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# ACADEMIC PERFORMANCE AMONG HOMELESS STUDENTS: EXPLORING RELATIONSHIPS OF SOCIO-ECONOMIC AND DEMOGRAPHIC VARIABLES

#### by

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A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Department of Public Affairs in the College of Health and Public Affairs at the University of Central Florida Orlando, Florida

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#### **ABSTRACT**

This study examines homeless student academic performance, types of temporary housing used among the homeless, degree of stability or instability for families with school-aged children, child needs for academic success, the importance of parental involvement in a child's academic growth, and other known factors in relations to child student academic performance, with a focus on grade level and racial differences. A multiple linear regression model is used to test the hypotheses while controlling confounding variables. Statistically significant relationships are reported between race and academic performance, and grade level and academic performance. Practical and policy implications are discussed, as well as limitations of the study and need for future research.

# ACKNOWLEDGMENTS

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## CHAPTER 1 INTRODUCTION

According to the U.S. Department of Housing and Urban Development, roughly one third of the homeless population is comprised of families with children under the age of 18 (Annual Homeless Assessment Report, 2010). In 2010, it is estimated that 1.5 million children experienced homelessness at some point during the calendar year (Coalition for the Homeless of Central Florida, 2010). Each year, school districts are required to keep data on the homeless children enrolled in the public schools. The requirements come about as a result of the McKinney-Vento Act of 1987, with guidelines on the role of the liaison set forth by the US Department of Education. "Every local education agency in a state receiving federal funds, not only those receiving McKinney-Vento subgrants, must designate a local liaison for homeless children" (Ableidinger, 2004). The liaison employed in each district is responsible for making sure homeless children are receiving all the benefits entitled to them and play a crucial role in ensuring the schools district complies with the McKinney-Vento Act.

Homeless children, due to their transient existence, may fall through the cracks of our school system without laws such as the McKinney-Vento Act in place to support them. A recent national survey states "less than one in four homeless children graduates from high school. Approximately 1,166,520 of today's homeless children will not graduate from high school" (National Center on Family Homelessness, 2009).

In May 2010, the US Office of the Assistant Secretary for Planning and Evaluation convened a roundtable symposium addressing the issue of child

homelessness. They identified critical areas in need of further research to include poverty and resilience, subgroups of homeless children such as those who are not living in shelters (either "doubled-up" or in foster care), and child homelessness as a result of the economic downturn. The impact of the recession from 2007-2010 reports a 38 percent increase in child homelessness in the United States, with 45 states reporting increases and half the states reporting an increase of 50% or more (National Center on Family Homelessness, 2010). Families are being forced to "double-up" in housing due to economic reasons (Joint Center for Housing Studies of Harvard University, 2010).

The American Psychological Association (APA; 2014) lists multiple negative effects of homelessness on youth to include "hunger, poor physical and mental health, and missed educational opportunities." A study conducted by Wood, Valdez, Hayoshi, & Shen (1990) indicates homeless and poor housed children suffer from high rates of health problems due to nutritional deficiencies cause by imbalanced diets, dependency on meals consisting of fast food products, and periods of food deprivation. Homelessness and hunger are closely related; homeless children experience hunger at twice the rate as non-homeless children. In a study by Lahey and Rosen (2010) on the effects of nutrition on learning and behavior, the students who had inadequate intake of fruits and vegetables in their diet scored lower in their academic performance than those students who did not, suggesting that hunger negatively effects the cognitive development of children. Additionally, children who did not eat breakfast produced significantly lower morning test scores than children who did (Sampson, Dixit, Meyers, & Houser, 1995).

Physical and mental health are compromised at higher rates among homeless children with 25 percent having witnessed violence (which contributes to multiple psychosocial and behavior difficulties) and 22% experiencing separation from their families (APA, 2014). As many as half the homeless teenagers have problems with anxiety, Post Traumatic Stress Syndrome (PTSD) and depression, and many have problems with substance abuse. Younger homeless children are highly susceptible to chronic physical illnesses such as asthma and exposure to environmental toxins, while homeless mothers are at a high risk of having a low birth weight baby and their children show an increased susceptibility to malnutrition and illnesses such as ear infections (APA, 2014).

A reported 97% of homeless youth experience housing instability, having moved at least once a year, every year. This lack of stability causes significant and recurring disruptions in education and affects academic achievement, negatively (APA, 2014). In addition to consistent delays and interruption in schooling, the APA (2004) reports homeless children are suspended from classes and repeat grades at twice the rate of housed children, and have twice the rate of documented learning disabilities.

## **Housing for Homeless**

Homelessness has been identified as a significant social problem since the 1980s, when the federal budget cuts were made to housing and income assistance (Dreier, 2004). One important concept of homelessness is "housing affordability." This term is versatile because it implies that people cannot afford housing because it becomes too expensive.

