ECONOMICS OF GRANDPARENTS RAISING GRANDCHILDREN AFTER THE 2008 RECESSION – ANALYZING ACS DATASETS FOR THE YEARS 2007 AND 2011

A Thesis by

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Bachelor of Science, Newman University, 2012

Submitted to the Department of Sociology
and the faculty of the Graduate School of
Wichita State University
in partial fulfillment of
the requirements for the degree of
Master of Arts

May 2014

ECONOMICS OF GRANDPARENTS RAISING GRANDCHILDREN AFTER THE 2008 RECESSION - ANALYZING ACS DATASETS FOR THE YEARS 2007 AND 2011

The following faculty members have examined the final copy of this thesis for form and content, and recommend that it be accepted in partial fulfillment of the requirement for the degree of Master of Arts with a major in Sociology.

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DEDICATION

I dedicate my research paper for my master's thesis to my two daughters who I am very proud of for their professional life choices. I want to thank Nichole for always expressing her faith in me and encouraging me to continue with my education, and Amanda for showing me how to follow your passion by her work with a nonprofit to feed the hungry children in Colorado. Also, special thanks to Bonnie, my previous employer and dear friend who was always there to encourage me and to listen.

"Whatever sociology may be, it is the result of constantly asking the question, what is the meaning of this?" – C. Wright Mills

ACKNOWLEDGMENTS

I would like to acknowledge and share my sincere appreciation to all of my professors, committee members, and staff at Wichita State University that guided and supported me throughout my graduate studies. I would especially like to thank Dr. Hill for all her support and guidance throughout the process of writing my thesis. She was my everything at WSU, my Chair, my Graduate Coordinator, my Advanced Statistics Professor, and my Advisor. I would also like to thank Darren who was there from the first day to the last, and always helpful whenever asked. Finally, I would also like to thank Dr. Merrifield, who was there to help and give me support and guidance whenever I needed it throughout my graduate studies. He was the first to educate me in the research process and the first to witness when I caught the research bug!

Thank you all so much.

ABSTRACT

The current cross sectional quantitative study examined the structural and historical trends of social and economic effects on grandparents who raised grandchildren before and after the Great Recession of 2008. The study focused on the time period of 2007 and 2011 and analyzed the American Community Survey, which was made available for public use on the IPUMS website. The variables analyzed were individual, familial, and structural. The economic variation in income for the 2007 and 2011 time period is the main focus of this study, while age, citizenship employment status, education, gender, marital status, race, family size, relationship to head of the house, and location are the other variables that were analyzed as well. After running the multivariate test the analysis revealed the variables with the most variation from 2007 to 2011 were employment status, gender, and education.

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CHAPTER 1

INTRODUCTION

There are many reasons why grandchildren live with their grandparents. It may be due to economic necessity because of job loss, or abandonment, parental death, incarceration, or just because of the grandparent's care and concern for the child's welfare (Atchley, Barusch 2004; Baldock 2007; Hill 2006; Ruiz 2008). A recent article in Huffington Post discussed a study by the Pew Research Center, Brown University, and Russell Sage Foundation, and their 2011 research showed that 1 in 10 or 7.7 million grandchildren are being raised by their grandparents (HuffingtonPost.org). Amy Goyer, an expert on family issues stated that the recession was the primary reason for the recent drastic increase in the number of children being raised by grandparents. Close to twenty percent are living below the poverty line and almost one third are the primary caregivers for their grandchildren (HuffingtonPost.org). This recent study showed that this phenomenon is still on the rise with another increase in grandchildren who now live with a grandparent.

In 2010, ten percent of all children or 7.5 million grandchildren under 18 were living with a grandparent who was the head of the household (Cooper 2012; Goyer 2010; U.S. Census Bureau 2012). There were 3.2 million grandchildren who lived with both a grandmother and a grandfather, which left 4.3 million children that were raised by a single grandparent (Census Bureau 2012). Over seven million grandparents had children under 18 living with them in 2010, and 2.7 million were providing primary care, with 1.7 million of them who

were grandmothers and 1 million of them grandfathers. Additionally one third of those grandparents were over 60 years old (U.S. Census Bureau 2012).

The recession has placed an increased interest in the economic challenges and deficiencies today with a large number of grandparents raising their grandchildren. Furthermore, times have changed, and when looking back, the family structure has changed. Family structure has changed considerably compared to fifty years ago. Today there are more divorced women and single women with children, which means there is an even greater chance of a grandparent becoming responsible for a grandchild and living in need (Cancian, Reed 2009). One result of the changing family structure was a high poverty level for grandparents raising grandchildren in 2010.

The number in poverty has fallen considerably over the last 10 years, but there is still a substantial number, with twenty percent of custodial grandparents living in poverty in 2010, according to the American Association of Retired Persons (Goyer 2010). Prior research suggested that the least likely to be in poverty are the non-Hispanic white, married, grandfathers. The negative economic effects on grandparents reach across all genders, races, and classes (Atchley, Barusch 2004; Fuller-Thomson, Minkler, Driver 1997; Goodman 2001; Hayslip, Kaminski 2005; Keene, Prokos, Held 2012; Smith and Hancock 2010).

This study examines the economic effects on custodial grandparents raising their grandchildren in the years before and after the economic downturn in 2008. The custodial

grandparent is defined as the responsible parent for the grandchild when the biological parent has given up or been relieved of their responsibility to care for their child. This study will focus on the time period of 2007 and 2011 analyzing the American Community Survey, which has been made available for public use on the IPUMS website (Ruggles, Alexander, Genadek, Goeken, Schroeder, Sobek, 2010). The variables analyzed were individual, familial, and structural for the years 2007 and 2011.

How *did* the economic downturn of 2008 affect the grandparent respondents' income during this time period? Using the available cross sectional data this study attempts to answer this question, while analyzing different respondents over time. This quantitative cross sectional study analyzed the data to compare the effect on respondents' income for years 2007 and 2011. The literature review begins by looking at the individual variables related to the grandparent respondents and the socioeconomic issues that pertain to them when raising a grandchild, next the issues of the family are discussed, and lastly the literature review covers the structural variables of urban and rural custodial grandparent respondents and their economic issues.

CHAPTER 2

LITERATURE REVIEW

2.1 Individual

2.1.1 Educational Attainment and Employment Status

Research suggested that the grandparents with high educational attainment also achieved a higher economic status (Burnette 1999). Additionally, previous research indicated that the custodial grandparents had many needs that were not provided for while taking care of their grandchildren, and they also had lower levels of education than their peers (Burnette 1999). Research found that grandparents with low educational levels had high rates of unemployment (Burnette 1999). Subsequently, my hypotheses is that grandparent respondents with a lower educational attainment will have a lower mean income than respondents with higher educational attainment.

In 2010, according to the U.S. Bureau of Labor, *Women in the Labor Force Study* 2013, 36% of women held college degrees. According to Cherlin (2010), the college educated seemed to have higher rates of marriage and lower rates of divorce, and those who are less educated and older have more of a chance that they will raise their grandchildren and live with greater economic challenges than the grandparents who are well-educated. The family life cycle is related to income and education (Cherlin 2010). Cherlin (2010) indicated that fifty years ago there were similarities in family patterns between the wealthy and the poor, where now there seems to be a difference in family

life cycles in reference to education and income (i.e., divorce rates, unemployment rates).

The unemployment rate "more than doubled" from 2007 to 2009 and job creation was at an all-time low (Katz 2010). Grandparents with low educational levels had high rates of unemployment (Burnette 1999). According to the 2013 *Women in the Labor Force Study*, the overall unemployment rate for women was 8.6 compared to 10.5% for men (U.S. Bureau of Labor Statistics 2013). African American women had the highest unemployment rate at 13.8% and Hispanic women had the next highest at 12.3% compared to white women at 7.7% (U.S. Bureau of Labor Statistics 2013). According to Katz, the recession has severely impacted those who were already unemployed as well as those who have a college education, and produced a slow-down in educational attainment and job creation (Katz, 2010). My hypothesis is that grandparent respondents that are unemployed will have a lower mean income than the respondents who are employed. Additionally, my hypotheses are 1) the study will show that the effect of unemployment will be greater in 2011 than in 2007 and 2) the effect of educational attainment will be greater in 2011 than in 2007.

2.1.2 Marital Status

According to Cherlin (2010), for the college educated, marriage increased while divorce decreased, and for those who were not college educated the institution of marriage was far more unstable. "During the 1960s and 1970s, the probability that a marriage would end in divorce rose sharply for all groups. . . Since then, however, the probability of

divorce has declined among married couples in which the spouses have college degrees, whereas divorce probabilities have stayed roughly the same or even increased for the less educated" (Cherlin 2010). Research that analyzed single and married grandparents' income prior to 2007 revealed that single grandparents were more likely to earn less and have economic deficiencies compared to married grandparents. In 2010, a single grandparent's median income was $33,000 a year (Cooper 2012; U.S. Census Bureau 2012), and married couples income was $51,100. Additionally, if the single grandparent lived outside an urban area there were considerably more obstacles to overcome, such as job availability.

