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## EFFECTS OF FAMILY STRUCTURE ON EDUCATIONAL ATTAINMENT AND HEALTH INSURANCE COVERAGE OF YOUTH IN THE LOWER MISSISSIPPI DELTA REGION

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Chaquenta L. Smith, Student

Dr. Alison F. Davis, Major Professor

Dr. Micheal Reed, Director of Graduate Studies



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Chaquenta L. Smith

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Chaquenta L. Smith, Student

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Dr. Micheal Reed, Director of Graduate Studies

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EDUCATIONAL ATTAINMENT AND HEALTH INSURANCE  
COVERAGE OF YOUTH IN THE LOWER MISSISSIPPI DELTA REGION

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THESIS

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A thesis submitted in partial fulfillment of the  
requirements for the degree of Master of Science in the  
College of Agriculture  
at the University of Kentucky

By

Chaquenta L. Smith

Lexington, Kentucky

Director: Dr. Alison F. Davis, Professor of Agriculture Economics

Lexington, Kentucky

2013

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## ABSTRACT OF THESIS

### EFFECTS OF FAMILY STRUCTURE ON EDUCATIONAL ATTAINMENT AND HEALTH INSURANCE COVERAGE OF YOUTH IN THE LOWER MISSISSIPPI DELTA REGION

A large body of research, typically nationally focused, has examined the relationship between family structure, educational attainment, and healthcare access. Within this field of study, there is limited availability of regionally based studies, specifically the Lower Mississippi Delta (LMD) region. This exploratory study examines the effects of family structure on high school graduation rates and health insurance coverage within the LMD region. The objective is to determine if family structure has a direct impact on the educational attainment and health outcomes of a child within the region using concepts from nationally focused literature. Through the use of an OLS regression, we find that family structure does not have a strong impact on the educational attainment of children within the region. However, we did find that family structure had a strong impact on the health insurance coverage of youth within the region. Additionally, we examine the impact that spatial location and race has on these variables. These results can encourage the development of potential intervention programs, outreach initiatives, and other programs geared toward helping youth within the region. The study's conclusions provide insight on the impact of family structure on health and education thus encouraging further research within the LDM region.

**KEYWORDS:** Family Structure, Lower Mississippi Delta Region, Educational Attainment, Health Insurance Coverage, Child Well-Being

Chaquenta L. Smith

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August 1, 2013

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EDUCATIONAL ATTAINMENT AND HEALTH INSURANCE  
COVERAGE OF YOUTH IN THE LOWER MISSISSIPPI DELTA REGION

By

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Director of Graduate Studies

August 1, 2013

## DEDICATION

To my loving parents, grandparents, family, and close friends that encouraged me to see this through. Especially my guardian angels I have lost along my journey, Aunt Ruth Tappin and my dear friend Alessandra Wayne.

## ACKNOWLEDGEMENTS

First, I would like to take this time to acknowledge Dr. Alison F. Davis for serving as my Advisor and Committee Chair. Also, I would like to acknowledge Dr. Yoko Kusunose and Dr. Stacy Vincent for serving on my committee. Many thanks for your willingness to see me succeed. Your candid feedback and support was very instrumental in the completion of this thesis. I am truly appreciative! I would also like to acknowledge my mentor, Dr. Quentin R. Tyler for his support, mentorship, and guidance throughout my journey.

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## CHAPTER ONE: INTRODUCTION

Interest in the impacts of family structure on a child's health outcomes and educational attainment has maintained its momentum over the years. Family structure is one of the key indicators of a child's well-being. It determines the allocation of time and money (Thomson, Hanson, and McLanahan, 1994). There are benefits traditionally attributed to intact household such as higher educational achievement, less behavioral problem, and better health outcomes. However, it is still unclear what elements of family structure have an effect on a child's educational attainment and health outcomes.

In recent years, the American family has changed in size, composition, structure, and roles. The traditional intact family that included the husband, wife and children has recently changed in composition. According to the 2010 Census, 62 percent of the nation's 75 million children in the United States live in two parent homes, 23 percent live in a mother headed home, 3 percent live in a single father headed home, and 4 percent live with neither of their parents. Of the two parent households, 91 percent lived with both of their biological or adoptive parents, and 9 percent lived with a biological, adoptive parent, or stepparent (Census Bureau, 2010). In the past decade, there has been a 30 percent increase in grandparent headed households since 1990, with about 7 percent of young people under age 18 living in grandparent-headed households (U.S Census Bureau, 2000).

Each of these household structures has its own level of economic well-being, access to resources, investment of time, and parental control. These elements create a layer to the dynamic of the family that helps illustrate the environment that impacts the development

of the child. Several studies examine the impact the family structure has on a child's quality of life. Each of those found that family structure had some level of effect on the child's educational attainment and health outcomes. Each study, based on its design, provided a different perspective on the roles of family structure (Astone and McLanahan, 1991; Brown, 2004; Carlson and Corocoran, 2001; Davis-Kean, 2005; Heck and Parker, 2002; Park and Ooms, 2004; McLanahan and Percheski, 2008).

The purpose of this study is to examine the effects of family structure on high school graduation rates and health outcomes. This research intended to determine the impacts of family structure on the high school graduation rates and health insurance coverage rates of youth under the age of 18 in the Lower Mississippi Delta (LMD) of the United States. This study contributes to the current body of literature on the effect of family structure in three different aspects: regional focus, theoretical framework, and family focus. First, the primary focus of this study is the Lower Mississippi Delta region as identified by the Lower Mississippi Delta Development Act (1988). Most of the previous research studied this topic from a national standpoint than a regional study.

Second, we used a unique application of both sociological and economic theory in this study. The goal was to provide a more diverse view of the effects of family structure on child educational and health outcomes. Through the lens of sociological theory, socialization and social learning theory helped to illustrate the effects the household has on the child's ability to function in society. Within the economic family economic lens (Ermisch, 2003), we use the concept of human capital theory (Becker, 1975) and household production theory (Ermisch, 2003; Becker, 1975). Both illustrate the impact that family structure has on the child based on the overall parental investment into the

child's overall intrinsic value. The theoretical framework informs the research model, which provides a foundation to highlight and discuss new policy implications based on the results of this analysis.

Lastly, the study examines family structure from three different household perspectives: single female headed, grandparent headed, and married households. Many family structure focused studies analyze and compare the impacts of the single female, single male or married households on a child's health and educational outcomes. These studies very seldom focused on the grandparent-headed households (Thomson, Hanson, and McLanahan, 1994; Sandefur and Wells, 1999; Astone and McLanahan, 1991; McLanahan, 1985; Carlson and Corcoran, 2001; Brown, 2004; Musick and Mare, 2006; McLanahan, 1985). Grandparents, regardless to their financial status, are entering the role of parents for their grandchildren (Smith and Dannison, 2003). A recent report shows more than 5.8 million children live in their grandparents' homes (AARP, 2013).

This thesis is organized as follows: Chapter two includes the regional background of the study and its significance; Chapter three explains the theoretical considerations within the study; Chapter four provides insight on conceptual considerations and research questions guiding this study; Chapter five reviews literature and research that relates to family structure and its impact on health and educational outcomes; Chapter six describes the sample, data, and data sources; Chapter seven discusses the empirical methods and data analysis used in this analysis; Chapter eight discusses the results of the study; and Chapter nine includes the conclusion, summary, and recommendations for further research.

## CHAPTER TWO: REGIONAL BACKGROUND

Nationally, the Lower Mississippi Delta Region ranks as one of the poorest regions (Slack et al., 2009). It is one of three of the nation's impoverished regions including Appalachia and Texas Borderland (Allen-Smith, Wimberley, & Morris, 2000). The Lower Mississippi Delta (LMD) region is a sub-region, defined by the Lower Mississippi Delta Development Act in 1988 and as shown in Figure 2.1, which includes Arkansas, Southern Illinois, Western Kentucky, Louisiana, Mississippi, Southeastern Missouri, and Western Tennessee. This region has 219 counties and parishes with a population of about 9.1 million people. Geographically, the region spreads across over 200 miles of plains that cover more than 90,000 miles of rivers and streams. It contains over 3 million acres of the nation's most fertile land that has influenced the region's agricultural and music industries.