However, it can also be true that the housing market remains steady as family income decreases. Additionally, a number of other factors may be relevant to affordable housing such as changes in income, employment status or benefits, inflation of housing costs and materials, or the change in the housing market overall (Dreier, 2004; National Coalition of the Homeless, 2006).

While homelessness is often due to one or more of these factors, many times the homeless suffer additional deficits such as mental illness, physical disabilities, alcoholism, or drug abuse (Paquette, 2011). These disabilities can compound problems with low income and high housing costs, making a lower income family or individual even more susceptible to becoming homeless.

### Families and Children

What is most alarming is the increase in the number of homeless families with children ("2009 Point in Time," 2009). Many of these families move out of necessity, to less stable places of habitation such as a public park, unable to camp for more than six weeks at a time before being required to move on. Most have children in the public school system. Their dedication to remain intact as a family is noble, yet not always possible, as we are seeing an increasing number of children being sent to live with relatives without the homeless factor being remedied for their parents.

Parenting factors are important for early academic achievement (Englund, Luckner, Whaley, & Egeland, 2004). "Parental effort is consistently associated with higher levels of achievement, and the magnitude of the effect of parental effort is

substantial" (Houtenville & Conway, 2007; University of New Hampshire, 2008). In the University of New Hampshire study, the impact of dinnertime parental efforts and school-related parental efforts were measured and found to have a "positive and statistically significant relationship with student achievement" (Houtenville & Conway, 2007; University of New Hampshire, 2008).

#### Purpose of the Study

This study builds on existing literature of homeless student academic performance, types of temporary housing used among the homeless, degree of stability or instability for families with school-aged children, child needs for academic success, the importance of parental involvement in a child's academic growth, and other known factors to affect child student academic performance. While there is substantive existing literature on a child's need to thrive academically and comparison studies between homeless and housed children, there is little research to help explain the various types of housing situations of homeless children and how it can affect their academic performance.

This study will examine the relationships between the types of living arrangements experienced by homeless students and their academic performance in the public schools, including primary, middle, and high schools in Seminole County in the State of Florida. The study will focus on the types of housing identified by the Florida Department of Education that meet the criteria for which a student is classified as homeless within the Florida public school system, and Florida Comprehensive

Assessment Test (FCAT) scores from the students who have been identified as homeless by the Seminole County school liaison to the Florida Department of Education. It will also look at relationship between living with a parent or legal guardian and academic performance.

The specific research questions are as follows:

- 1. How do types of housing affect overall academic performance of homeless students?
- 2. How does living with a parent or legal guardian affect academic performance of homeless students?
- 3. How does grade level affect academic performance of homeless students?
- 4. How does race affect academic performance of homeless students

### Significance of the Study

This study will explore alternative housing options for homeless families with children. The significance will be to find ways to decrease known factors in poor academic performance that are similar to those for which homeless children are at a high risk. Some predictors of low academic performance include (but are not limited to) gender, race/ethnic status, and age/grade (Buckner, Bassuk, & Weinreb, 2001). A study by Buckner et al. (2001) showed similar rates of school-related problems and absenteeism among both housed and homeless students, suggesting "housing status was not associated with academic achievement." Additionally, research by Ziesemer, Marcoux, & Marwell (1994) showed no significant different in grades between homeless

and housed low-income children, suggesting long-term poverty may be a stronger indicator of poor academic performance, than homelessness. For these reasons, this study will also look at possible relationships between grade level and academic performance, and between race and academic performance.

The importance of this study lies in the examination of school performance in relation to the types of housing in which homeless children reside. According to the National Center on Family Homelessness (NCFH; 2009), the "proficiency rates for homeless children in reading and math are on average 16 percent lower than the scores for all students," with homeless elementary students performing at 21.5% and 24.4% proficiency in math and reading, respectively. These numbers further decline among homeless high school students to 11.4% proficiency in math and 14.6% in reading (NCFH, 2009).

#### Overview of the Rest of Chapters

The following chapter of this study will explore existing literature describing the history and causes of homelessness and the welfare programs to assist homeless persons, educational programs for homeless children, and the sociological dimensions of homelessness to include physiological, family, social, and academic needs for children to thrive, as well as laws in place to protect a homeless child's right to education. Chapter 3 describes the theoretical framework and hypotheses for this study, with a focus on Maslow's (1954) hierarchy of needs, Erikson's (1968) stages of psychosocial development, and Alderfer's (1969) ERG theory of human needs, which introduced a

frustration-regression factor as an extension of Maslow's hierarchy of needs. Maslow refers to the basic needs to sustain life, which if fulfilled, will allow one to reach a more successful tier in the hierarchy to include education, safety, and eventually self-actualization. Erikson discusses the importance of a child meeting specific benchmarks at crucial points in his life, which allow him to successfully move on to the next stage. These benchmarks much be met in order to be academically successful.