Due to economic, societal, and social expectations of family responsibilities there is likelihood that the working grandparent will be single (Alkadry, Tower 2011, 741). Women who work are more likely to be divorced due to increased responsibilities at home and less help from their husbands with the housework. Alkadry and Tower's (2011) study involving 1,600 participants revealed that working married women had more chores than their husbands, which caused them more stress and increased the chance of them getting divorced (741). Furthermore, according to this study there was a reduced chance for promotion for women compared to men, which equates to reduced chance for upward mobility, which results in less income for married women and lower socioeconomic status (Alkadry, Tower 2011). Ultimately, the more chores, the more pressures and stress, which results in more divorced/single women who make less money and who are likely to be grandparents at some point, and possibly

raising a grandchild alone. My hypothesis is that single grandparent respondents raising grandchildren will have a lower mean income than married respondents.

2.1.3 Race

Although, minority grandparents live in poverty they are more likely not to use formal services to supplement their income (Burnette 1999). Additionally, minority grandparents may live in poverty, but Goodman and Silverstein's study found that minority custodial grandparents had a higher satisfaction with their life course than the nonminority custodial grandparents (Goodman, Silverstein 2006; Pruchno 1999). An interesting finding is that all grandparents, no matter the race, share similarities in how they raise their grandchildren even though there are many cultural differences (Bean, McAllister, Hudgins 2001).

In 2009, according to the Census Bureau, a higher percentage of minority grandchildren compared to nonminority grandchildren lived with a grandparent (Census Bureau 2012). Minority custodial grandparents are especially vulnerable to low socioeconomic conditions; the most affected family structure by this new parenting role is the minority, single, grandmother who is low-income (Kelch-Oliver 2011). Additionally, female minorities are more likely to have chronic health issues that may hinder their ability to work and provide an income to aid in raising their grandchild (Cross, Day, Byers 2010). Even with the physical and economic predispositions the minority grandmothers are still more likely to care for their grandchildren than nonminority grandmothers (Luo, Pierre, Hughes, Waite 2012).

Previous studies indicated that minority grandparents, who are primary caregivers for their grandchildren, are more vulnerable to income instability, health disparities, and the minorities living in rural areas are at an even higher risk (del Bene 2010; Kelch-Oliver 2011; Ruiz 2008; Thomas 2011). In 2000, Fuller-Thompson and Minkler's (2013) study revealed one in twenty out of almost two hundred thousand minority grandparents were raising a grandchild, or thirty percent compared to fifteen percent of minority grandparents who were not raising a grandchild (fifty-five percent were noncustodial grandparents) and the custodial grandparents were more likely to be living with economic deficiencies and/or in poverty (Fuller-Thompson, Minkler (2013). My hypothesis is that grandparent respondents that are minority group members will have a lower mean income than those who are nonminority group members.

2.1.4 Citizen

There are two ways that people become citizens in the United States, with one being through birth, and the other through naturalization, although, there are a number of noncitizens that live in the United States that are not born here or naturalized U.S. citizens. The number of noncitizens that are raising grandchildren in the United States has increased, just as the numbers of American grandparents raising grandchildren has increased. In 2012, 490,000 foreign born grandparents were raising their grandchildren (Census Bureau 2012). When a citizen grandparent who raises their grandchild is married to a noncitizen, the government aids the grandparent in this unusual situation by allowing the noncitizen to qualify as head of household and receive certain tax breaks (IRS.gov 2013). Without some form of a tax break these

citizen/noncitizen grandparents may earn less, be located in an even lower socioeconomic status, and live in poverty while raising their grandchildren.

In order for the noncitizen grandparent to afford to raise their grandchildren they must make a decent wage, and be free of the fear of wage discrimination. Wage discrimination has been a problem for noncitizens. Noncitizen females have two characteristics that work against them. "For example, both women and immigrants may experience discrimination by receiving lower returns to their endowments than men or US natives" (Lopez 2012, 104). The noncitizen has many obstacles to overcome while living in a foreign land, challenges of acculturation, language, finding work, and discrimination. There are many reasons they are discriminated against as Lopez states, "A final explanation for the wage differential may be a lack of assimilation among immigrants. When immigrants arrive to the US, they lack US-specific human capital and as a result earn lower wages than US natives" and, the noncitizens lack of familiarity and language skills contribute as well (Lopez 2012, 104). According to Lopez, the wage gap between skilled noncitizen women and the native born men suggested there is a greater unexplained portion due to gender than there is to being born outside the U.S. (Lopez 2012, 124). Consequently, my hypothesis is that grandparent respondents who are noncitizens will have a lower mean income than the respondents who are citizens.

2.1.5 Age

Grandparents taking on the responsibility to raise their grandchild when they are over sixty-five are very vulnerable and challenged economically with this new role (Padillo-

Fausto, Wallace 2013, 1). The typical grandparent is more than likely to be in the middle to latter stages of their life course where specific health issues are probable as one grows older (Atchley, Barusch 2004). According to the Pew Research Center, in 2009, sixty-seven percent of grandparents raising grandchildren are younger than sixty years old, and thirteen percent are younger than forty-five (Livingston, Parker 2010), which means the majority of grandparents are preretirement age. The grandparents who are over sixty-five may be in better financial shape then the under sixty-five preretirement group since they are more likely to access Social Security benefits and Medicare.

Growing older limits capabilities and makes earning an adequate income to raise a grandchild even more difficult (Atchley, Barusch 2004). Considering everything, the custodial grandparent has more economic and physical impediments to overcome than the younger biological parent. The economic impact on an older adult is substantial at this point in their life, and economic deficiencies and poverty is not unlikely. In 2010, elderly grandparents who were raising grandchildren and living in poverty numbered 580,000 (US Census Bureau 2012). In 2010, twenty-eight percent of grandparents who were age thirty to fifty-nine years old were caring for a grandchild (US Census Bureau 2012). Eighteen percent of all grandparents over sixty years old raising grandchildren in 2010 lived in poverty (US Census Bureau 2012). Additionally in 2010, a little over three million grandparents over the age of 60 lived with a grandchild under 18 years old and 915,000 had full responsibility for the grandchild, which was a thirty percent increase over a ten year period (Population Reference Bureau 2011).

Adverse life course events, such as taking on a new parenting role, have many negative effects on older adults including negative economic effects (Ingersoll-Dayton, Morgan, Antonucci 1997; Seltzer, Yahirun, Jenjira 2013; Thomas 2011). The socially constructed progression of the life course is disrupted with this new role and not in sequence with the normal life course events, which affects the overall socioeconomic well-being of the grandparent (Atchley, Barusch 2004). Abnormal life course events can increase individual disengagement and economic instability through a normal progression of time (Atchley, Barusch 2004; Backhouse, Graham 2011). Consequently, because of the limitations of age, health, economic challenges, and likelihood of poverty, my hypothesis is that grandparent respondents that are pre-retirement age will have a lower mean income than the respondents who are retirement age.

2.1.6 Sex

Prior to the 2008 recession there were 2.7 million grandparents raising grandchildren with 1.7 million female grandparents and 1 million male grandparents that provided for their 4.3 million grandchildren or 10% of the nation's children who live with a grandparent (U.S. Census Bureau 2012). Recently, in 2010, there were over seven million grandparents raising grandchildren (U.S. Census Bureau 2012). Thirty-six percent were male and sixty-four percent were female (U.S. Census Bureau 2012). The majority of grandparents are women and with the issue of wage discrimination in this country puts women at a double disadvantage from the start. According to Lopez, there

is more wage discrimination in the United States due to gender than to being foreign born (Lopez 2012, 124).

According to the US Bureau of Labor Statistics the starting salary in 1970 for a woman was $31,928 compared to $39,832 for a man. In contrast in 2010, the median income for a grandparent headed household/and or spouses was $33,000 (US Census Bureau 2012). In 1979, a female earned sixty-two percent of what her male counterpart earned. Pay inequality overall has continued on through 2007 and 2011. In 2011, women earned only eighty percent of what a man earned in a full-time salaried position (U.S. Bureau of Labor Statistics 2013). Obviously, the grandmother has experienced this economic loss throughout her working career. The grandmother has endured years of income inequality. According to Alkadry and Tower (2011), ". . . there are many gender issues in organizations that negatively affect women's pay, including occupational, agency, and position segregation. Furthermore, women are burdened by gender images and pay disproportionate social costs for career advancement compared to their male counterparts. All of these issues add to an array of gender-driven and non-gender-driven factors that tend to contribute to pay differentials between men and women" (741). Consequently, my hypothesis is that the grandparent respondents who are female will have a lower mean income than the respondents who are male.

2.1.7 Months Responsible for Grandchildren

Since the months responsible variable pertains to the individual grandparent's number of months they are responsible for the grandchild themselves I have listed this variable

under the individual variables rather than the familial variables. The number of months a grandparent cares for a child may be anywhere from 6 months up to 6 years, and some grandparents raise their grandchildren until they graduate from high school (Luo, Pierre, Hughes, Waite 2012). According to previous research 28% of grandparents cared for a grandchild for more than two years, (Luo, Pierre, Hughes, Waite 2012; Musil, Gordon, Warner, Zauszniewski, Standing, Wykle 2011).

Grandparents who are responsible for raising their grandchildren are more likely to be in poverty or economically disadvantaged (Atchley Barusch; Mutchler Baker 2009; Padillo-Fausto Wallace 2013; US Census Bureau 2011). When raising a grandchild for a long period of time the custodial grandparent may have to obtain employment to provide for their grandchild. This may be impeded by obstacles of health problems, healthcare and childcare costs, and the longer the child is with the grandparent the more costs incurred. Additionally, there is a lack of social programs to help the custodial grandparents economically and otherwise. Research has shown that a grandchild placed with the non-kin will receive more assistance than those who have kinship. Consequently, my hypothesis is that grandparent respondents who are responsible for grandchildren more than 24 months will have a lower mean income than the respondents who are responsible for less than 24 months.