*Figure 2.1.* Lower Mississippi Delta Regional Map. Source: Lower Mississippi Delta Commission

The Lower Mississippi Delta, or LMD, has its own rich, ingrained history of persistent poverty and inequality that has inevitably shaped the communities, both rural and metropolitan. The region was once the epicenter of slavery and cotton industry within the nation. A harsh history and culture of disparity is one that is hard to overcome. It creates a constant region of disparity and inequality that impacts both families and youth. The Delta Commission, during the tenure of Former President Bill Clinton, deemed the LMD region as a place where:

*“Jobs are scarce, and job skill training almost unknown, where infant mortality rates rival those in the third world; where dropping out of school and teenage pregnancy are commonplace, where capital for small farmers and small businesses is severely limited; where good housing and healthcare are unattainable for many...”*(US House of Representatives, 1990).

Although the nation has made strides reducing poverty and inequality, the Lower Mississippi Delta continues to have consistently higher county percentages of persistent poverty. A report shows that about 20 percent of the region lives in poverty (HAC, 2011). Figure 2.2 illustrates, that between the timeframe of 1990 to 2010, a large majority of the region experienced persistent poverty on the county level with rates of 20 percent or higher. In 2010, it also shows that much of the counties within the region experienced higher levels of the population in poverty. The region has maintained poor rankings compared to national averages in education, economic resources, income, and health. Poverty is a phenomenon that affects families within both the rural and metropolitan areas. The harsh reality of poverty is families in rural, non-metropolitan areas feel the impacts in a greater capacity than families that live in metropolitan areas. Poverty rates in

the non-metropolitan areas are higher than those of metropolitan areas. Rural Communities tend to have significantly lower availability of economic resources than other communities (Duncan & Tickameyer, 1988).

In the rural communities, families tend to deal with more stress than most metropolitan based families due to economic inadequacy (Bokemeier & Garkovich, 1991; Flora & Christenson, 1991). Persistent poverty has had a major impact on families within not only the Lower Mississippi Delta region, but other rural based regions, as well.

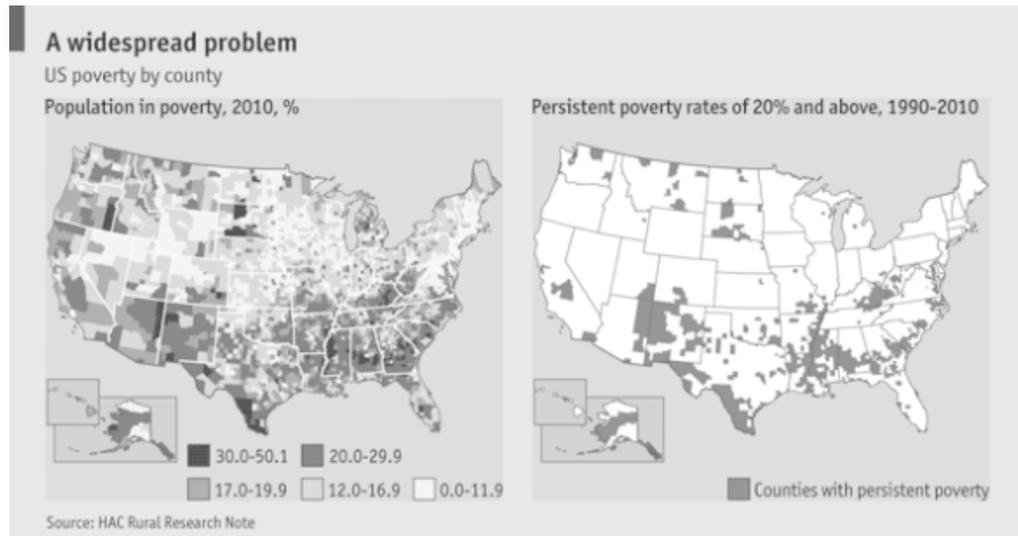
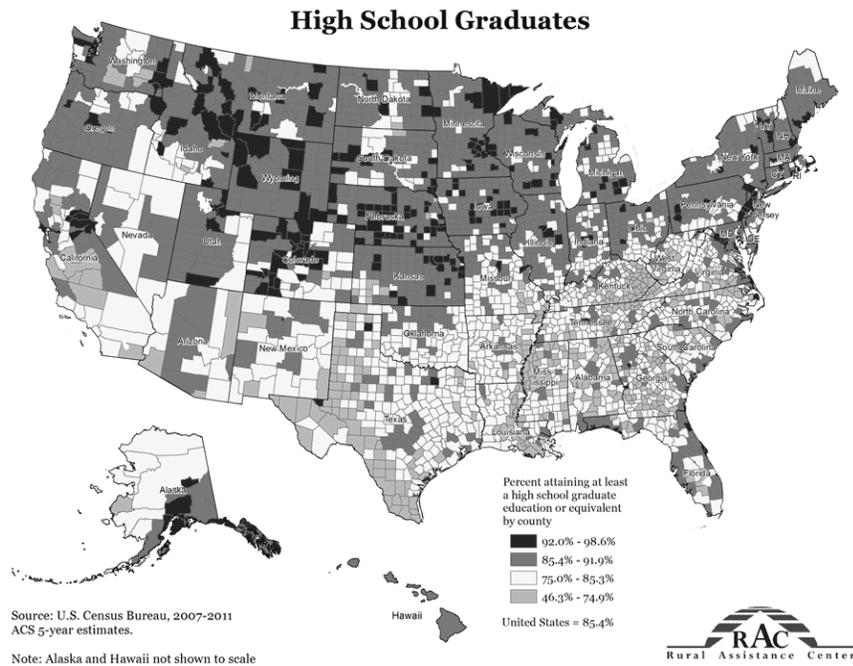


Figure 2.2. Poverty Population. Source: HAC Rural Research

The region has some of the lowest levels of educational achievement in the nation. Recent studies found that Mississippi has one of the highest illiteracy rates in the nation for adults (Ebersole, 2012). According to figure 2.3, the average graduation rate for high school students in the region is about 70 percent in comparison with the nation average of 85.4 percent. It is clear to see that a large portion of counties within the region are below the national average for high school graduates. Many of these counties are almost 39 percent less than the national average for high school graduates. These consistently

lower graduation rates can adversely impact the cost of healthcare and costs in relation to crime within the state (Fisher et al., 2010). These facts show that education is truly an influential component to not only the wellbeing of the child's future but the community, as well.



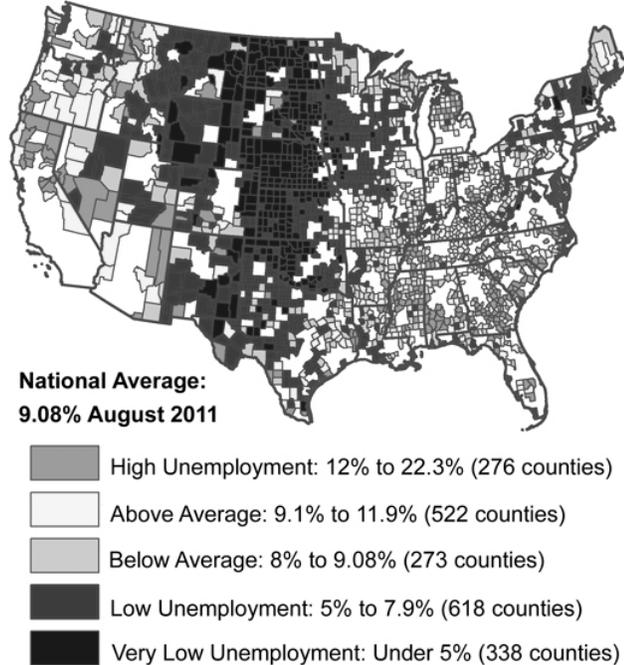
*Figure 2.3. High Graduation Rates. Source: US Census Bureau/Rural Assistance Center.*

Feeding America (2013), a national poverty resource, stated that unemployment rates are a stronger indicator of food insecurity than poverty. The LMD has the highest unemployment rankings in the country. Although the region has a rich culture of tourism, agriculture, and higher education, the region has a less than impressive economic culture. The region has an almost nonexistent workforce training program system. The unemployment rates vary from state to state, but many of the counties are above the national average. The unemployment rate for Mississippi is 11.1 percent with about 42 of

those counties found above the national average of 9.3 percent in 2011 (HAC, 2011). The availability of resources among the states in the region has an impact on the variations of the county level unemployment rates as seen in Figure 2.4.

