviolet-radiation#tab=tab_1.
- Zippia. (2021). Sta-home health & hospice: Overview. <https://www.zippia.com/sta-home-health-hospice-careers-39461/>.