Other theories discussed are resilience theory, and relative and cultural deprivation theory. Resilience theory as it relates to this study, tries to explain why two people in identical situations may not succeed to the same degree. Relative deprivation theory measures social, political, and economic deprivation from a social science perspective (Bayertz, 1999) and is associated with social exclusion and poverty (Poverty Site, 2011). Cultural deprivation theory is more closely associated with what a child may be exposed to, or lack, as a result of his childhood culture. For example, how high a parent holds education as a priority in his child's life, the strength of parental involvement in a child's studies, and the tools a child is given to increase critical thinking skills.

The hypotheses are explored in terms of what homeless children lack: adequate shelter and nutrition, medical care, transportation, parental assistance, and a stable school environment (non-transient). The largest cause of homelessness is poverty, which is unequally distributed between racial and ethnic lines in the US, making minority children especially vulnerable to becoming homeless. For this reason, it is hypothesized that homeless children of minority status will fare more poorly, academically, than homeless white children.

The research methodology chapter (Chapter 4) discusses data sources and the research design, to include the criteria for homelessness as described by the Florida Department of Education. Chapter 4 describes the analytical framework to include the models and variables used to conduct the quantitative analysis. The quantitative analysis focuses on Florida Comprehensive Assessment Test (FCAT) results and information collected by the Seminole County Schools on the students identified as homeless by Department of Education criteria.

Data sources include existing data from the Seminole County School Board, limited date from the 2012 survey from Families in Transition of Seminole County, and the 2008-2009 FCAT scores of Seminole County's homeless students in grades 3-12.

The study findings in chapter five discuss the results of the quantitative analysis and the relationships between homelessness and academic performance with regard to socio-economic needs, family status, and demographic characteristics of the child. The results indicate a statistically significant relationship between race and academic performance, and between grade level and academic performance. Homeless black children were likely to score lower on FCAT than homeless white children, and the fail rates of FCAT scores were statistically significant at the 6<sup>th</sup> and 12<sup>th</sup> grade levels.

The conclusion in Chapter 6 discusses the limitations of the study, and future study and policy implications as projected by the relationships between variables which were found to be statistically significant. Some of these include adding or evaluating existing programs for materials used in 6<sup>th</sup> and 12<sup>th</sup> grade FCAT study materials and whether homeless black students would benefit from longer test preparations times or

mentoring. Policy implications include direction of grant funding for housing and tutoring for students considered to be at risk. One challenge of this will be to identify needy children without violating the civil rights of any child based on race or ethnicity.

The study is limited by the amount and quality of the data, exclusion of school characteristics, low response rate on the survey, and the inability to study students in consecutive years. School characteristics may add a measureable value to the percentage of students by race, average family income, and the size of the school (number of students attending). This could help pinpoint specific areas of need with regard to individual schools in Seminole County. Due to the transient nature of homeless persons and families, it is difficult to follow up on results. Future studies will need to focus on test scores from the new standardized exam to be implemented in 2015. Researchers will likely be unable to make general comparisons between years due to the differences in exams up to, and after 2015.

# CHAPTER 2 LITERATURE REVIEW

## History and Causes of Homelessness in America

There are often political, economic, and systemic issues which cause homelessness. "Industrialization, wars and subsequent problems, natural disasters, racial inequities, medical problems, widowhood, and the values of a nation as represented by their policies relating to the disenfranchised" (Fischer, 2011) are all contributors to the displacement of people during the course of American history.

Greater than 7% of the U.S. population has been homeless at some time, requiring them to sleep in the street, homeless shelters, abandoned buildings, cars, and bus and/or train stations (Link, Susser, & Stueve, 1998). Homelessness in the United States can be traced back to the 1600s (Cook, 2010), when a homeless person was considered to have a character flaw or moral deficiency, as it was widely accepted that good Christians would have their needs met by God. If a person were homeless, they would have to prove their goodness to the community or move on to the next town (Fischer, 2011). These were commonly accepted stereotypes of the homeless from the 1600s through the 1800s and the laws were written to reflect these beliefs. Equating moral character to homelessness helped form a moral guideline and began the concept of labeling people who did not have adequate housing. In fact, as far back as 1781 when the Articles of Confederation were signed, section IV specifically exempts "paupers, vagabonds, and fugitives from justice" from the privileges and immunities guaranteed to all citizens as described in the Articles of Confederation (Yale Law School, 2008).