### **Rural Employment, August '11**

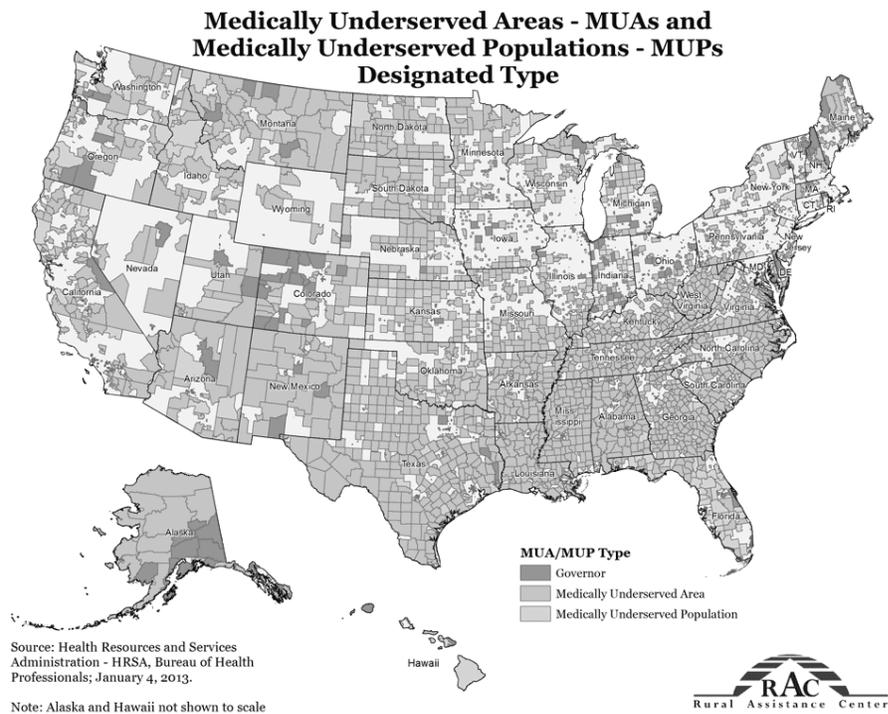
Six out of ten rural counties had unemployment rates below the national average in August, 2011



*Figure 2.4.* Unemployment Rates Map. Source: Bureau of Labor Statistics/Daily Yonder.

According to a recent study, about 21 percent of the households in the region are not secure in their food supply (Stuff et al., 2004). The inadequacy of food supply in these rural areas can be contributed to family constraints such as lack of transportation, access to fresh, affordable foods, and financial stability. The region has a large population that resides in rural areas. Many of these rural areas do not have access to local supermarkets or grocery stores. According to the USDA, about 2.3 million people are residing in low

income communities that are more than 10 miles from a grocery store. By definition, these rural communities are food deserts; there are about 418 counties found to be food deserts within the United States (Morton & Blanchard, 2007). Of those counties, about 98 percent have a total population estimated as less than 10,000 (Morton & Blanchard, 2007). Rural areas are more likely to have convenience stores that have limited to no fresh produce available for consumers. Typically, the local cost of food in these rural areas is too expensive for local families to afford. These food inadequacies can have negatively impacts on the community’s family health leading to poor diets, higher levels of obesity, heart disease, and high levels of food insecurity (White House, 2010).



*Figure 2.5. Medically Underserved Areas and Population. Source: US Census Bureau/Rural Assistance Center*

The LMD region is one of three of the nation's persistently unhealthy regions and medically underserved area (RAC, 2013). The Lower Mississippi Delta has a regional average of about 8.2 percent of the youth reported as uninsured (CHR, 2011). The region has the lowest life expectancy rates, highest mortality rates, and highest low birth rates in the country. Every state within the region has a state average above the national average, especially Mississippi (12.1 percent) and Louisiana (10.7 percent). Within this context, many of the counties within the region have percentages well above the national average.

The region has soaring rates of diabetes, hypertension, high cholesterol, and stroke. For instance, Mississippi has the highest rates of hypertension and diabetes in the nation. The top three health concerns within the state are diabetes, heart disease and cancer (Mayfield-Johnson et al., 2012). These chronic health issues, such as hypertension, increase the possibility of the occurrence of other ailments such as blindness, heart disease, stroke, and kidney failure. Food insecurity plays in the frequent occurrence of these chronic diseases within the region due to poor nutritional intake, poor diets, and lack of health foods. Limited availability of healthcare providers and facilities can have an adverse effect on a community, especially with a population affected by chronic diseases. The region has a significant lack of healthcare providers and nurses. The shortage in the number of registered nurses, at about 23 percent, is significantly larger than the national average of about 13 percent. Within the region, some of the population does not have a healthcare provider available locally and have to travel to alternate locations outside of their community to seek healthcare assistance.

### **CHAPTER THREE: THEORETICAL FRAMEWORK**

Family structure research suggests that child development revolves around the connection between family structure and resources. Through sociological theory, we look through the lens of socialization and learning theory to illustrate causal instances between the impacts of the family household on a child's outcomes.

Socialization theory provides insight on the parenting styles that vary among the different family structures (Patterson & Hastings, 2007). This predicts that children raised in a single parent household are likely to have less parental involvement and control. This lack can have a negative effect on the child's development. This theory places emphasis on the pertinent role that parenting plays in a child's development. For instance, a single female headed household provided limited parental control and support provided to the children, due to no father being present (Astone & McLanahan, 1991; Thomson et al., 1994). The stress of single parenting can have a negative impact on the mother's psychological well being. This high level of stress can lead to inconsistency in parenting, supervision, and authority. The older children in these households tend to inherit mature roles to provide assistance to the single mother. All of these factors have an impact on the child's overall development.

Social learning theory is the concept that, during childhood, children learn how to interact in a society based upon their family surroundings. A fatherless household is a disadvantage to children, especially boys because these households lack economic resources and relevant developmental traits such as discipline, structure, and guidance that a father could provide (Moynihan, 1965; McLanahan & Sandefur, 1994). Children

reared in two parent households, within this context, learn the concept of authority and how to interact with these authority figures. Learning these concepts throughout childhood positively influences the child's future educational and occupational attainment. In a single female headed household, where the mother becomes more of a friend than a parent to the child, these powerful concepts are less likely to be learned. Family economic theory is an essential component to understanding how the family interacts with markets (Ermisch, 2003). According to Ermisch (2003), the family is one of the greatest determinants in an individual's welfare. To analyze the economic effects of family structures, we draw on the human capital, and household production theory to illustrate the effects of the family structure on a child's educational attainment and access to health insurance coverage. Becker (1975) explains the human capital theory as an approach to illustrate how individuals make decisions about the amount they invest in education as to maximize their utility. Within this context, utility is a representation of preferences over some set of goods and services. Human capital predicts that parents that invest adequate time and money into their children have a greater return on investment than parents that do not. It emphasizes the importance of parental investments and endowments to a child's development.

Endowments are the genetic characteristics that children inherit from the parent such as physical traits or values; investments are the funds invested in the child's expenses such as health and education, as well as the parental time invested through supervision (Musick & Mare, 2006). Family could play an essential role in the inheritance for a child (Taubman, 1996). For instance, a single parent household is more likely have lower levels of income, transfer of wealth, and level of investments in their children causing the

child to be raised in a below average environment that adversely affects the child's academic achievement and health outcomes.

Household production theory examines all household decisions and allocations of resources; and views the household as an entity that produces and consumes. Families “produce” goods that are important to the family, such as investments in their children's health and education, with a combination of time and purchased goods (Becker, 1975; Ermish, 2003). This theory predicts that children raised in a married household are more likely to have more time, money, and resources invested than a child that has not. Both monetary and non monetary activities contribute tremendously to the development of the child. Within the same context, a parent's investment within themselves can improve the economic contributions in home production of goods. Therefore, parents who provide more time and resources to their children will obtain greater levels of education. Family is the key component in the overall teaching of children (Becker, 2002). Therefore, the presence of the parents is an essential component to the development of children. Family economic theory is the framework that illustrates the effects of the investments that parents make in the child. This theory helps better illustrate the impact that parental investments can have on a child over time.