2.2 Familial

2.2.1 Multigenerational Household, Number Living in the House, and Relationship to the Head of the Household

Multigenerational households are expected to increase as a result of the economic recession and housing situation (Keene, Batson 2010). During hard economic times minorities were more likely to start or continue coresidence (Keene, Batson 2010; Luo, Pierre, Hughes, Waite 2012). Due to continued economic instability minority groups have been living in multi-generation households for hundreds of years and find coresidence a way of coping with hard economic times (del Bene 2010; Ruiz 2008). According to Hill (2006), in 1970 3% of children were living in a grandparent's household and by 1990 the percent had increased to almost double at 5.6%. The majority of the increase was for three generation households between 1980 and 1990 (Hill 2006). There were approximately 1% of children living with a grandparent only in 1990, and the poverty level was at 13% (Hill 2006). In 2008, one out of ten children were living with a grandparent, and almost half of those children lived without a parent present in a two generation household (Livingston, Parker 2010). Grandmothers have always been seen as source of strength, support, and stability, and have been responsible for sharing traditional family values, beliefs, culture, and actually helping to keep the family together, whether living together or not in a multigenerational household (del Bene 2010; Ruiz 2008).

Coresidence is more prevalent today compared to 2007 due to the economic downturn of 2008 (Keene, Batson 2010; Luo, Pierre, Hughes, Waite 2012; Seltzer, Yahirun, Jenjira

2013). Those grandparents living in a multigenerational household with a grandchild and the grandchild's mother have an advantage of a two income household, have fewer problems paying their bills compared to those single grandparents living by themselves with a grandchild, and they are less likely to live below the poverty level (Goodman 2007; Mutchler, Baker 2009). Paying expenses and keeping the household running is less stressful, and more probable if there are three generations living in the household (Goodman 2007; Mutchler, Baker 2009).

Another advantage of living a multigenerational household is the additional income from the grandparent's Social Security or retirement income, which may help the multigenerational household to live above the poverty level (Mutchler, Baker 2009). The number of family members living in a household also has an effect on the economic status of the grandparent who is raising a grandchild (Mutchler, Baker 2009). The single grandparent family is more likely to be living with economic deficiencies or below the poverty level with the married grandparents still making below poverty level median incomes (Mutchler, Baker 2009).

In 2010, the median income for a married couple was $51,100 (US Census Bureau 2012, Income Poverty & Health Insurance Coverage in the US). This means that the child living with both a mother and a grandmother is less likely to live with economic deficiencies and below or near the poverty level (Mutchler, Baker 2009). Consequently, my hypotheses are that grandparent respondents living in a multigenerational household with more generations will have a higher mean income than the respondents

who are living in a mutigenerational household with less generations; grandparent respondents who live with less family members will have a lower mean income; and grandparent respondents who are head of household will have a lower mean income than the grandparent respondents with a spouse as head of household.

2.3 Structural

2.3.1 Location

Previous research suggested the rural grandparent is even more susceptible to economic deficits and health disparities than those living in an urban area due to lack of jobs, family support, and resources, especially members of minority groups who live in a rural area (del Bene 2011; Ruiz 2008; Thomas 2011). According to the Census Bureau and the Frontier Education Center, in 2000, the West Region of the United States (which includes the states as indicated in Fig 2.3.1) had the lowest proportion of grandparents raising grandchildren at four percent, and the South Region had the highest proportion of primary caregiver custodial grandparents at forty-eight percent (Fig 2.3.1); the North and East Regions had percentages that fell in between the four and forty-eight percent (National Center for Frontier Communities 2004).

The economic, social, and political cultures that are the norm in rural areas are considerably different than those in urban areas (Leipert, Ruetter 2005; Ruiz 2008; Thomas 2011). The grandparents living in rural areas are facing many more obstacles than the urban grandparents face. One obstacle the rural grandparent faces is the lack of employment availability. The rural grandparent has less types of employment to

choose from as well, and those who work in rural areas usually make less money especially those in minority groups (del Bene 2011; Leipert, Ruetter 2005; Ruiz 2008; Thomas 2011). Research suggests that states with more urban areas will have more social programs and more grandparent headed households than rural areas, and more job opportunities (Hill 2006; Thomas 2011). Consequently, my hypothesis is that grandparent respondents that live in a rural area will have a lower mean income than the respondents living in an urban area.

2.4 Hypotheses

The hypotheses for this study are founded on the intention of this study to analyze the data to answer the following research question: How did the economic downturn of 2008 affect the grandparent respondents' income during this time period? Additionally, the intention of this study is to look at the variables in relationship to the grandparents' economic conditions with a desire to provide data to support and encourage social program development that assists grandparents who are raising grandchildren. Focused on the research question the following are the hypotheses for this study (while controlling for the other variables on each one). The testing of each of these hypotheses is for both years 2007 and 2011 with the exception of section 2.4.4.

2.4.1 Individual

- Grandparent respondents with a lower educational attainment will have a lower mean income than respondents with higher educational attainment.
- Grandparent respondents that are unemployed will have a lower mean income than the respondents who are employed.

- Single grandparent respondents raising grandchildren will have a lower mean income than married respondents.
- Grandparent respondents that are minority group members will have a lower mean income than those who are nonminority.
- Grandparent respondents who are noncitizens will have a lower mean income than the respondents who are citizens.
- Grandparent respondents who are female will have a lower mean income than the respondents who are male.
- Grandparent respondents that are pre-retirement age will have a lower mean income than the respondents who are retirement age.
- Grandparent respondents who are responsible for grandchildren more than 24 months will have a lower mean income than the respondents who are responsible for less than 24 months.

2.4.2 Familial

- Grandparent respondents who are head of household will have a lower mean income than the respondents with a spouse as head of household.
- Grandparent respondents living in a multigenerational household with two generations will have a lower mean income than the respondents who are living in a mutigenerational household with three or more generations.
- Grandparent respondents who live with less family members will have a lower mean income.

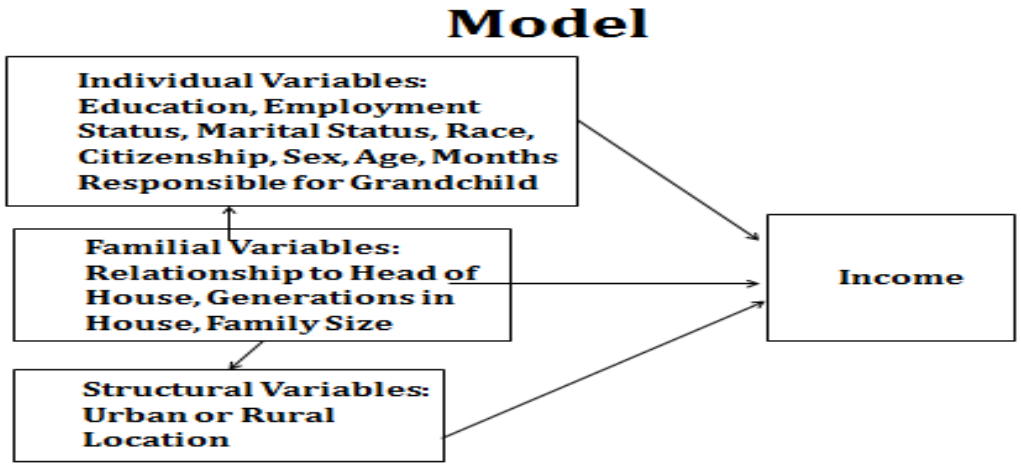
2.4.3 Structural

- Grandparent respondents that live in a rural area will have a lower mean income than the respondents living in an urban area.

2.4.4 Comparison of 2007 and 2011 Segments

- The effect of unemployment will be greater in 2011 than in 2007.
- The effect of educational attainment will be greater in 2011 than in 2007.

2.5 2007 & 2011 Logic Model



CHAPTER 3

METHODS

3.0 Methods

The methods and measures in this cross sectional study involved the analysis of the 2007 and 2011 secondary dataset from the American Community Survey (Ruggles, Alexander, Genadek, Goeken, Schroeder, Sobek, 2010). The analysis measured the individual variables of education, employment status, marital status, race, citizen, sex, age, and months responsible for a grandchild. The familial variables analyzed were the relationship to head of household, the number of generations living in a household, and the number of members in the household. The structural variable analyzed is the location of the respondents, whether rural or urban. An ordinary least squares regression test was run with income as the dependent variable. The control variable was a grandchild living in the household. The total sample size after restrictions was 18,599 before the outliers were removed and 18,373 after for 2007 and 20,888 before the outliers were removed and 20,621 after for 2011.

3.1 Participants

The secondary dataset sample used in this study involved the participants from the American population that participated in the 2007 and the 2011 American Community Survey (ACS). The dataset was extracted from the Minnesota Population Center University of Minnesota IPUMS-USA website (Ruggles, Alexander, Genadek, Goeken, Schroeder, Sobek, 2010). The data is a 1-in-100 national random

sample of the population. The data originally included persons in group quarters and the sample is weighted. Every record in the dataset represents a person and each person's record has certain characteristics that are coded in the dataset to enable analysis. The coding includes household data as well. The collection process includes selecting samples from each county and then each sample is either mailed a survey, contacted by phone (CATI), or surveyed in person using a computer to survey the participant (CAPI).