The 1800s brought about an Industrial Revolution during which time people began migrating from the farms to the cities in search of jobs, causing many people to live in the street (Cook, 2010). The large number of people in the cities created a "lower urban class" of citizens, and although the purpose of migrating to the city was to create a better life, many were unable to find jobs and ended up homeless (Cook, 2010). The use of new machinery, no laws protecting workers from injury, and no regulations on children performing hard labor all contributed to injuries which would prevent a person from finding work in the future.

By 1850, it was estimated that 30,000 children in the City of New York, alone, were experiencing homelessness. A response to this social plague was the founding of the Children's Aid Society of New York by Charles Loring Brace in 1853 (Children's Aid Society, 2014a). Organizations such as these placed children in lodging houses and schools for homeless children, as well as publicly funded orphan asylums (Institute for Children, Poverty, and Homelessness, 2013). By 1875, the Society for the Prevention of Cruelty to Children was founded in New York, with specific intent to identify children who were neglected or cared for improperly (Institute for Children, Poverty, and Homelessness, 2013).

The Orphan Train Movement ran from 1853 through the early 1900's, placing more than 120,000 homeless children with families and on farms throughout the Midwest (Children's Aid Society, 2014b). This Movement, organized and run by the Children's Aid Society of New York, placed homeless children from the ages of 6-18 on trains, and then dispersed them to 45 states, Canada, and Mexico (Children's Aid Society, 2014b).

The years 1861 -1865 brought about the Civil War. Morphine had been invented and was instrumental in saving lives through amputation. The advancement of pharmaceuticals has increased the survival rates of veterans injured in war. Even now, many of those injuries, to include Post Traumatic Stress Disorder (PTSD) and depression, greatly affect a person's ability to work and many become homeless, with 107,000 on any given night and up to 1.5 million veterans at immediate risk of losing their homes (National Coalition for Homeless Veterans, 2010).

It wasn't until the 1940's when the government recognized true equality of rights with regard to basic human needs. Article 25, section 1, of the universal Declaration of Human Rights of 1948 states:

Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing, and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control. (United Nations, 1948)

## Reagan Administration and Homelessness

There are a number of theories in which researchers have used to explain the phenomenon of homelessness, two of the more widely accepted being housing and welfare problems. These can be attributed to both structural and individual factors.

Neale (2007) argues alternative theoretical perspectives in addition to the list of

individual factors and barriers to obtaining affordable housing. While additional theories such as post-structuralism and feminism may lead to further understanding of the problem and potentially improve policies toward eradicating homelessness, socioeconomic factors such as disability, education, and income, as well as structural barriers created by a decrease in affordable low-income housing, are at the forefront of concerns for any family or individual who is facing or currently in a state of homelessness.

The 1980's saw a significant decline in federal public assistance subsidies, particularly those designated for low-income housing. Between 1970 and 1985, the number of low-cost rental housing units fell from 6.5 million to 5.6 million, while the number of low-income renters rose from 6.2 million to 8.9 million, leaving millions without low-income housing options. At the same time, federal aid in 1980 accounted for 22% of the large city budgets, but had dropped to only 6 percent by 1988 (Dreier, 2004). In Reagan's first year of office he cut the budget for Section 8 public housing assistance in half and then continued to propose cuts eliminating federal housing assistance for low-income people, altogether (Dreier, 2004). Between 1973 and 1993, 2.2 million low-income rental units were eliminated, while the median cost of a rental unit rose 21 percent from 1991-1995 (National Coalition of the Homeless, 2008).

In 1989, after multiple attempts by the Reagan Administration to eliminate incremental funding for Section 8 and decrease social spending, the Bush Administration promised "compassionate conservatism," but did not provide a plan to fund the crisis. Even though Congress had secured affordable housing spending at restricted levels and adopted the Low Income Housing Tax Credit in 1986, funding for low-income renters

was well below what was needed to avert further crisis and avoid homelessness for thousands of Americans (National Low Income Housing Coalition, 2014).

According to the National Association for the Education of Homeless Children and Youth (NAEHCY; 2008), a nationwide survey showed that 330 school districts with more homeless students identified at the onset of the school year than during the entire previous school year and 459 school districts claimed a 25% increase in the number of students identified as homeless. The survey presented evidence of increased challenges in assisting homeless students that include rising costs of transportation and the difficulty in providing transportation to out of area students and increased local needs.

Additionally, a lack of available shelter and affordable housing and a decrease in community services contributed to the challenge of dealing with homeless children in the schools (NAEHCY, 2008).

#### Welfare Programs for the Prevention of Homelessness

Some of the more common welfare programs include Medicaid/Medicare,
Temporary Assistance for Needy Families (TANF), Special Supplemental Nutrition
Program for Women, Infants, and Children (WIC), and Supplemental Nutritional
Assistance Program (SNAP). Other federally funded programs, to include tax rebate
programs, include the Earned Income Tax Credit (EITC), Child Tax Credit (CTC),
Unemployment Insurance, and Supplemental Security Insurance (SSI).