Health, education, and economics are essential in family economic research because each component intertwines (Mirvis, Steinberg, & Brown, 2009). With this in mind, all four theories fit best for illustrating how the family impacts children both sociologically and economically. The collaboration of sociological and family economic theory implies that family structure and its distinct characteristics such as time allocation, resource

access, and monetary support play a role in a child's educational outcomes and health insurance coverage.

## **CHAPTER FOUR: CONCEPTUAL MODEL AND RESEARCH QUESTIONS**

Family economic resources play a pertinent role in many of the components involved with a child's outcomes (i.e. health, social, and educational development). The model comes from the concept developed by McLanahan and Percheski (2008) that shows the relationship among family structure, parent resources, parenting, and child outcomes. The conceptual model for this study can be seen in Figure 4.1. Each variable is present with its relationship with each other. It provides a visual illustration of the relationship between family structure, parental resources, parenting and child outcomes.

The first variable in the model is the family structure. It is the primary focus of this study. We classify the family structure variable into three different levels: single female headed, married households, and grandparent headed households. Each family structure used in the model provides insight on the impacts that each structure has on resources, parenting styles, and the outcome of the child.

The second variable in the model is the economic resources. This variable represents the financial impact that parents have on the household such as income, housing, food, shelter, and other household related responsibilities. Next, we look at the parenting variable within the model. The variables in two separate subject areas: parental involvement and parental control. Both variables are a component of parenting but have different impacts. Parental control is the area of parenting that provides structure and guidance to the child. Parental involvement, or time allocation, is the component of parenting that in which parents take an active interest in the child's development both physically and educationally. An example is a parent attending a child's after school

baseball games to provide support and encouragement. These three variables, when taken into consideration, can provide insight on the impact that the family can have on the child's growth.

Within the model, child outcomes and health insurance coverage are the final variables. The health insurance coverage variable represents the coverage that children have based on their household. The health insurance coverage has a direct impact on the health outcomes of a child. Based on this fact, the model pairs the health insurance and health outcomes together. We examine a child's educational outcomes by looking specifically at the high school graduation rates.

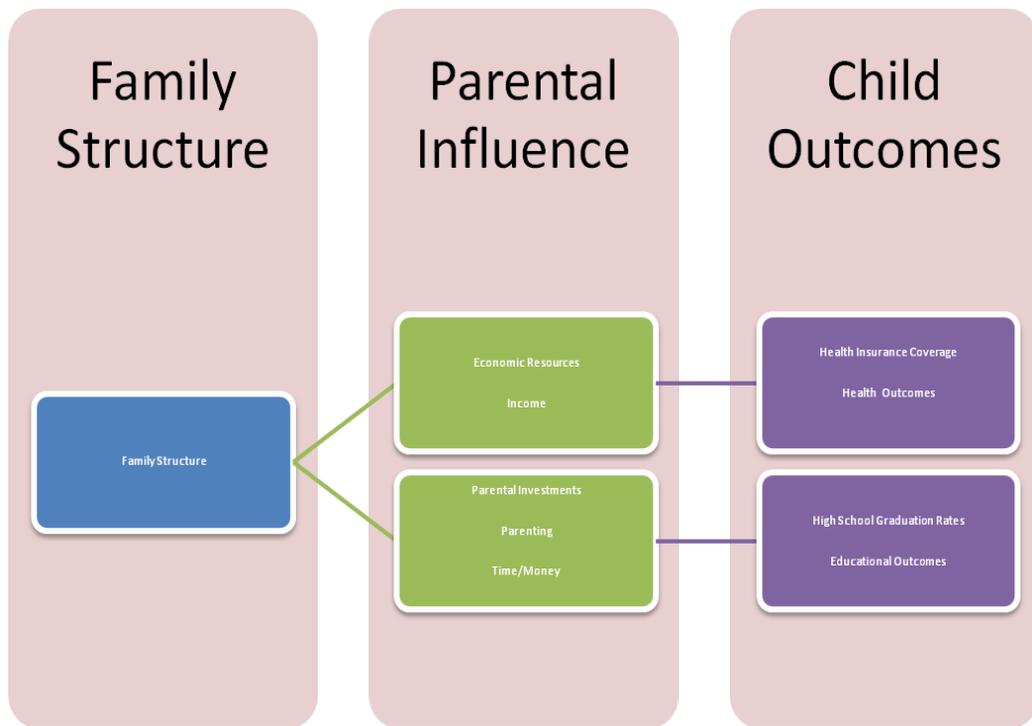
*This model leads us to following questions to be addressed:*

Research Question 1: What impact does family structure have on high school graduation rates in the LMD?

Research Question 2: What impact does family structure have on health insurance coverage of children in the LMD?

Research Question 3: What impact does race and location have on the health insurance coverage of children in the LMD?

Research Question 4: What impact does race and location have on the high school graduation rates of children in the LMD?



*Figure 4.1.* Conceptual Model. Impacts of Family Structure on Child and Health Outcomes.

## CHAPTER FIVE: LITERATURE REVIEW

This chapter reviews past research on the family structure and its impact on child educational attainment and health insurance coverage.

In the early 1990's, the federal government expressed an active interest in the structure of families during the welfare reform era. The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) meant to bring change to the welfare system. As a result, a new program geared toward helping needy families, called the Temporary Assistance to Needy Families (TANF), replaced the 1935 Aid to Families with Dependent Children (AFDC) program. The program granted state governments the ability to design their own assistance programs independently as long as they met the basic federal requirements. The primary focus of the program was to discourage out-of-wedlock births and encourage two-parent family households. Furthermore, Welfare Reform Bill aimed to enhance the enforcement of child support. The Welfare Reform Bill proved that the government recognized the strong relationship between family structure and poverty because the bill stressed the formation and maintenance of two parent households (cited in H.R. 3734).

In the post-welfare-reform era, family structure has proved to be an influential component to the well being and academic achievement of a child, especially during his/her adolescent years. The adolescence years are the most significant time in a child's development because it is a time that has the most impact on a child's development (Astone & McLanahan, 1991; Heck & Parker, 2001). During these formative years, they learn essential skills that have a direct impact on their future goals.

Family instability, or disruptions, coupled with the stress and environmental changes associated with it can have a direct and lasting impact on the well-being of children and adolescents (McLanahan, 1985; Fomby & Cherlin, 2007). Family instability can be divorce, death, separation, remarriage, incarceration or even substance abuse that can create unexpected stress for parents and children. Family instability can occur within any of the family structures with a universal impact: unforeseen stress for both adults and children. Furthermore, it can create sudden shifts in parental involvement, child-parent relationships, parenting styles, household environment, daily routines, academic achievement and behaviors for the children.

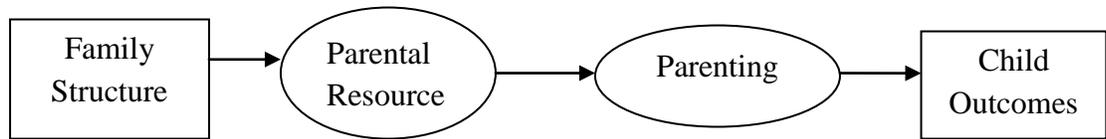
Family structure is an essential determinant of a child's access to health care (Heck & Parker, 2002). These households impact a child's eligibility for federal assistance programs, such as Medicaid and Medicare. For example, a parent that makes too much or not enough for the eligibility requirements for public assistance insurance program can cause a child ineligible of those benefits. Children are heavily dependent upon their parents, especially for health care access. Family structure and its socioeconomic status can have a direct impact on the family's ability to accommodate the child's health needs. Within this context, health insurance coverage is an influential aspect and pipeline for the family's access to health care. Health insurance coverage has public and private sectors. These sectors are available based on the socioeconomic status of the parents. Family structure composition changes can impact the insurance coverage of children.

According to sociological and learning theory, parental involvement is a key component to the overall development of children. Studies show that strong academic achievement and overall development involve positive parental involvement (Astone &

McLanahan, 1991). The levels of parental involvement vary significantly among the family structures. Emphasis is placed on education by the parents positively impact the child's academic achievement (Shaw & Shah, 1968; Brooks-Gunn & Duncan, 1994; Davis-Kean, 2005). For instance, if the expectations of the parents are lower, the academic achievement and the connection will be not being as strong. Based on this result, a negative impact on the child's academic career can take place in the long run. Furthermore, a comprehensive review of research, shown in figure 7, suggests that family structure does have a significant impact on academic achievement and health outcomes (Astone & McLanahan, 1991; Heck & Parker, 2004).