3.2 Measures

The personal weight was restricted to only those greater than zero. The sample was weighted using the person weight variable divided by its mean to compensate for nonresponse and over and under-sampling in order to be representative of the population, while maintaining the sample size to prevent Type I errors. The sample size for 2007 was 18,373 after recoding and restrictions, and 20,621 for 2011 after recoding and restricting the data.

3.3 Dependent Variable

The dependent variable income was measured in dollars and is a continuous interval variable. The original variable was recoded to create a new variable which adjusted for inflation of the dollar from 2007 to 2011. The adjustment for inflation was accomplished by multiplying the dependent variable of income (in 2007 only) by 1.085.

3.4 Individual Variables

Age was limited by selecting only those respondents up to 99 years old. I recoded the variable to a binary with ages 0 through 64 coded as 0 and ages 65 and up coded as 1.

The Education attainment variable was recoded with the following codes: 0 indicates no schooling (originally coded as 0 through 2), 1 indicates 8th grade or less (which was originally coded 10 through 26), 2 indicates grades 9 through 12 and no diploma (originally coded as 30 through 61), 3 indicates a high school diploma (originally coded 62 through 64), 4 indicates some college (originally coded as 65 through 100), 5 indicates a bachelor's degree (originally coded as 101), 6 indicates 5 plus years of college (originally coded as 110 through 113), 7 indicates a master's degree (originally coded 114), 8 indicates a professional degree above a BA (originally coded as 115) and 9 indicates a doctoral degree (originally coded as 116). Next, the education variable now with 9 categories was recoded again into a new variable with only 4 categories, which are as follows: 0, 1, and 2 were recoded to 0 (no diploma), 3 was recoded to 1 (HS Diploma), 4 was recoded to 2 (Some College), 5 and 6 were recoded to 3 (BA or 5 plus years of college), and 7, 8, and 9 were recoded to 4 (MA or higher degree).

The employment variable was recoded to a binary with 0 (originally coded as 0 and 1), which indicates employed, and 1 (originally coded as 2 and 3), which indicates unemployed.

Marital status was included and coded with 1 as married spouse present, 2 as married spouse absent, 3 as separated, 4 as divorced, 5 as widowed, and 6 as never married/single, which I recoded 1 and 2 as 1, which is married and 3 through 6 as 0, which is unmarried.

The race variable was divided into 9 categories which were white, black, American Indian or Alaska Native, Chinese, Japanese, Other Asian or Pacific Islander, other race, two major races, three or more major races. I recoded the variable as a binary with white as 0 and all the other races as 1.

The coding for the sex of the respondents was originally coded as 1 male and 2 female, which was recoded to 2 equals 1 for female and 1 equals 0 for male.

The original variable from the ACS dataset called citizen was used with the original coding of 1 that indicated the citizen was born abroad of American parents, 2 that indicated the citizen was a naturalized citizen, 3 that indicated the participant was not a citizen, 4 that indicated the participant was not a citizen, but has received first papers to become a citizen, 5 that indicated the participant was a Foreign born citizen. The original variable citizen was then recoded to a binary with 0 that indicated American (including 1 and 2 of the original codes) and 1, which indicated Foreign (including 3, 4, and 5 of the original codes).

The number of months with the grandchild in the house was included with the original coding as 0 being N/A, 1 less than six months, 2 six to eleven months, 3 one to two years, 4

three to four years, 5 five or more years. The numbers zero through three were recoded to 0, which was 24 months or less. The numbers four, five and six were recoded to 1, which was more than 24 months.

3.5 Familial Variables

Family size was originally coded with 1 through 29 members. One which indicated one family member present, 2 indicated two family members present, etc., up to 29 which equaled 29 family members present. Family size was recoded into a new variable as a binary with 0, which indicated there were any number of family members up to 4 present, and 1 which indicated the number of family members present from 5 through 29. Family size was coded this way to balance the percentages of responses for analysis.

The variable related was the variable that described how the respondent is related to the household members with 1 being the householder, 2 spouse, 3 child, 4 child-in-law, 5 parent, 6 parent-in-law, 7 sibling, 8 sibling-in-law, 9 grandchild, 10 other relatives, 11 partner, friend, or visitor, 12 other non-relatives, 13 institutional inmates. However, institutional inmates were excluded from the respondents in my analysis. This variable was restricted to 1 and 2 only for the householder and spouse. Related was recoded to the new variable with 2 being recoded to 0 that is the spouse of the head of the house, and 1 recoded to 1, which is the respondent who is head of house.

The generations in the household variable was restricted to greater than or equal to 2, which included 2 generations as 2, and 3 plus generations as 3. The variable was recoded

to 0 as 2 generations living in the household, and 1 as 3 plus generations living in the household. This variable did not indicate consecutive specific generations, but only the total number of generations living in the household.

3.6 Structural Variable

Metro, the original variable, indicated 0 as not identifiable, 1 not in metro area, 2 in central city area, and 3 outside central city area. The variable was recoded to a binary with 0, 1, 2 recoded to 0 and 3 recoded to 1. The 0 in the new variable indicated urban, and the 1 indicated rural.

CHAPTER 4

RESULTS

4.1 Univariate Analysis 2007

4.1.1 Individual

The univariate analysis for 2007 revealed the following results. Twenty-seven percent had less than a high school diploma, 36% had a high school diploma, 26% had some college, 7% had a Bachelor's degree, and 4% had a Master's degree or higher. Fifty-six percent were employed and 44% percent were unemployed. Thirty percent of the respondents were unmarried and 70% were married. Thirty-eight percent were minority and 62% were nonminority. Ninety-two percent were citizens and 8% were noncitizens. Eighty percent of the respondents were preretirement age (under 64) and 20% were retirement age (over 65). Sixty-one percent of the respondents were female and 39% were male. Sixty-seven percent of the respondents had responsibility for their grandchild for 2 years or longer.

4.1.2 Familial

Thirty-eight percent of the households had two generations and 62% had three or more generations living in the household. Thirty-three percent of respondents indicated a spouse as head of household and 67% indicated themselves as head of house. Fifty nine percent of households had four or less members living there. Forty one percent had 5 or more members living there.

4.1.3 Structural

Seventy-nine percent of grandparent respondents lived in an urban area and 21% lived in a rural area.

4.2 Univariate Analysis 2011

4.2.1 Individual

Twenty-five percent had less than a high school diploma. Thirty-four percent had a high school diploma, 30% had some college, 7% had a Bachelor's degree, and 4% had a Master's degree or higher. Fifty-five percent were employed and 45% percent were unemployed. Twenty-nine percent of the respondents were unmarried and 71% were married. Thirty-five percent were minority and 65% were nonminority. Ninety-two percent were citizens and 9% were noncitizen. Eighty-one percent of the respondents were preretirement age (under 64) and 19% were retirement age (over 65). Sixty-one percent of the respondents were female and 39% were male. Fifty-nine percent of the respondents had responsibility for their grandchild for 2 years or longer and 41% had responsibility for less than 2 years.

4.2.2 Familial

Thirty-two percent of the households had two generations and 68% had three or more generations. Thirty-four percent of respondents indicated a spouse as head of household and 66% indicated themselves as head of house. Fifty seven percent of the respondents' households had up to 4 members living there and those with 43% had five or more living in the household.

4.2.3 Structural

Seventy-eight percent of respondents lived in an urban area and 22% lived in a rural area.

4.3 Bivariate Analysis 2007

4.31. Individual

A Pearson's correlation test was conducted to evaluate the hypothesis that a grandparent's education has a correlation with the grandparent's income (see Table 3). The correlation results for income and education revealed a positive correlation ($r=.346$, $p<.001$). The findings suggest that there is a positive relationship between education and income. A positive relationship would suggest that the higher the education the higher the income.

An independent sample t-test was conducted to evaluate the hypothesis that a respondent's income was affected by the respondent's employment status (Table 4). The majority are employed (n=10493) with a mean income of $44,343, and those who are unemployed (n=8106) with a mean income of $16,597. The difference was statistically significant ($T=57.41$, $p<.001$), and meaningful.

An independent sample t-test was conducted to evaluate the hypothesis that a respondent's income and marital status are related (see Table 5). The group of married (n=12961) had the highest mean of income, which is $34,251 followed by the

unmarried (n=5638) who have a mean income of $27,652. The difference was statistically significant (T=-12.85, p<.001), and meaningful.

An independent sample t-test was conducted to evaluate the hypothesis that a respondent's income and race are related (see Table 6). The mean income for the respondents who are minority group members (n=7121) is $27,205 and the mean income for the respondents who are white (n=11478) is $35381. The difference in mean income for a minority respondent is $8,176 less compared to a nonminority respondent. The difference was statistically significant (t=15.78, p<.001), but meaningful. The findings suggest that there is a relationship between income and race, it is a weak one.

An independent sample t-test was conducted to evaluate the hypothesis that a respondent's income and citizenship are related (see Table 7). The mean income for a citizen (n=17182) is $33,217 and the mean income for a respondent who is not a citizen (n=1417) is $20,531. The difference in mean income for a noncitizen is $12,686 less compared to a citizen. The difference was statistically significant (t=17.76, p <.001), and meaningful.