Temporary Assistance for Needy Families is a cash assistance program provided to parents of minor children who would otherwise receive child support from an absent

parent. According to the Administration for Children and Families, TANF has four purposes:

- Provide assistance to needy families so children can be cared for in their own homes
- Reduce dependency of needy parents by promoting job preparation, work, and marriage
- Prevent/reduce incidence of out-of-wedlock pregnancies
- Encourage formation and maintenance of two-parent families (US Department of Health and Human Services, 2014)

The Special Supplemental Nutrition Program for Women, Infants, and Children, or WIC, provides food, juice, formula, and fruit and vegetable supplements to women and children under the age of five, with some packages that promote long-term breastfeeding. There are seven different packages of WIC available, all which are consistent in providing participants with foods recommended by the Dietary Guidelines for Americans (Burstein, Patlan, Bartless, Connor, & Johnson, 2014).

The Special Supplemental Nutrition Program for Women, Infants, and Children is a discretionary federally funded grant program, rather than an entitlement program. Annual funds are authorized by Congress in specific amounts. Established in 1972 as part of the Child Nutrition Act of 1966, it was permanently funded in 1974. During the month of April 2012, 9.7 million participants were enrolled in WIC, with the cost of the program at \$6.8 billion for the 2012 fiscal year (Burstein et al., 2014).

While WIC is not designed to be a disaster emergency relief fund, there are cases in which refugees and homeless persons are accepted into the program. State agencies

are authorized to provide WIC assistance to persons who are living in temporary residences such as homeless shelters, without proof of residency (Unites States Department of Agriculture, 2014).

Supplemental Nutritional Assistance Program began in 1933 under the Roosevelt administration, as part of the Agricultural Adjustment Act. It was originally designed to assist farmers during the depression when crop prices fell, creating a surplus of food ("SNAP to Health," 2014). By 1939, the Food Stamp program was implemented, providing food assistance to low-income individuals and families. The program was terminated in 1943 after World War II, when poverty was low due to an economic boom ("SNAP to Health," 2014). The program was reintroduced in 1961 by President Kennedy, and signed into effect in 1964 by President Lyndon Johnson ("SNAP to Health," 2014). Other changes and additions to the program included the Agriculture and Consumer Protection Act of 1973, which allowed the purchase of seeds to grow foods, and the elimination of the requirement to purchase the stamps in 1977 (SNAP to Health, 2014). The 1980s saw extreme budget cuts to multiple social welfare services and to date, the Federal budget has not recovered to pre-1980 spending for welfare programs (Dreier, 2004).

In 2012, there were 22.3 million SNAP households in the US, with 46.6 million people benefitting from the SNAP program (Farson & Esa, 2014). Supplemental Nutritional Assistance Program aims to supplement low-income households with nutritional food. All SNAP households are low-income, with the number of zero net income households receiving assistance increasing from 22% in 1992 to 38% in 2012

(Farson & Esa, 2014). In 20 years from 1992 to 2012, the biggest change in households receiving SNAP was the shift from welfare to work, with a decrease of welfare recipients from 40% to 7% and an increase in employment of 20% to 31% (Farson & Ese, 2014). SNAP has the ability to lower poverty in that when the benefits are added to the total household gross income, 13% of households move above the poverty line. According to Farson and Ese (2014), "The impact is even greater on the poorest households, moving 14% of them above 50% of the poverty line."

In addition to food and cash assistance, the federal government offers other programs that aid in curbing the effect of poverty. Some of these include tax programs such as Earned Income Tax Credit (EITC) and the Child Tax Credit (CTC). The benefits of utilizing these credits are obtained annually through the filing of federal income taxes.

The Earned Income Tax Credit was enacted under the Presidency of Gerald Ford in 1975 as a part of the Tax Reduction Act (National Low Income Housing Coalition, 2014). It is a credit provided to low-income individuals and families, with or without children, who have an income from employment. While the program has undergone changes over the past four decades, it has always been an incentive to work and helps subsidize the annual income of the family. The credit is maximized for a family with three or more qualifying children and the Adjusted Gross Income (AIG) must be less than \$46,997 in the 2014 tax year (Internal Revenue Service, 2014). The maximum credit for a single person with no qualifying children is \$496 (Internal Revenue Service, 2014).

Research shows that EITC has been successful part in reducing poverty (National Low Income Housing Coalition, 2014). The Earned Income Tax Credit boosted 6.5

million recipients, to include 3.3 million children, above the poverty level in 2012. According to the National Low Income Housing Coalition (2014), "more than 50%t of the decline in poverty among children from 1993-1997 could be attributed to changes in the tax code, and that the most critical change was to the EITC."