With positive parental involvement, children are more likely to have higher grades and test scores, better graduation rates, better attendance, increased motivation, better self esteem, less behavioral problems, decreased use of drugs and alcohol and fewer violent behavioral occurrences (MDE, 2002). Parents can be involved in the child's education development in several different ways. Parents can implement a strict family scheduling, encourage controlled after-school-program participation, demonstrate an appreciation for hard work, and learning. The parents can develop reachable academic goals, encourage the child's educational development, and encourage literary growth (MDE, 2002).

These practices provide a household of educational encouragement that results in a more productive and constructive household environment. Figure 5.1 provides a simplified visual of correlation between family structure and child outcomes (McLanahan & Percheski, 2008). It provides a step-by-step depiction of the pathway among family structure, parental resources, effective parenting, and a child's outcomes.



*Figure 5.1.* Simplified Pathway among Family structures and child outcomes

Source: McLanahan and Percheski 2008

### *5.1. Two- Parent (Biological-Married)*

Children raised in harmonious, two- parent (intact) households tend to fare better than children in non-intact households. The harmonious, two- parent household is more likely to have lower levels of stress and possibility of divorce (Park & Ooms, 2004). These children have significantly higher educational rankings and health outcomes than children in other household types. Children residing in married- biological parent households are more likely to complete high school and attend college than children that do not (McLanahan & Sandafur, 1994). In addition to this, children in this household have much fewer behavioral problems than children in other family types. The parents have consistently been found to be able to contribute more time and financial support to the child. The structured dually headed household provides adequate parental involvement, guidance, expectation, support, time, and direction. Each of these components serves to be important to a child’s educational attainment.

Family, both children and adults, can benefit from marriage (Wood, Goesling, & Avellar, 2007). One of the contributions of married families is its ability to provide adequate health insurance coverage to children. It can impact the types of healthcare options that are available to both children and the adults within the household. Parker and Heck (2002) found that two parent headed households provide insurance coverage from

employment-based resources or private insurance companies. They ensure medical needs for the children are minimal.

Race and income play a pertinent role in the correlation between family structure and health insurance coverage. For instance, low- income families have a higher percentage with public insurance coverage (58 percent) than married households (28 percent); while married household has a higher percentage of families with employer based insurance (32 percent) than single parent households (Goesling & Koball, 2008). Race has different impacts on the health insurance coverage provided for the family. For example, Hispanic families have higher percentages of families with partial insurance coverage within married households (40 percent) than single households (24 percent). When looking at the full insurance coverage, the study suggests that Hispanic married households have higher Employee based rates than single parent households (36 percent versus 26 percent). Within the finding by Goesling and Koball (2008), we find that the percentages varied among black, white, and Hispanic families showing that race does have an impact on the health insurance coverage of children.

### *5.2. Single Parent (Female Headed)*

Children in single parent households have lower levels of academic achievement and health outcomes than children in married households (McLanahan, 1985; Heck & Parker, 2002). There are several different classifications of single parent headed households such as female headed (never married), male-headed (never married), female headed (post divorce/separation/widow), male headed (post divorce/separation/widower) (Vanier, 2006). The variation of a single household can be a result of family disruptions, but this is

not always the case. These households tend to lack stability, adequate care, and help due to the financial stresses endured by the head of the household.

The impact of single parent households can impact the child in other aspects, as well. A child raised in a single female headed household is more likely to become a single parent with similar financial traits. The new parenting roles create a roadblock for the young mothers because it places a strain on their educational attainment and job placement concurrently. According to Carlson and Corcoran (2001), children within single female headed household tend to have more behavioral problems and educational issues than other household types.

### *5.3. Grandparent*

Older generations have traditionally acted as a support resource for the family. The status of the nation's economy today has involuntarily designated family members, especially grandparents, to be a "safety net" in today's society for raising children within their families (Hayslip & Kiminski, 2005). According to the 2010 Census, about 5.4 million children were living with their grandparents. These households have grown since the 1970s with nearly a 4 percent increase in population. Although they are often a safety net, the grandparent headed household has not proven to be one of much substance or stability for the children (Smith, Dennison, & Vacha-Haase, 1998).

These grandparent headed multigenerational households include: three-generational and skipped-generation. The three-generational households contain the grandparents, their adult children, and grandchildren in one household unit. These households are the result of personal dynamics that influence the grandparent to help the adult child in times

of family instability such as divorce, death, financial burden, illness and military deployment. The skipped-generation household is the household that had the grandparent and the grandchildren only. These skipped generation households are typically the result of similar family disruptions. The custodial grandparents of these households take full responsibility for the raising of the child in the absence of the biological parents (Frontier Education Center, 2004).

In addition to individual issues, cultural dynamics can have an impact on the grandparent's presence in their grandchildren's lives. For instance, within the African American community, the custodial grandparents take on a "kinship care" role that is cultural, non- formal form of adoption (Davis & Wilkerson, 2011). Within kinship care role, family members, typically grandparents, act as surrogate parents that take over the responsibility of guardian for their grandchildren in the absence of the parents. According to Wilkerson and Davis (2011), living with family members (grandparent or other kin) helps to keep the family intact while creating a level of stability for the children. These grandparent-headed households are universal among all races and socioeconomic background. According to the 2010 Census, these grandparent headed households are about 51 percent White, 24 percent African American, and 19 percent Latino.

Both the grandchildren and the grandparents feel the impact of this unique household. Grandparent headed households tend to have a negative impact on the academic and health development of a child due to lack adequate resources (Smith & Dannison, 2003). Within these grandparent households, these children are more likely to reside in a household where the caregiver is older, poorer, and less educated. AARP (2011) reported that 67 percent of grandparents raising children were less than 60 years of age. Typically,

many grandparents raising their grandchildren are retirees and live on highly limited incomes. These are all characteristics that can limit the parenting style of the caregivers and essentially have an adverse impact on the development of the child. These elder caregivers along with the children feel the pressures of this new household structure. The caregivers feel the pressure of both growing older with their own health issues and experiencing the embarrassment of repeated parenting with their grandchildren. They feel a sense of failure to their children due to their child's failed parenting (Smith & Dannison, 2003).

Within the households, the children feel the impact of the challenges the grandparents struggle with as a new guardian. The lack of attention is due to the generational gap that is apparent between the children and their caregivers. Grandparents feel disconnected, with not only the children but the other parents, due to their age. The grandparent's age tends to influence a sense of isolation from other parents and social events. The lack of participation and involvement in the child's education can have a negative impact on academic achievement. These children living with grandparents are more likely to have more developmental, learning, and behavioral issues than other children in other household types (Frontier Education, 2004).

Lastly, children that live with grandparents are more likely to be exposed to drugs and alcohol, neglected, abused, and emotionally detached (Smith, Dannison, and Vacha-Haase, 1998). Grandparent-headed households have an adverse effect on children both educationally and physically.

#### *5.4. Health Insurance Coverage*

Socioeconomic status is an influential determinant of a child's health outcomes because it has an immediate impact on access to insurance and health services (Parker & Heck, 2004). In tough economic times, the challenge to provide adequate health insurance coverage to all families remains constant.

According to the Child Defense Report (2011), there are a reported 8.3 million children nationwide that are uninsured. Although there are many government-funded healthcare programs available, such as Medicare and Medicaid, many families are still not able to enroll or are not eligible to receive insurance coverage (Brach et al., 2003). Many families do not meet the income and residency eligibility requirements. In an attempt to help to alleviate these child insurance enrollment issues, states adopted the Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA). The purpose of the CHIPRA act was to expand the Children's Health Insurance Program (CHIP) and decrease the amount of uninsured children in the United States. The State Children' Health Insurance Program (SCHIP) is a publically-funded insurance program that provides insurance to children that did not qualify for Medicaid based on family income. Enrollment issues still exist, though SCHIP is currently one of the third largest federal assistance programs. Those issues include parents and children having the issue of one sided enrollment (i.e. the child qualifies for the program, yet their parents did not), parent are unaware of the program, or lack of citizenship of the parents and/or children.