An independent sample t-test was conducted to evaluate the hypothesis that the respondent's age and income are related (see Table 8). The group of preretirement age (n=15015) had a mean income of $33,217 and those who were of retirement age (n=3584) had a mean income of $28,199. The difference for the retirement

respondents' mean income was $5,018 less than the preretirement respondents' mean income. The difference was statistically significant (t=7.60, p<.001), but not meaningful. The findings suggest there is a relationship between the grandparent's age and income, it is a weak one.

An independent sample t-test was conducted to evaluate the hypothesis that the respondent's sex and income are related (see Table 9). Results indicated there was a negative effect on the female respondent's income. The female respondents (n=11383) had a mean income of $23,578 compared to the male's (n=7216) mean income of $45,931. The difference for the female respondent was $22,353 less in mean income than the male respondents' mean income. The difference was statistically significant (t=36.74, p<.001), and meaningful.

An independent sample t-test was conducted to evaluate the hypothesis that there is a relationship between the months responsible for a grandchild and income (see Table 10). The respondents that were responsible for less than 24 months had a mean income of $33,790. The respondents that were responsible for over 24 months had a mean income of $31,079. The respondents with responsibility for more than twenty-four months had a mean income of $2,711 less than those responsible for less than twenty-four months. The difference was not statistically significant (t=4.89, p>05), and not meaningful. The findings suggested that there is not a relationship between months responsible and income.

4.3.2 Familial

An independent sample t-test was conducted to evaluate the hypothesis that being head of household and income are related (see Table 11). The test results indicated the respondents who claimed head of household (n=12406) had a mean income of $34,755 and the respondents who claimed to be a spouse (n=6193) had a mean income of $27,234. The difference was statistically significant (t=-13.44, p<.001), and meaningful. The findings indicate there is a relationship between the two categories, it is a weak one.

An independent sample t-test was conducted to evaluate the hypothesis that living in a mutigenerational household and income are related (see Table 12). The test included two generations in the household (n=6995) with a mean income of $30,007 and three plus generations in a household (n= 11604) with a mean income of $33,602. The difference in mean income for a two generation household was $3595 less than a household with three or more generations living there. The difference was statistically significant (t=6.42, p<.001), but not meaningful. The findings suggested that there is a relationship between income and number of generations in a household, it is weak one.

An independent sample t-test was conducted to evaluate the hypothesis that the respondents' family size and income are related (see Table 13). The test results indicated the respondents who had 4 or less family members (n=11040) had a mean income of $31,970 and the respondents with 5 or more (n=7559) had a mean income of $32,660. The difference was statistically significant (t=-13.44, p<.001), but not

meaningful. The findings indicate there is not a relationship between family size and income.

4.3.3 Structural

An independent sample t-test was conducted to evaluate the hypothesis that a respondent's location, whether rural or urban, and income are related (see Table 14). The respondents in a rural location (n=3986) had a mean income of $27,278 and the respondents in an urban location (n=14613) had a mean income of $33,607. The difference was statistically significant (t=10.122, p<.001), but not meaningful. The findings suggest that there is a relationship between location and income, it is a weak one.

4.4 Bivariate Analysis 2011

4.4.1 Individual

A Pearson's correlation was conducted to evaluate the hypothesis that a grandparent's education has a correlation with the grandparent's income (see Table 15). The correlation results for income and education revealed a positive correlation (r=.335, p<.001). The findings suggest that there is a positive relationship between education and income. A positive relationship would suggest that the higher the education the higher the income.

An independent sample t-test was conducted to evaluate the hypothesis that income was and employment status are related (Table 16). The majority are employed

(n=11463) with a mean income of $42,681, and those who are unemployed (n=9425) have a mean income of $15,848. The difference was statistically significant (T=61.34, p<.001), and meaningful.

An independent sample t-test was conducted to evaluate the hypothesis that income was and marital status are related (see Table 17). The group of married respondents (n=14743) had the highest mean income, which was $31,934 followed by the unmarried respondents (n=6145) who had a mean income of $27,311. The difference was statistically significant (T=-9.35, p<.001), but not meaningful. The findings suggest there is a relationship between marital status and income, it is a weak one.

An independent sample t-test was conducted to evaluate the hypothesis that a grandparent's income and race are related (see Table 18). The mean income for the respondents who are minority group members (n=7306) is $25,970 and the mean income for the respondents who are nonminority (n=13582) is $33,050. The difference in mean income for a minority respondent is $7,080 less compared to a nonminority respondent. The difference is statistically significant (t=15.06, p<.001), and meaningful. The findings suggest that there is a relationship between income and race, it is a weak one.

An independent sample t-test was conducted to evaluate the hypothesis that a grandparent's income and citizenship are related (see Table 19). The mean income for a citizen (n=19139) is $31,721 and the mean income for a respondent (n=1749) who is

not a citizen is $18,013. The difference in mean income for a noncitizen is $13,708 less compared to a citizen. The difference was statistically significant (t=25.68, p <.001), and meaningful.

An independent sample t-test was conducted to evaluate the hypothesis that a grandparent's age and income are related (see Table 20). The respondents of preretirement age (n=16879) had a mean income of $30,775 and the respondents who were of retirement age (n=4009) had a mean income of $29,726. The difference for the retirement age respondents' mean income was $1,049 less than the preretirement age respondents' mean income. The difference was statistically significant (t=4.398, p<.001), but not meaningful.

An independent sample t-test was conducted to evaluate the hypothesis that the grandparents' sex and income are related (see Table 21). Results indicated there was a negative effect on the female respondent's income. The female respondents (n=12713) had a mean income of $23,214 compared to the mean income of $42,020 of the male respondents (n=8175). The difference for the female respondent was $18,806 less in mean income than the male respondents. The difference was statistically significant (t=34.81, p<.001), and meaningful.

An independent sample t-test was conducted to evaluate the hypothesis that there is a relationship between the months responsible for a grandchild and income (see Table 22). The respondents that were responsible for less than 24 months (n=8649) had a

mean income of $32,275. The respondents that were responsible for over 24 months (n=12239) had a mean income of $29,371. The respondents with responsibility for more than twenty-four months had a mean income of $2,904 less than those responsible for less than twenty-four months. The difference is statistically significant (t=5.66, p<.001), but not meaningful.

4.4.2 Familial

An independent sample t-test was conducted to evaluate the hypothesis that being head of household and income are related (see Table 23). The test results indicated the respondents who claimed head of household (n=13793) had a mean income of $32,708 and the respondents who claimed to be a spouse (n=7094) had a mean income of $26,425. The difference between the two categories was statistically significant (t=-12.89, p<.001), and meaningful. The findings indicate there is a relationship between the two categories, it is a weak one.

An independent sample t-test was conducted to evaluate the hypothesis that a mutigenerational household and income are related (see Table 24). The test included two generations in the household (n=6789) with a mean income of $27,828 and three plus generations in a household (n= 14099) with a mean income of $31,896. The difference in mean income for a two generation household was $4,068 less than a house with three or more generations living there. The difference was statistically significant (t=-8.18, p<.001), but not meaningful. The findings indicate there is not a relationship between the two variables.

An independent sample t-test was conducted to evaluate the hypothesis that the respondents' family size and income are related (see Table 25). The test results indicated the respondents who had 4 or less family members (n=11858) had a mean income of $30,450 and the respondents with 5 or more (n=9030) had a mean income of $30,736. The difference was statistically significant (t=-13.44, p<.001), but not meaningful. The findings indicate that there is not a relationship between family size and income.

4.4.3 Structural

An independent sample t-test was conducted to evaluate the hypothesis that a respondents' location, whether rural or urban, has an effect on income (see Table 26). The groups consisted of rural respondents (n=4629) with a mean income of $26,763 and urban respondents (n=16259) with a mean income of $31,659. The difference was statistically significant (t=8.96, p<.001), but not meaningful. The findings suggest that there is not a relationship between location and income.

4.5 Multivariate Analysis 2007 and 2011

4.5.1 2007 Segment

Tests for Assumptions:

The dependent variable was not normally distributed, although, there were over 18,000 cases. Also, the residual tests suggested that there could be a problem, which means the results should be interpreted with caution. The tests for multicollinearity and for outliers were conducted. The Cooks distance was less than 1, and the outliers were less

than 5%. None of the independent variables were correlated over .70 with any other independent variable. The maximum found for the Mahalonobis distance test was 41, and the adjusted R^2 is 0.41. These results are after the outliers were removed.

Comparing the standardized betas, being employed had the largest standardized beta of -0.39. Education had a standardized beta of 0.29. The sex variable had the next highest standardized beta, which was -0.28, which both education and sex seems to have a greater effect on income than the other variables. The smallest of the standardized betas was for marital status, which had a standardized beta of -0.02. Age had a standardized beta of 0.04. Race had a standardized beta of -0.06. The relationship to head of household variable was 0.07. The location variable had a standardized beta of -0.07. The citizen variable had a standardized beta of -0.07.

4.5.2 Individual

For the female respondents the mean income was $15,522 less than the mean income of the male respondents. The respondents who are married had a mean income of $1,279 less than the mean income of the respondents that are not married. The respondents age 65 and over reported a mean income of $2,914 more dollars than the mean income of the respondents who were under the age of 64. The nonminority respondents reported a mean income of $3,345 more than the mean income of the minority respondents. The respondents who are noncitizens reported a mean income of $6887 less than the mean income of the respondents who are citizens. For every unit of increase in education the mean income increased by $7,411. The unemployed

respondents reported a mean income of about $19,352 less than the mean income of the employed respondents.