A severe housing cost burden occurs when more than 50% of household income is spent on the cost of housing. In 1999, one in four households eligible for EITC fell into this category (National Low Income Housing Coalition, 2014). The addition of EITC into the total household income decreased the incidence of severe housing cost burden by 15% overall. It was more than doubled to 31% for families with two qualified children (National Low Income Housing Coalition, 2014).

The Child Tax Credit (CTC) was introduced in 1997 in the Taxpayer Relief Act of 1997 (P.L. 105-34). The CTC is a credit which can reduce a family's tax liability. The intention was to help ease the additional financial burden families incurred as a result of having children. The CTC has undergone numerous changes since its inception, the most significant changes being an increase from \$500 to \$1000 per child and a decrease in the annual income threshold at which a family is eligible for the refund, from \$10,000 to \$3,000 (Crandall-Hollick, 2013). Much like the EITC, the cost savings of the CTC to a family can help decrease the debt of the lower-income household and reduce the effect of poverty.

Unemployment Insurance (UI), Social Security, and Supplemental Security
Insurance (SSI) are three additional programs that are available to individuals meeting
certain criteria. Unemployment Insurance, a state funded insurance program, was first

established in the state of Wisconsin in 1932, three years before President Roosevelt signed the Social Security Act of 1935 (originally titled the Economic Security Act). This Act presented guidelines to states in making "provisions for old age insurance, welfare, and unemployment insurance" (Department of Labor, 2010). The first major step in establishing and implementing Unemployment Insurance in the United States, the Social Security Act "encouraged stated to adopt their own Unemployment Insurance laws" (Department of Labor, 2010).

Originally a retirement program only, Social Security was amended a number of times to include retiree's spousal benefits (and benefits for children), survivor's benefits, and disability benefits (Social Security Administration, 2014). The Social Security Act is much broader today than it was when it was first signed. Social Security has a significant role in fighting poverty, especially in the over-65 age group. The income threshold for poverty of an older individual is \$11,011 and \$13,878 for a couple (National Academy of Social Insurance, 2014). With Social Security benefits, one in ten aged Americans is in poverty by those standards. Lack of these benefits would place nearly half of our older Americans below the poverty level (National Academy of Social Insurance, 2014).

Because of the expansion of benefits over the years, Social Security is instrumental in keeping 21 million Americans above the poverty level to include 14.5 million senior citizens, 5.5 million adults aged 18-64, and 1 million children under the age of 18 (National Academy of Social Insurance, 2014).

Supplemental Security Insurance (SSI) is a supplemental cash program provided to elderly, blind, and disabled persons (including children) who have very low incomes.

Unlike Social Security, SSI is a means tested program. These are programs for "last resort" recipients and criteria for eligibility are not solely based on limited income and assets. Additional criteria include age (over 65), blindness, and disability must be met to qualify for benefits (Center on Budget and Policy Priorities, 2014). From 1974 through 2012, the number of SSI recipients has more than doubled and the program has been expanded from one that originally targeted elderly adults, to one that encompasses a broader anti-poverty campaign that assists disabled persons of all ages (Center on Budget and Policy Priorities, 2014). In 2014, 2.1 million adults over the age of 65, 4.9 million adults aged 18-64, and 1.3 million children under the age of 18 received benefits from SSI funds (Center on Budget and Policy Priorities, 2014).

SSI is an effective anti-poverty program. Although it is not a large enough supplement to move the most impoverished individuals or families above the poverty threshold, it greatly decreases the burden of extreme poverty by raising single individuals to about three-fourths of the poverty level and couples to over 80% of the poverty level (Center on Budget and Policy Priorities, 2014).

#### Education Programs for Low-Income Children

The Head Start Program serves low income children with an emphasis on improving social and cognitive development. Eighty percent of the program is federally funded, with the other 20% funded through state and local budgets, as well as private donations and direct services (Hechinger Report, 2010). All 2,600 programs in the U.S. and operated by contract and enrolls over 900,000 children from low-income families,

annually (Hechinger Report, 2010). Studies on the effect of Head start programs are conflicting. Some research indicates that the improvements during early years fade by the end of first grade, while other studies show that children who participate in Head Start programs are "more likely to graduate from high school and less likely to commit crimes as adults" (Hechinger Report, 2010).

#### Needs for Homeless Families to Survive and Thrive

Needs vary from individual to individual and family to family; however, certain basic needs remain prevalent in most cases (Rosenheck et al., n.d.).