Private health insurance companies have maintained a presence since the early 1930s. Private insurance companies developed to fill the void with no available national health insurance programs. Today, those that can afford private insurance, typically through an employer usually have it. These private insurance companies insure about 60 percent of

the nation. According to the Kaiser Foundation, private insurance coverage companies provide coverage to 95 percent of firms with 50 or more employees.

The latest legislation, the Patient Protection and Affordable Care Act (ACA) of 2010, aims to encourage health insurance coverage among families by building on the current private and public system. It will alleviate issues, such as eligibility and enrollment, with Medicaid coverage, employer based coverage, and private insurance coverage premiums. Medicaid will then be available for adults living below or 138 percent poverty level. In addition to this, legislation will help to expand the current insurance coverage eligibility to decrease the current level of uninsured persons in the nation. The program has a 2014 goal to decrease the insurance gap by establishing new insurance rules and requirements. The recent strides in health insurance reform provide opportunities for families to have insurance coverage in the LMD region.

The lack of health insurance coverage over time can have a negative impact on the child's health outcomes. The family's economic well-being has a large impact on this. The reason is that children are 100 percent dependent upon their parental unit and their abilities to provide for the household. Children without adequate health insurance can have different health issues and unmet health needs that impact them into adulthood. These illnesses include dental health problems, asthma, respiratory issues, and other chronic illness. Uninsured children have a greater chance of dying young or developing a chronic illness than insured children. The longer that a child goes without adequate healthcare the worse the outcomes can be. Health insurance plays a huge role in the access and frequency of healthcare for children.

Children that live in non-intact households have more issues in terms of healthcare than any other household. Non-intact households tend to deal with guardianship problems and health insurance coverage ineligibility. These issues can have a negative impact on the child's health care. Health insurance coverage is an example of the investments that parent make in their child's future just like education. They both go hand in hand for the development of the child. Parental investments in the child's health are essential. Children that are in better health have better academic achievement and attendance than a child that does not.

## CHAPTER SIX: DATA

We rely on data from US Census Bureau American Community Survey, Small Area Health Insurance Estimate, Small Area Income and Poverty Estimates, Social Security Administration (SSI); and County Health Rankings to examine the impact of family structure on high school graduation rates and health insurance coverage. The American Community Survey, a large, nationally representative, annual survey provides communities with current demographical information. It is conducted by the US Census Bureau. The Small Area Health Insurance Estimates, a model-based program, produces estimates of health insurance coverage for states and all counties in the United States. The Small Area Income and Poverty Estimates are annual income and poverty statistics for all school districts, counties, and states. The Social Security Administration provides an annual estimate of all disabled adults and children that receive federal assistance from the Supplemental Security Income program. County Health Rankings, conducted through the Robert Wood Johnson Foundation, provides rankings of various health outcomes and factors to emphasize factors that are essential to health and wellness.

Table 6.1 shows all the variables used to conduct the analysis in this study. Several requirements guided the development of this study's dataset. The sample is defined by data collected over five years between 2006 and 2011. It is restricted to the population of counties located within the LMD region. The county level data was collected and sorted among all 7 states located in the Lower Mississippi Delta region: Arkansas, Southern Illinois, Western Kentucky, Louisiana, Mississippi, Southeastern Missouri, and Western Tennessee. We are interested to learn more about impact of family structure on children

so some of the sample data are age specific. Those variables include: poverty rates, uninsured rates, high school graduation rates, SNAP participation rates, and SSI recipients. These variables looked specifically for data that related to children 18 years old and under. We include black and Latino estimates in the analysis as additional variables to account for race. Lastly, we develop dummy variables to account for the states of each of the counties represented in the dataset.

Table 6.1. *Definitions of Variables*

Table 6.1: Definitions of Variables			
Variable	Year	Data Source	Description
<b>medhouseholdinc</b>	2011	County Health Rankings	Median income of households within the county
<b>CntyPovChild</b>	2010	U.S. Census Bureau, Small Area Estimates	% of children that live below the poverty level
<b>Black</b>	2011	County Health Rankings	% of population of African American decent only
<b>Hispanic</b>	2011	County Health Rankings	% of population of Latino Descent only
<b>GradRate</b>	2011	County Health Rankings	% of students that graduate HS in the county
<b>Snap</b>	2006-2010	U.S. Census Bureau, American Community Survey	% of families With children under 18 years that receive food stamps
<b>SSI</b>	2011	Social Security Administration	% of children under 18 that receive SSI benefits
<b>childuninsured</b>	2010	US Census Bureau, Small Area Health Insurance Estimates	% of children that are not insured
<b>Single (X<sub>s</sub>)</b>	2011	US Census Bureau, American Community Survey	% of household raised in a female headed household
<b>Married (X<sub>m</sub>)</b>	2011	US Census Bureau, American Community Survey	% of household with own children led by two parent households
<b>Grandparent (X<sub>gp</sub>)</b>	2006-2010	US Census Bureau, American Community Survey	% of household with children headed by grandparents

## **6.1. Variables**

### *6.1.1. Left-Hand Variables*

Several different indicators impact and define a child's quality of living and well-being. We use two of these indicators to serve as left side variables in our study: high school graduation rates and percentage of uninsured children. The high school graduation rates are collected from the American Community Survey 5 Year Estimate between 2007 and 2011. The county level high school graduation rates are those individuals that have a high school diploma within the county. The high school graduation rates provide an illustration of the educational climate within the region.

Another indicator is the county level estimates of uninsured children within the LMD region. These 2010 estimates are collected from the Small Area Health Insurance database. These estimates represent the percentage of uninsured children from households with incomes 100-400% below the poverty threshold. An uninsured child is any individual under 18 old that during the previous year did not have coverage from a recognized source of insurance, such as Medicaid. The data collected provide insight on the health insurance inadequacies within the counties and the region.

### *6.1.2. Right- Hand Variables*

Within this study, we examine family structure from three different perspectives: married, single female-headed, and grandparent- headed households. Family structure is defined by the number of adults in household and their relationship to the child. Family disruptions are not taken into consideration for this study. The grandparent county level percentages are collected from the 2010 ACS 5 year estimates. These estimates are the

percentage of grandparents raising their grandchildren under the age of 18 between 2006 and 2010. The estimates for married household are collected over five years between 2007 and 2011 from the 2011 ACS. These county based estimates are the percentage of married households raising their own children under the age of 18. Lastly, the single female headed household county based estimates from the 2011 ACS 5 year estimates. The data provide estimates of single mothers raising their own children between 2007 and 2011.

The county based median income estimates from the Small Area Income and Poverty Estimates (SAIPE) provide insight on the median income for all households in the county. County child poverty rates provide insight on the poverty climate for children within the LMD region. These rates are county percentage of children living below the national poverty threshold. SNAP participation rates indicate that families receive federal benefits based on financial need. These county level percentages are households that receive food stamps or SNAP benefits between 2006 and 2010.

Supplementary Security Income (SSI) recipient estimates indicate the caregivers that gain assistance based on disability. It is a county based percentage of the households with children under the age of 18 that receive SSI benefits. Both forms of assistance provide insight into how federal programs impact the overall financial stability of the household. Race is an additional variable for this analysis. The county based percentage for the Black and Hispanic population within the LMD region, although not age focused, evaluates the impact of race. These variables are collected from the County Health Rankings database. Lastly, dummy variables were developed to distinguish the 219 counties in the 7 state composed LMD region. The dummy variable can show the impact

that geographical location has on the health and educational outcomes of the youth within the region.

## *6.2. Limitations*

There are some limitations that may impact the results of the study based on the following conditions or factors:

1. In the data collection process, the data for select counties was limited due to small county population sizes within certain states. The very small sample sizes made some of the data unreliable for analysis.
2. Panel data was not available on a county basis. Panel data provides a more in depth illustration of the effects of exposure to the family structures over time.
3. Grandparent headed household data are not broken into married or single-female headed classifications.