4.5.3 Familial

For the relationship to head of household question the respondents who indicated they were the head of household had a mean income of $3,938 more than those who indicated they were a spouse.

4.5.4 Structural

Those who lived in a rural location had a mean income of $4,728 less than the mean income of those who lived in an urban location.

4.5.5 2011 Segment

Tests for Assumptions:

The dependent variable was not normally distributed, although, there were over 20,000 cases. Also, the residual tests suggested that there could be a problem, which means the data should be interpreted with caution. The tests for multicollinearity and for outliers were conducted. The Cooks distance was less than 1, and the outliers were less than 5%. None of the independent variables were correlated over .70 with any other independent variable. The maximum found for the Mahalonobis distance test was 41, and the adjusted R^2 was 0.40. These results are after the outliers were removed.

When comparing the standardized betas, being employed had the largest standardized beta of -0.42, and education had a standardized beta of 0.28. The sex variable had the

next highest standardized beta of 0.25 and both seem to have a greater effect on income than the other variables. The smallest of the significant standardized betas was multigenerational household, which had a standardized beta of 0.02. Marital status had a standardized beta of -0.02 and race had a standardized beta of -0.06. The relationship to head of household variable was 0.06. The location variable had a standardized beta of -0.06, age had a standardized beta of 0.07, and citizen had a standardized beta of -0.08.

4.5.6 Individual

For the female respondents the mean income was $13,348 less than the mean income of the male respondents. The respondents who are married had a mean income of $897 less than the mean income of the respondents that are not married. The respondents age 65 and over reported a mean income of $4,846 more dollars than the mean income of the respondents who were under the age of 64. The minority respondents reported a mean income of $3,139 less than the mean income of the white respondents. Respondents who were noncitizens reported a mean income of $7,238 less than the mean income of the respondents who were citizens. For every unit of increase in education the mean income increased by $6,807. The unemployed respondents reported a mean income of about $21,489 less than the mean income of the employed respondents.

4.5.7 Familial

For the relationship to head of household question the respondents who indicated they were the head of household had a mean income of $3,938 more than those who indicated they were a spouse. Respondents in a three plus generation household reported $1,024 more mean income than those with a two generation household.

4.5.8 Structural

Those who lived in a rural location had a mean income of $3,551 less than the mean income of those who lived in an urban location.

4.5.9 Comparison of 2007 and 2011 (Modified Chow)

The OLS regression was run separately for the years 2007 and 2011. A Modified Chow test was performed on the statistically significant coefficients. The Modified Chow revealed that education and employment status coefficients were statistically significantly different, which means the Modified Chow test supports my hypotheses for the employment variable, but not the education variable.

CHAPTER 5

CONCLUSION

5.1 Discussion

How *did* the economic downturn of 2008 affect the grandparents who were raising their grandchildren during this time period? The current cross sectional study analyzed the past and present state of the respondents' economic status in order to answer that question. Research indicated that negative effects on income for grandparents were apparent during this time period (Keene, Batson 2010), as well as in this study. Previous research suggested negative economic and social effects for grandparents raising grandchildren as well as the negative effects on the adjustments of the grandchildren themselves (Smith and Hancock 2010). The intention of this study was to provide data to support and aid in the development of new social programs to support the custodial grandparents' economic and physical needs. This would in turn enable the grandparent to maintain the child's required level of physical and psychosocial needs and allow the child to become a physically and psychologically stable, productive adult.

5.1.1 Individual Variables

The following paragraphs summarize the findings and attempts to explain what might have caused these effects on the individual variables to occur during this time period.

The findings supported my hypothesis that for every year of increase in education there is an increase in income, which means those with a higher education, will have a higher

income in 2007 and 2011. For every unit of increase in education there was an increase in income in 2007 and 2011. However, in 2011, after the recession, educational attainment made less difference on respondents' income. There was a statistically significant difference between 2007 and 2011. These findings are likely due to the changes in the levels of educational attainment, the recession, and employer's reductions in jobs and pay to save money (Cherlin 2010; Katz 2010). My hypothesis for the individual years was supported as well.

The findings supported my hypothesis that there would be more of a negative effect on those who were unemployed in 2007 and 2011. There was a statistically significant difference between 2007 and 2011. Unemployment had more of a negative effect in 2011 when compared to 2007 with a substantial loss of mean income for the unemployed respondents, which is likely due to lack of employment and job creation during the recession (Cherlin 2010; Katz 2010).

The findings did not support my hypothesis that single grandparent respondents raising grandchildren will have a lower mean income than married respondents in 2007 and 2011. The married group had the highest mean income of $34,251 and the unmarried group had a mean income of $27,652. Net of the other factors, however, married respondents earned less in mean income than the single respondents, which may be due using individual income rather than household income as a variable.

The findings supported my hypothesis that grandparent respondents that are minority group members will have a lower mean income than those who are nonminority in 2007 and 2011. The findings showed the minority groups' mean income was $3345 less than whites in 2007 and $3139 less in 2011.

The findings did support my hypothesis that grandparent respondents who are noncitizens will have a lower mean income than the respondents who are citizens in 2007 and 2011. The noncitizens earned $6887 less in mean income in 2007 than citizens and $7238 less in 2011. The income difference may be due to language barriers, lack of human capital, low paying jobs, and wage discrimination (Lopez 2011).

The findings supported my hypothesis that there would be more of a negative effect on those who were preretirement age than the respondents of retirement age. In 2007 and 2011, there was a positive increase in the effect on the retirement age respondents ($2914 in 2007 and $4,847 in 2011) compared to the preretirement age respondents. The grandparents of retirement age's higher amount may be due to receipt of retirement benefits, or higher wages due to more years of service in a position (Katz 2010; Mutchler, Baker 2009; US Census Bureau 2012).

The findings did support my hypothesis that female respondents would have a lower mean income than male respondents. The majority of grandparents caring for a grandchild are female. Female respondents had a lower mean income of $15,522 less than males in 2007 and $13,348 less than males in 2011. The difference may likely be

due to the glass ceiling, income inequality, wage discrimination, and the recession (Alkadry, Tower 2011; Katz 2010; Luo, Pierre, Hughes, Waite 2012).

5.1.2 Familial and Structural Variables

The findings did support my hypothesis that there would be more of an effect on households with three or more generations living there. The respondents with three or more generations living in the house versus two generations had a higher mean income in 2011 and in 2007. The relationship was statistically significant in 2011.

The findings did not support my hypothesis that there would be more of a negative effect on the mean income of those who were the head of household. The respondents who were head of household had a higher mean income than the respondents with a spouse as head of household in 2007 and in 2011, which may be due to using individual income rather than household income.

The findings did not support my hypothesis that households with 4 or less members would have a higher mean income. The respondents in households with more family members had a lower mean income in 2007 and 2011 than those with less family members, although they still earned a mean income of $571 less than the individuals in households with 4 or less members. This may be due to using individual income as the dependent variable.

The findings did support my hypothesis that the respondents living in rural areas would have a lower mean income. In 2007 the mean income for rural respondents was $4,728 less than urban respondents, and in 2011 their mean income was $3,551 less than urban respondents. This may be due to lack of opportunities, resources, and the recession (del Bene 2011; Leipert, Ruetter 2015; Thompson 2011). Research found that urban areas provide more types of job opportunities, more accessibility, and more resources and support for those at an economic disadvantage than rural areas provide (del Bene 2011; Leipert, Ruetter 2015; Thompson 2011).

5.2 Limitations

The findings of this study revealed limitations in the analysis due to it being a cross sectional study rather than a longitudinal study. A longitudinal study would have benefited this analysis by analyzing the data from the same participants over time, which is the normal process in a longitudinal study. Additionally, another limitation was the health related data that was available in the 2011 survey, but was not available in the 2007 survey. Had the health related data been available for both 2007 and 2011 the study could have included analysis on the health related variables.

5.3 Implications

Social policies and programs are necessary to ensure that the elderly custodial grandparents receive the assistance they need to sustain their socioeconomic status before, during, and after their role as a caregiver, (Atchley, Barusch 2004; Baker, Silverstein, Putney 2010). By aiding the grandparents with social programs in raising their grandchildren the savings for taxpayers is $20 to $40 billion a year compared to funding

foster care and other associated costs, according to *Today's Research on Aging Newsletter* (Population Reference Bureau 2011; Cohen et al 2011; Baker, Silverstein, Putney 2010). A good example of a simple, but very helpful social program that was implemented in Kansas, in Wyandotte and Johnson Counties was a respite program that assisted by providing transportation for the grandchildren to summer camp. This allowed the grandparents a short break while the grandchildren went to camp. The grandparents' socioeconomic status would not have allowed them to send the children to camp and be provided this break from caring for their grandchildren. The program was established by the Kansas Department of Aging to provide respite care for grandparents. However, only twenty grandparents received this benefit at that time (Kansas Dept. of Aging 2009). Many more grandparents would have benefited from this program if it was implemented statewide, and in the rural areas, rather than only in the urban areas. The literature showed the rural areas are lacking in social and economic resources and services for rural custodial grandparents. Future studies should consider using longitudinal data that includes the health related dated from the participants as well. This would enable the researcher to analyze the relationship of not having health insurance and the effects on the respondent's mean income. Future research would be beneficial in this area to further aid the grandparent population.