- Shelter is essential, both temporary and permanent, to deal with immediate housing needs;
- Child care, pre-school, and other school needs for homeless children are necessary for displaced families with school-aged children;
- Counseling and support services to keep families intact and improve and maintain strong emotional needs of individuals and all family members;
- Job training and placement services, to include employment counseling;
- Mental health counseling especially important for cases where domestic violence or mental health issues such as PTSD are either a root cause for homelessness, or are contributing to the current state of homelessness;
- State assistance in programs such as AFDC and Medicaid;
- Other government assistance such as the WIC and food stamp programs;

- Legal assistance providing advocates for assistance with disability applications,
   divorce, and other legal matters such as the elimination of minor infraction on an individual's record, which may prevent an applicant from qualifying for housing;
- Substance abuse treatment and counseling services; and
- Medical care for immediate needs and preventative care for family planning and contraceptive needs, HIV prevention, childhood immunizations, and pregnancy care.

While most would agree these are all necessary services, locating funding for these services can be a difficult task. Most funding comes from the federal government and is distributed from the state though county agencies set up to distribute grants to individual organizations.

The homeless population is made up into three predominant groups:

- Veterans,
- Individuals, and
- Families.

The availability of shelter varies and is dependent on season, number of people housed, veteran status, and physical/mental health of the individual. The number of homeless persons is difficult to measure due to factors such as transiency, seasonal fluctuation, and movement in and out of a homeless status. Perhaps the most significantly affected are those who are unable in any way to change their circumstances: the children.

In January of 2007, the Homeless Services Network of Central Florida teamed up with the University of Central Florida in an effort to obtain a count of the homeless population of the region. In a one-day count, the group accounted for 3,823 homeless persons in shelters and in homeless camps (wooded areas, abandoned buildings, unsheltered, and other makeshift homeless communities). This number does not include the additional 1,700 children who meet the criteria of homelessness (Table 1). Based on this information and other data collected, the estimated number of people who experienced homelessness in 2006 in the tri-county region is 7,665 (Homeless Services Network, 2007).

# Sociological Dimensions of Homelessness

Research shows that poverty and homelessness disproportionately affects minorities groups (Sommer, 2001; Newman, 1999). However, the demographics of the homeless population are not discriminatory. A near equal number of blacks and whites are counted (44% and 45%, respectively) as are a significant number of Hispanics (17%). In addition, the number of homeless veterans is expectedly high. At 17%, they up a group all their own because they are allegedly eligible for benefits beyond those with a nonveteran status.

The family status appears to be unbiased in that large numbers of persons both with and without children, and families that are still intact make up the homeless population.

While 60% of the homeless are single adults, single or married adults with children make

up over 35% of the homeless population. The remainder, 5.5%, is married couples without children (Department of Children and Families, 2006).

Among this population, there is a high disparity of alcoholism, mental illness, and drug use. A large percentage of the homeless population has, or has had in the past, a professional diagnosis of one or more of the following: mental illness, alcoholism and/or drug use, physical disability, developmental disability, or HIV/AIDS. Any one of these is a significant barrier to long-term employment. These are only a few of the issues to consider when planning for sustained living situations for the homeless.

## Physiological Needs and Academic Performance

Children living in poverty experience increased risk to psychosocial development (Luthar, 1999; McLoyd, 1998) and academic achievement, which determines success in school. A significant amount of research has been conducted on the long-term effects of homelessness on children with regard to education. We know that homeless children are less likely to score at or above grade level in reading and mathematics (Rafferty & Rollins, 1989) and more likely to repeat a grade than their housed counterparts (Masten, 1990; Rafferty and Rollins, 1989; Wood et al., 1989). Furthermore, there are negative long-term repercussions of repeating grades and significant age variances among peers such as higher dropout rates, more negative interaction with the law, negative self-concept development, and a lower amount of material learned in the following year (Hess, 1987).

"The problem of youth homelessness cannot be resolved through regulating patterns of leaving home" (Jones, 1998). People who must leave home will continue to do so, despite their lack of economic resources, and increased risk of homelessness (Jones, 1998). Young people who become homeless often do so as a result of being forced to leave abusive, neglectful, and violent family settings. The majority are not criminals or drugs users. However, some may turn to criminal behavior and drug use after they become homeless as a way of survival (Larkin Street Youth Organization, 2014). The APA (2014) reports that "substance abusing or physically violent parents and stepparents are the major drivers of homelessness in runaway youth." For the teenagers who identify as gay, lesbian, bi-sexual, or transgendered (GLBT), these risks are a predominant concern and common occurrence (APA, 2014).

Researchers have developed varying models to explain parental involvement.