## CHAPTER SEVEN: EMPIRICAL METHODS

In this analysis, the dual OLS regressions determine a correlation among the family structure, health insurance coverage, and high school graduations rates within the region. We take into consideration additional household variables such as income, SNAP, poverty rates, and SSI. The basic models, shown below model 1 and 2, state that a child’s educational attainment and health insurance coverage is a function of income, family structure, county poverty rates, SNAP, and SSI.

$$Y_1 = \beta_0 + \beta_1 X_s + \beta_2 X_m + \beta_3 X_{gp} + \beta_4 X_{inc} + \beta_5 X_{pov} + \beta_6 X_{snap} + \beta_7 X_{ssi} + \mu_{mo} + \mu_{ar} + \mu_{ky} + \mu_{il} + \mu_{ms} + \mu_{tn} + \epsilon \quad (1)$$

$$Y_2 = \beta_0 + \beta_1 X_s + \beta_2 X_m + \beta_3 X_{gp} + \beta_4 X_{inc} + \beta_5 X_{pov} + \beta_6 X_{snap} + \beta_7 X_{ssi} + \mu_{mo} + \mu_{ar} + \mu_{ky} + \mu_{il} + \mu_{ms} + \mu_{tn} + \epsilon \quad (2)$$

The Y1 and Y2 variables represent the left side variables that are indicators of child well-being (Percentages of uninsured youth and high school graduation rates) in this analysis. The different family structures, a right side variable, are an X value in the model. The remaining variables are the median household income, county child poverty rates, percentage of SNAP participation, and percentage of SSI participation of the region’s population. To show geographical impacts, dummy variables represent each state in the model.

$$Y_1 = \beta_0 + \beta_1 X_s + \beta_2 X_m + \beta_3 X_{gp} + \beta_4 X_{inc} + \beta_5 X_{pov} + \beta_6 X_{snap} + \beta_7 X_{ssi} + \beta_8 X_{black} + \beta_9 X_{latino} + \mu_{mo} + \mu_{ar} + \mu_{ky} + \mu_{il} + \mu_{ms} + \mu_{tn} + \epsilon \quad (3)$$

$$Y_2 = \beta_0 + \beta_1 X_s + \beta_2 X_m + \beta_3 X_{gp} + \beta_4 X_{inc} + \beta_5 X_{pov} + \beta_6 X_{snap} + \beta_7 X_{ssi} + \beta_8 X_{black} + \beta_9 X_{latino} + \mu_{mo} + \mu_{ar} + \mu_{ky} + \mu_{il} + \mu_{ms} + \mu_{tn} + \epsilon \quad (4)$$

In models 3 and 4, we use the same model, but we account for race of the region. The variable for race represents the Black and Latino percentages. The goal is to examine the

role race plays in relationship between family structure, high school graduation rates, and health insurance coverage.

The primary analysis uses a series of multi-variable statistical analysis with uninsured rates and high school graduation rates serving as right side variables and the variables of income, youth poverty rates, SNAP participation rates, SSI participation rates as additional left side variables. This method of analysis proves to be best for this research. As a precautionary measure, a multi-collinearity analysis test finds any indication of correlation among the variables within this analysis. Multi-collinearity is a statistical occurrence in which predictor variables in a multiple regression model correlate. Therefore, one can linearly predict from the others with a non-trivial degree of accuracy. In this situation, the coefficient estimates may be negatively impacted and can change erratically in response to small changes in the model.

## CHAPTER EIGHT: RESULTS

The main goal of this regression analysis is to assess the correlation between family structure, health insurance coverage, and high school graduation rates. We considered several different models in which we used different sources of variation. We first ran a basic statistical analysis to learn more about the dataset. The results can be seen in Table 8.2. We are able to see the standard deviation and means of the variable that we are using within this study. The  $V$  is the number of counties/parishes involved in this study. The multi-co linearity test suggests there was not a high level of correlation amongst the variables included within the model. Therefore, we were able to go ahead with the analysis.

For a more in-depth analysis, we start by implementing an OLS regression of the correlation between family structure, high school graduation rates and health insurance rates in different family structures. The OLS regression models include the following variables: household income, poverty rates, SNAP participation rates and SSI participation rates. The resulting findings in Table 8.3 provide the results of the regression that examines the correlation between family structure and high school graduation rates within the LMD region. The results for both models were surprisingly different.

Table 8.2.

*Summary Statistics*

V=219

<i>Variable</i>	<i>Mean (Standard Deviations)</i>
<i>Independent Variables</i>	
Married	.250 (.05)
Single	.122 (.047)
Grandparent	.027 (.012)
Black	24.869 (22.04)
Hispanic	2.207 (1.616)
Snap	.536 (.078)
Cnty Povchild	33.52 (8.93)
Medhouseholdinc	35389.19 (6980.04)
<i>Dependent Variables</i>	
Grad Rate	.369 (.088)
Child Uninsured	8.378 (2.44)

*V- Variables*

The results in Table 8.3 examine the effects of family structure on child uninsured and graduation rates. The regression results show that single-female headed homes are significant at the .01 level of significance. However, family structure has a weak impact on the child's educational attainment within the remaining households in the region. The results suggest that single parent households relate to lower graduation rates. Taking a look at the other right side variables within the model, we did not find a strong impact

among those variables. The right side variables such as household income, poverty rates, SNAP and SSI did not prove to have a significant impact on a child's educational attainment in the region.

**Table 8.3.**  
*Effects of Family structure on High Graduation Rates and Health Insurance Coverage*

Right Side Variables	Left Side Variables			
	Model 1 (Graduation Rate) R <sup>2</sup> = <b>.237</b> Adj. R <sup>2</sup> <b>0.188</b>	Model 2 (Child uninsured) R <sup>2</sup> = <b>.721</b> Adj. R <sup>2</sup> <b>0.703</b>	Model 3 (Grad Rates) R <sup>2</sup> = <b>.241</b> Adj. R <sup>2</sup> <b>0.184</b>	Model 4 (Child uninsured) R <sup>2</sup> = <b>.564</b> Adj. R <sup>2</sup> <b>0.534</b>
X				
Single	-.298 (.208)*	-8.47(3.508)***	-.219(-.974)	-29.84 (-7.976)*
Married	.155 (.165)	-4.64 (2.762)***	.109 (.633)	-13.11 (-4.604)*
Grandparent	.621 (.568)	-2.74 (9.495)*	.818 (1.342)	-27.61 (-2.732)
Median Household Income	-.223 (.001)	.794 (.0414)	-.001 (-.984)	.057 (1.871)
SNAP	-.019 (.081)	5.66 (1.364)***	-0.045 (-.532)	5.58 (3.923)*
SSI	-.512(.169)	-1.898 (2.839)	-0.111 (-.631)	-2.84 (-.967)
County Poverty Rate	.022(.001)	-.036 (.022)	.005 (.322)	-0.342 (-1.312)*
Black	-	-	-.056 (-.973)	-.009(-.102)
Hispanic	-	-	.059 (.162)	.135 (2.274)
AR	.391 (.029)**	.31(.335)	.032 (.024)	.313(.336)
MO	.032 (.019)	-.63 (.328)	.025 (.025)**	-.603(.334)*
IL	-.030 (.022)	-4.15 (.414)***	-0.032 (.028)	-4.154 (.419)**
MS	-.032 (.017)	3.36 (.298)***	-0.023 (.017)	3.453(.203)*
KY	.022(.027)	0.91 (.369)*	0.025(.022)**	.946 (.303)
TN	.053(.020)**	-1.87 (.345)***	0.053 (.024)	-1.963 (.307)*

\*- Significance at 10%- \*\* Significance at 5% - \*\*\* Significance at 1%

Note: Values in Parenthesis represent standard errors

When taking the spatial location into account, we find that location did not have an impact. Within the first OLS test, the dummy variables Arkansas and Tennessee were

significant in the regression (see Table 8.3). This finding suggests that location has an impact on the educational attainment of children within the region. These findings can be attributed to the availability of resources within the state and its local legislation and leadership.

In Model 3, we include race as a variable in the regression (Table 8.3). There was very little change among the results in terms of the correlation. The trend of low significance levels was persistent among the variables. Thus, these results suggest that family structure may not have a strong, direct correlation with the graduation rates of youth within the region.

Model 4 within Table 8.3 suggests that family structure, child poverty rates, and SNAP participation have a significant impact on the percentages of children without insurance in the region. Married and single-female-headed households show a significant impact on the percentage of uninsured children. SNAP participation shows an impact. However, the SSI participation and county poverty rates are not significant in the analysis. Household income is significant within this regression.