5.4 Conclusion

This study provided needed data to show that more social programs are needed to assist grandparents in raising their grandchildren. The grandparents who raise their grandchildren are the first choice for a child placement when the parents are unable to care

for their own children. Obviously, there are two main benefits both social and economic as well as others, when placing the child with a grandparent; first, placing the child with a relative has proven to be the best choice for the child's mental health to maintain some type of normality and familiarity; second, there is an enormous savings for the taxpayer if these programs are implemented to aid the grandparent (Population Reference Bureau 2011; Cohen et al 2011; Baker, Silverstein, Putney 2010). In knowing only this, let alone everything else the findings have shown us, we should definitely push for more social programs to assist the custodial grandparents with their socioeconomic needs (Population Reference Bureau 2011; Cohen et al 2011; Baker, Silverstein, Putney 2010).

Additionally, grandparents who live in rural areas or smaller cities should not be excluded from social programs that are offered in the urban areas. As the study has shown the respondents living in rural areas in 2011 had a mean income of $3,551 less than those in urban area, which indicates they are more likely to need these types of social programs. Social policies with more programs like this need to be considered for the future, and program implementation in the rural areas needs to be included as well. A program of this nature would allow the grandparent a break from the everyday stressors involved in raising their grandchildren.

In conclusion, overall most of my hypotheses were supported, and this study indicated there is a need to create more social programs, which would benefit the grandparent, give them more stability economically and socially, and the grandchild would reap the benefits as well. Demographers suggested that between 2010 and 2030 there will be an even

greater need for enhanced social programs due to the increase in the elderly population from the baby boomer generation, especially for minority families who are most in need of public assistance (Strom, Strom 2011).

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APPENDICES

TABLES

TABLE 1: 2007 Frequency Table

Variables		N	Percent
Education	No Diploma	5089	27.4
	HS Diploma	6611	35.5
	Some College	4854	26.1
	BA or 5 Years College	1326	7.1
	MA or Higher	720	3.9
Employment Status	Employed	10493	56.4
	Unemployed	8106	43.6
Marital Status	Unmarried	5638	30.3
	Married	12961	69.7
Race	Nonminority/white	11478	61.7
	Minority	7121	38.3
Citizenship	Citizen	17182	92.4
	Not a Citizen	1417	7.6
Age	Pre-Retirement age	15015	80.7
	Retirement age	3584	19.3
Sex	Male	7216	38.8
	Female	11383	61.2
Months Responsible	24 Months or more	8037	43.2
	Less Than 24 Months	10562	56.8
Generations in HH	2 generations	6995	37.6
	3+ generations	11604	62.4
Relationship to HH	Head/Householder	12406	66.7
	Spouse	6193	33.3
Number in HH/Family Size	Up to Four	11040	59.4
	Five or More	7559	40.6
Location	Urban	14614	78.6
	Rural	3986	21.4

		18599	100.0

TABLE 2: 2011 Frequency Table

Variables		N	Percent
Education	No Diploma	5162	24.7
	HS Diploma	7073	33.9
	Some College	6342	30.4
	BA or 5 Years College	1548	7.4
	MA or Higher	763	3.7
Employment Status	Employed	11463	54.9
	Unemployed	9425	45.1
Marital Status	Unmarried	6145	29.4
	Married	14743	70.6
Race	Nonminority/white	13582	65.0
	Minority	7306	35.0
Citizenship	Citizen	19139	91.6
	Not a Citizen	1749	8.4
Age	Pre-Retirement age	16879	80.8
	Retirement age	4009	19.2
Sex	Male	8175	39.1
	Female	12713	60.9
Months Responsible	24 Months or more	8649	41.4
	Less Than 24 Months	12239	58.6
Generations in HH	2 generations	6789	32.5
	3+ generations	14099	67.5
Relationship to HH	Head/Householder	13793	66.0
	Spouse	7094	34.0
Number in HH/Family Size	Up to Four	11858	56.8
	Five or More	9030	43.2
Location	Urban	16259	77.8
	Rural	4629	22.2

	20888	100

Bivariate Analysis 2007

INDIVIDUAL VARIABLES

TABLE 3
Correlation between Income and Education

Education	0.35***

N=18599
Note: *** p<.001

TABLE 4
Comparison for Difference in Income and Employment Status

Relationship to Employment Status						
Employed			Unemployed			
N	Mean	SD	N	Mean	SD	T
10193	44343.87	41464.92	8106.00	16597.77	23771.24	57.41***

N=18599
Note: ***p<.001
Cohen's D = 0.82
This is a moderate meaningful difference.

TABLE 5
Comparison for Difference in Income and Marital Status

Relationship to Marital Status						
Married			Unmarried			
N	Mean	SD	N	Mean	SD	T
5638	27652.50	27673.22	12961.00	34251.06	40873.58	-12.83***

N=18599
Note: ***p<.001
Cohen's D =-0.36
This is moderate meaningful difference.

TABLE 6
Comparison for Difference in Income and Race

Relationship to Race						
Minority			NonMinority/White			
N	Mean	Std. Dev.	N	Mean	Std. Dev.	T
7121	27205.29	28926.48	11478	35381.09	41627.82	15.78***

N=18599
Note: ***p<.001
Cohen's D = -0.21

This is a small meaningful difference.

TABLE 7

Comparison for Difference in Income and Citizenship

Relationship to Citizenship						
Citizen			Noncitizen			
N	Mean	SD	N	Mean	SD	T
17182	33217.37	38203.07	1417	20531.10	24553.07	12.29***

N=18599

Note: ***p<.001

Cohen's D = 0.42

This is a moderate meaningful difference.

TABLE 8

Comparison for Difference in Income and Age of Respondent

Relationship to Age of Respondent						
Pre-Retirement age			Retirement Age			
N	Mean	SD	N	Mean	SD	T
15015	33217.90	38011.59	3584	28199.27	34936.28	7.21***

N=18599

Note: ***p<.001

Cohen's D = 0.15

This is not a meaningful difference.

TABLE 9

Comparison for Differences in Income and Sex of Respondent

Relationship to Sex of Grandparent						
Male			Female			
N	Mean	SD	N	Mean	SD	T
7216	45931.59	47286.31	11383	23578.60	26178.96	41.41***

N=18599

Note: ***p<.001

Cohen's D = -0.57

This is a moderate meaningful difference.

TABLE 10

Comparison for Difference in Income and Months Responsible

Relationship to Months Responsible						
Less Than 24 Months			More Than 24 Months			
N	Mean	SD	N	Mean	SD	T
8037	33790.19	37498.95	10562	31079.47	37442.59	4.88***

N=18599

Note: ***p<.001

Cohen's D = 0.07

This is not a meaningful difference.

TABLE 11

Comparison for Difference in Income and Relationship to Household Head

Relationship to Household Head						
Head of Household			Spouse			
N	Mean	SD	N	Mean	SD	T
12406	34755.25	38634.77	6193.00	27234.09	34545.85	-13.44***

N=18599
Note: ***p<.001
Cohen's D = 0.22
This is a small meaningful difference.

TABLE 12

Comparison for Difference in Income and Multigenerations

Relationship to Multigenerational Households						
2 Generations			3 or More Generations			
N	Mean	SD	N	Mean	SD	T
6995	30007.99	36245.08	11604	33602.77	38158.78	-6.34***

N=18599
Note: ***p<.001
Cohen's D = -0.06
This is not a meaningful difference.

TABLE 13

Comparison for Difference in Income and Family Size

Relationship to Family Size						
4 or Less			5 or More			
N	Mean	SD	N	Mean	SD	T
11040	31970.49	37930.50	7559	32660.18	36835.84	-1.23***

N=18599
Note: ***p<.001
Cohen's D = 0.02
This is not a meaningful difference.

TABLE 14

Comparison for Difference in Income and Location

Relationship to Location						
Urban			Rural			
N	Mean	SD	N	Mean	SD	T
14614	33607.05	38266.10	3986	27278..05	34040.66	10.122***

N=18599
Note: ***p<.001

Cohen's D = 0.17
This is not a meaningful difference.

Bivariate Analysis 2011

INDIVIDUAL VARIABLES

TABLE 15

Correlation between Income and Education

	Income
Education	0.34***

N=20888
Note: *** p<.001

TABLE 16

Comparison for Difference in Income and Employment Status

	Employment Status					
Employed			Unemployed			
N	Mean	SD	N	Mean	SD	T
11463	42681.14	39976.57	9425.00	15848.98	22119.40	61.34***

N=20888
Note: ***p<.001
Cohen's D = 0.86
This is more than a moderate meaningful difference.

TABLE 17

Comparison for Difference in Income and Marital Status

	Marital Status					
Married			Unmarried			
N	Mean	SD	N	Mean	SD	T
14743	27311.98	30114.42	6145.00	31934.27	37732.05	-9.36***

N=20888
Note: ***p<.001
Cohen's D =-0.14
This is not a meaningful difference.

Table 18

Comparison for Difference in Income and Race

	Race					
Minority			NonMinority/White			
N	Mean	Std. Dev.	N	Mean	Std. Dev.	T
7306	25970.97	28297.38	13582	33050.56	38913.38	15.06***

N=20888
Note: ***p<.001

Cohen's D =-0.21
This is a small meaningful difference.

TABLE 19

Comparison for Difference in Income and Citizenship

Citizenship						
Citizen			Noncitizen			
N	Mean	SD	N	Mean	SD	T
19139	31721.98	17182	1749	18013.57	193770.81	25.68***

N=20888

Note: ***p<.001

Cohen's D =0.42

This is a moderate meaningful difference.