With the addition of the right side variables, the dummy variables for states show various levels of significance. Tennessee, Illinois, Mississippi, and Missouri suggest location has a significant impact in this analysis. The dummy variables suggest that the geographical location of the counties has an impact on the rates within the region. The level of significant varied with the additional right side variables. When we consider race the estimates decreased in value. We find in Table 8.3 that a child of Hispanic descent, regardless to their household type, has a significant impact on the uninsured youth rates

in the region. Black, as a race variable, did not have a significant correlation between children and health insurance coverage.

## CHAPTER NINE: CONCLUSION AND RECOMMENDATIONS

### *9.1. Summary*

The purpose of this study was to explore the effects of family structure on high school graduation rates and health insurance coverage within the Lower Mississippi Delta region. To accomplish this goal, it becomes necessary to reach some prerequisite goals. Understanding what defines family structure and how these households connect with the educational attainment and health outcomes of children was a key concept within the literature review section for this study. As an additional measure to this effort, it becomes necessary to provide background about the Lower Mississippi Delta region. To ensure that the social and economic impact of the household is taken into consideration, a theoretical framework and conceptual map is discussed to show the connection between the household, parental influence, and a child's development. To provide a viable guide that provides insight for this study, it was necessary to develop a model with the potential for representing all the components of the household. Once these fundamental steps were achieved, this research was able to go forward. This chapter reports the conclusions and recommendations that resulted from this study.

The OLS regression method of research was utilized with a unique secondary dataset for this study. The left side variables of the study are high school graduation rates and uninsured rates. These are the selected indicator of child well-being. The right side variables within this study are the county child poverty rates, median household income, family structure, SSI participation rates, SNAP participation rates, Black, and Latino. These selected variables are indicators of different aspects of the household's economic

and social climate. The secondary data sources used for this study are from the 1) US Census Bureau American Community Survey; 2) US Census Bureau Small Area Health Insurance Estimate; 3) US Census Bureau Small Area Income and Poverty Estimates; 4) Social Security Administration (SSI); and 5) County Health Rankings database. The data are collected between a 2006 and 2011 timeframe. All data are collected for the 219 counties located within the 7 state region of the Lower Mississippi Delta region. A select number of the data was restricted to children under the age of 18 years old. Based on the data collection restrictions developed for this study, the data collected addressed the research problems discussed in the fourth chapter of this study.

## *9.2 Conclusion*

The idea that family is the epicenter of resources for the child's well-being, specifically health and educational development, is the driving force for this study. The purpose of the study was not only to show the relationship between family structure and academic attainment but also health insurance coverage. The fact that this study is a regionally-focused endeavor provides a diverse foundation for this exploratory study. Despite the inherent connection between family structure, educational attainment, and health insurance coverage, as seen in studies by Heck and Parker (2002) and Sandefur and Wells (1999), the results painted a much different picture. We use a diverse source of data to create the landscape for this study that focuses on the external characteristics of the household.

First we addressed the question: Does family structure have an impact on the high school graduation rates in the LMD? The findings indicate there is not a strong impact of family structure on high school graduation rates. Family structure does have an impact but not as strong as expected. It supports the finding that family structure has a modest impact on the educational attainment of youth (Gennetian, 2005). The results show that educational attainment could be related to family structure based on the household composition. Thus, this supports the conceptual framework that family structure impacts parental investment that impacts educational attainment. A possible reason why the effects are weak is that there may need to be additional identifying variables for the household included in the analysis. Additional household characteristics such as parent's education and family size may need to be included to provide more insight on the household. If the households are further defined, the analysis may be able to reflect stronger, more in-depth result.

Secondly, does family structure affect child health insurance rates in the LMD?

According to our findings the answer is yes. The family structure shows to have a strong impact on health insurance coverage. These findings support the conceptual model that economic resources based on family structure impacts the health outcomes of the child. Single-female headed and married households were found to have the strongest level of significance upon the uninsured rates within the region. Based on the economic resources of the parent, the availability of resources for the child can be impacted directly. The uninsured rates can also be impacted by the family's eligibility to federal and employee based insurance coverage programs. These various factors support this finding because

both households are usually eligible for one of the various forms of health insurance coverage.

Next, we ask what other factors contribute to the health insurance coverage of children in the LMD. Median household income, Hispanic (race), SNAP, and geographical location are all found to be significant in this analysis. The finding suggests that a household can have an impact based on the various characteristics of the household such as income, assistance availability, and location. This finding relates to the family economic theory that addresses the amount of investments that a parent invests in the health of the child. This shows that based on the family structure, the investments in their health insurance has an impact on the child's health insurance coverage.

Lastly, we asked, what other factors contribute to the high school graduation rates of children in the LMD. Geographical location was the only factor that suggests a strong impact on the graduation rates. Although previous research provides a correlation between family structure and high school graduation rates, we did not reach the same or similar results. We found that family structure did not have a strong level of significant in this analysis even when took race into consideration.

However, the child insurance rates were highly responsive to the race variable. We found that regional location does have an impact on the health insurance coverage of children within the region. We do not want to refer to this as a causal effect, but we have seen that dummy variable for the state suggests that location does play a role in this analysis.

Overall, this study indicates that family structure does not have a direct impact on educational attainment, but it does have an impact on health insurance coverage of youth.

### *9.3. Future Recommendations*

This study provides policymakers with additional knowledge on the issues of family structure, educational attainment, and health insurance coverage within the region. As policy makers look to understand the needs of the families within the region, this study can help to provide insight on how the families are faring based on each household's economics characteristics. If policymakers are looking to improve the educational and healthcare climate within the LMD region, they may accomplish this goal in two ways: by introducing intervention programs for families to increase their knowledge of the impacts of effective parenting or create programs for community leaders geared towards increasing people's knowledge about the impacts of family structure on child educational attainment and health outcomes. These programs could be great in the local schools, extension programs, and community centers. These are entities that work with families regularly on a one on one basis. These programs could be offered on a county or even state level. The selection of the programs could be determined on the overall budget, needs assessment, and the level of interest in the program.

Therefore, with a proper introduction and implementation of the program, the families will benefit from the ability to enhance their parenting style and maximize their child's potential. The local community would also benefit because it will positively impact the educational system and the families within the community.

We recommended that the study be conducted with one age group (high school or middle school) selected. Selecting one age group would provide a clearer illustration of the impact of family structure. The effects could be more evident within one age group rather than doing the entire population of children 18 and under within the region.

Additional research is necessary to explore the internal factors influencing family structure's impact on academic achievement and health insurance coverage. Because we have a somewhat unique dataset, we recommend that additional analyses need to be conducted using a similar dataset with additional variables such as parental education, number of siblings, rural, urban, and more demographical data. Analyzing the data using regression analysis, may give important information regarding factors influencing family structure in relation to health and educational attainment of youth within the region.

We would suggest the use of a reliable secondary panel data resource to collect regional data on the sample of interest for this study. The issue of panel data for this project connects to the availability of data pertaining to the LMD region. Most of the panel data are available on a national basis. The panel data provide insight on the population over time. The dataset would help to show the impact of poverty (persistent poverty) and parental investment within the households over time. Several family structure studies used panel data to gather information on the impact of family structure on a child's academic achievements. The data provide more on the effects of these family structures from one year to the next for the youth. For a lengthier study, surveys and interviews would be ideal. Many of the panel databases do not have regionally based data. Therefore, this unique approach would provide information of how the families and

youth within the region. It would be an ideal supplementary information source to enhance this study and its purpose.

Lastly, in the wake of the Obamacare era, we have to take into consideration that many of the health insurance coverage concerns will soon become non-existent. Obamacare, formally known as The Patient Protection and Affordable Care Act, signed into law in March, 2010 aims to ensure health insurance to every citizen regardless of their income status or medical history. Once the act sets into full motion, there will need to be a different approach taken with this study. We recommend that the researcher looks at health outcomes of the youth rather than the uninsured rates. The region has a history of poor health outcomes among children such as diabetes's, obesity, low birth weights, and infant mortality. The study should focus on chronic health outcomes such as child obesity, very low birth weights, or lead poisoning. The examination of health insurance coverage in the original study was meant to show the impact a lack of health insurance coverage can have on a child's health and development. A potential conceptual model could show a child's lack of health insurance can lead to unmet health needs and poor academic achievement. These dynamics go hand in hand because poor health will deter a child from adequate education. This clear illustration of the continuous cycle of healthcare inadequacies based on family structure can possibly have a strong impact on the strength of the future study.

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