TABLE 20

Comparison for Difference in Income and Age of Respondent

Age of Respondent						
Pre-Retirement age			Retirement Age			
N	Mean	SD	N	Mean	SD	T
16879	30775.78	34901.38	4009	29726.69	38979.91	4.398***

N=20888

Note: ***p<.001

Cohen's D =0.15

This is not a meaningful difference.

TABLE 21

Comparison for Differences in Income and Sex of Respondent

Sex of Grandparent						
Male			Female			
N	Mean	SD	N	Mean	SD	T
8175	42020.03	43814.60	12713	23214.91	26904.92	34.81***

N=20888

Note: ***p<.001

Cohen's D =-0.57

This is a moderate meaningful difference.

TABLE 22

Comparison for Difference in Income and Months Responsible

Months Responsible						
Less Than 24 Months			More Than 24 Months			
N	Mean	SD	N	Mean	SD	T
8649	32275.91	38409.30	12239	29371.96	33643.20	5.66***

N=20888

Note: ***p<.001
Cohen's D =0.08

FAMILIAL VARIABLES

TABLE 23
Comparison for Difference in Income and Relationship to Head if Household

Relationship to Household Head						
Head of Household			Spouse			
N	Mean	SD	N	Mean	SD	T
13793	32708.19	37820.29	7095	26425.73	30823.30	-12.89***

N=20888
Note: ***p<.001
Cohen's D =0.22
This is a small meaningful difference.

TABLE 24
Comparison for Difference in Income and Multigenerations

Relationship to Multigenerational Households						
2 Generations			3 or More Generations			
N	Mean	SD	N	Mean	SD	T
6789	27828.00	31664.16	14099	31896.41	37448.62	-8.18***

N=20888
Note: ***p<.001
Cohen's D =-0.06
This is not a meaningful difference.

TABLE 25
Comparison for Difference in Income and Family Size

Relationship to Family Size						
4 or Less			5 or More			
N	Mean	SD	N	Mean	SD	T
11040	31970.49	37930.50	7559	32660.18	36835.84	-0.57***

N=20888
Note: ***p<.001
Cohen's D =-0.01
This is not a meaningful difference.

STRUCTURAL

TABLE 26
Comparison for Difference in Income and Location

Relationship to Location						
Urban			Rural			
N	Mean	SD	N	Mean	SD	T
16259	31659.47	36736.94	4629	26763.48	31611.21	8.96***

N=20888

Note: ***p<.001
Cohen's D =0.17
This is not a meaningful difference.

TABLE 27: 2007 and 2011 Regression Table

Ordinary Least Squares Results for All Variables and Income for 2007 & 2011

	Model 1: 2007				***Model 2: 2011***			
VARIABLES	B	SE B	*B*		B	SE B	*B*	
Individual								
Education	7411.33	152.54	0.29	***	6807.22	174.20	0.28	***
Employment Status	-19352.65	334.65	-0.39	***	-21489.95	370.77	-0.42	***
Marital Status	-1279.66	429.40	-0.02	**	-897.30	473.54	-0.02	*
Race	-3345.01	322.97	-0.06	***	-3139.79	367.78	-0.06	***
Citizen	-6887.50	596.19	-0.07	***	-7238.94	648.94	-0.08	***
Age	2914.00	414.50	0.04	***	4846.99	466.18	0.07	***
Sex	-15522.70	351.31	-0.28	***	-13348.58	384.20	-0.25	***
Months Responsible	173.55	315.55	0.00		634.48	356.97	0.01	
Familial								
Relate to Head of House	3938.05	431.61	0.07	***	3264.25	415.36	0.06	***
Multigen Household	656.68	373.15	0.01		1024.80	429.48	0.02	*
Family Size	-547.50	422.68	-0.01		-571.02	410.66	-0.01	
Structural								
Location	-4728.08	377.07	-0.07	***	-3551.74	419.20	-0.06	***
R^2 (Adjusted)		0.41				0.40		
F		1066.42				1125.52		
N		18373				20621		

Education 0 = No HS Diploma 1 = HS Diploma, 2=Some College, 3=BA to 5 yrs, 4=MA or Higher, Sex 0 = Male 1 = Female, Race 0 = Nonminority 1 = Minority, Age 0 = Less than 65 1 = 65 and older, Employment 0 = Employed 1= Unemployed, Citizenship 0 = Citizen 1 = Noncitizen, Marital Status 0 = Unmarried 1 = Married, Relationship to Head of HH 0 = Spouse 1 = Head of House, Months Responsible 0 = Up to 24 months 1 = More than 24 months, Multigenerational Household 0 = 2 generations 1 = 3 plus generations, Family size 0 = Up to 4 1 = 5 or more, Location 0 = Urban 1 = Rural

*p<.05, **p<.01, ***p<.001

Table 28: Modified Chow Table

Modified Chow Results 2007 & 2011	
Education	2.61
Employ Status	4.28
Age	3.10
Sex	-4.17
Location	2.09

FIGURES

FIGURES

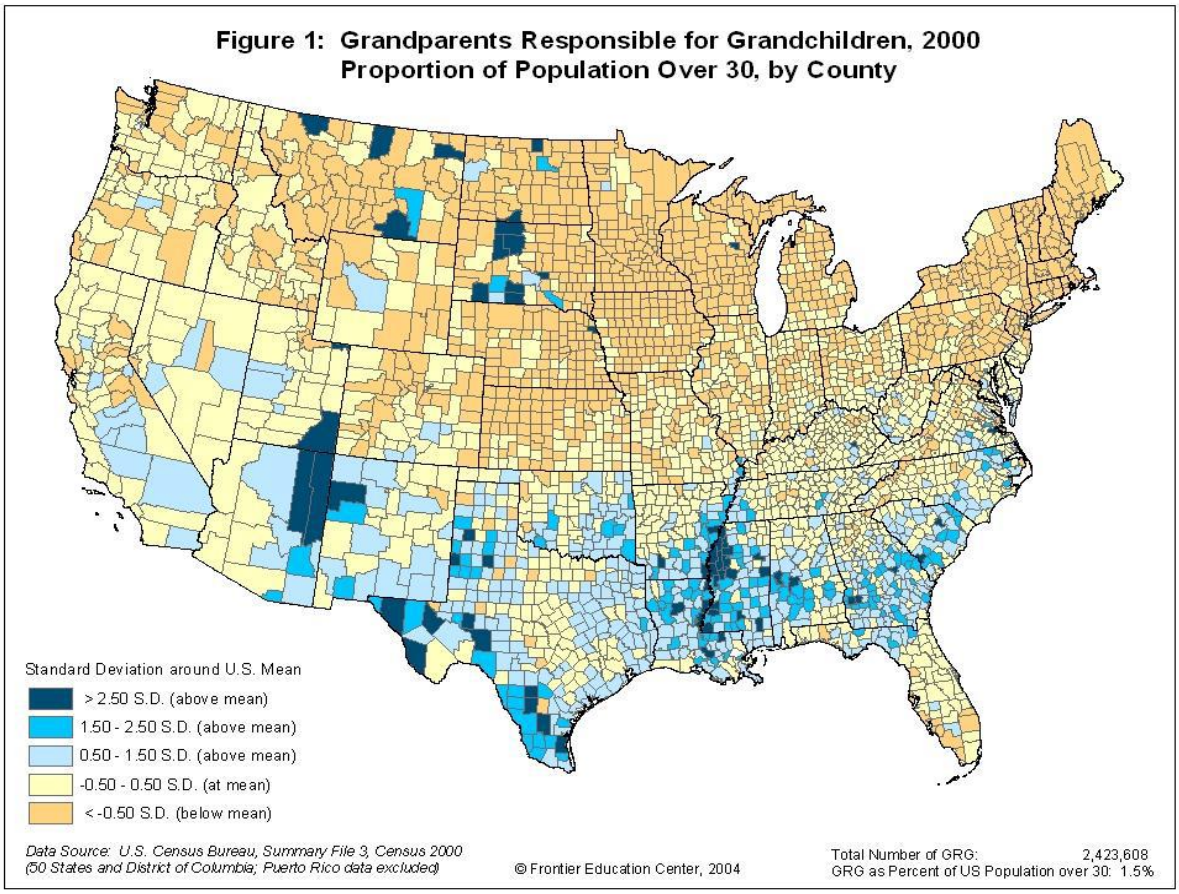

Fig. 2.3.1 Frontier Education Center Issues Brief. GP Raising GC: Caring for Children in the Frontier's Proportion of GP Population Raising Grandchildren.

MAPS FROM: FRONTIER EDUCATION CENTER - ISSUES BRIEF

The agency reported the following:

Regional Variation in Grandparent Caregiving

In its 2003 brief, "Grandparents Living With Grandchildren: 2000," the U.S. Census Bureau reported that the West Region (including Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming) had the highest proportion of co-resident grandparents and grandchildren (4.3% of adults over the age of 30), but the South region (Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia, and the District of Columbia) had the highest proportion of grandparents as primary caregivers (48% of coresident grandparents). Both of these regions contain "frontier states" or states with a high proportion of territory designated as "frontier," areas with

low population densities and long distances from urban areas 1. A map of the rates of grandparenting at the county-level reveals concentrations of grandparents raising grandchildren in the South (particularly in the Mississippi River Valley region), along the Texas border with Mexico, in Alaska, and in scattered counties in the Rocky Mountain and Plains states."