Some measure involvement with school and home activities, to include those that focus on parent-child interactions and school performance, and supportive behaviors from parents and academic outcomes (Schlee et al, 2009). Epstein (1992) separated parental involvement into categories to include "1) work habits of the family, (2) academic guidance and support, (3) stimulation to explore and discuss ideas and events, (4) language environment, and (5) academic aspirations and expectations" (Schlee et al, 2009), while Scott-Jones (1995) categorized them into four groups: valuing, mentoring, helping, and doing (Schlee et al, 2009). Regardless of the various models used to explain parental involvement, research has shown it to be an influencing factor in a child's academic performance (Schlee et al, 2009).

# Family Needs and Academic Performance

The "new" public view of the homeless brings more attention to the growing number of families and children who meet the criteria of homelessness. Current economic conditions have brought about a staggering number of home foreclosures and job layoffs, making it difficult for the lower middle class, often already living on credit, to maintain an adequate standard of living. While statistical data shows the rate of singles high at over 69%, a rising number of children under the age of 18 is evident in recent surveys with more than one quarter of the homeless population falling into that category (22.6%; Department of Children and Families, 2006).

There are a few theoretical perspectives to consider when explaining how academic performance might be influenced by a child's living arrangements and parental involvement. Two of these are evolutionary (biological) and resource (social and financial capital). From an evolutionary perspective, some research suggests biological parents are likely to be more vested in their children's education than children of stepparents or other non-biological relationship (Hamilton, 1964). A resource perspective may suggest social and financial availability plays a more important role than parenting. Social capital is measured by the strength of ties between family and community members. In this framework, a strong network of social capital would produce greater support, knowledge, and other resources (Bourdieu, 1988) necessary to achieve higher academic performance.

A more recent study at Brigham Young University looks at how social capital affects academic performance as it is derived from the school and from the home.

Researchers found that while both are influential on student academic performance, social capital from parental involvement has a stronger relationship to higher academic performance (Dufur et al., 2013).

Homelessness may occur for any number of reasons. Among the highest is employment and financial difficulties, which makes up just over one-half the cases documented by the Florida Department of Children and Families. Job growth in the U.S. over the past 30 years has been, "generated by positions that require at least some postsecondary education" (Larkin Street Youth Organization, 2014). Jobs requiring no college education declined 10% during the recession between 2007 and 2012 (Larkin Street Youth Organization, 2014). Additionally, there are certain factors that are prevalent among the homeless such as age, gender (at 66%, men are more likely to be homeless than women), race (blacks make up 36.5% of the homeless population in comparison to 14.6% of the Florida population), ethnicity, veteran status (16% of total), marital status (85.4% are single; Homeless Conditions in Florida, 2010). Additionally, there may be disabling conditions, which may consist of a physical or developmental disability, drug and/or alcohol dependency, mental illness, or HIV/AIDS (Homeless Conditions in Florida, 2010). One study shows that a higher rate of smoking and chronic health problems, and lower overall health status, was found in homeless and low-income mothers than in the general population. They tended to engage in riskier behaviors resulting in higher incidents of emergency care and hospitalization (Weinreb et al., 1998).

One of the leading predictors of homelessness is poverty. In America, at least 11% of children who live below the poverty threshold are homeless (APA, 2014). Rick

factors include female head of households, teen parents, lack of affordable housing, and family history of substance abuse and/or violence (APA, 2014).

The figures indicate a number of other contributing factors such as the breakdown of the family with over 85% of homeless individuals being unmarried, although the Department of Children and Families reported a drop in homeless veterans from 2009 to 2010 of 1.3%. This was partially a result of an increase in grant-funded programs designed to meet needs of homeless veterans (Homeless Conditions in Florida, 2010).

According to Rafferty and Rollins (1989), temporary housing conditions create hazardous conditions for children. Cooking facilities are often unavailable and lack of money means a child may go hungry and malnourished, which results in an inability to concentrate on academics. Furthermore, the ability to concentrate is often worsened because of sleep disturbances and inadequate sleep. Interrupted sleep frequently translates into poorer school attendance or lack of concentration for the children who attend classes. "Cramped quarters, noise, and lack of privacy in shelters and hotels make quiet study space an unknown commodity for most children. In order for children to succeed in school, they need to have a permanent home" (Rafferty and Rollins, 1989).

Families who move to shelters "adapt to shelter life by decreasing their interpersonal responsiveness, increasing their passivity, and increasing their dependence on others outside the family system" (Grunberg & Eagle, 1990, as cited in Davey et al., 2000). Parental involvement conveys a positive message to children about school and creates a cognitive foundation for the desire to learn (Grolnick & Slowiaczek, 1994).

Without this foundation and active parental involvement, student performance suffers (Davey et al., 2000).

## Resilience in Homeless Children

Although many children may be exposed to similar living situations, stressors, and hardships, some fare better than others do, over time. Resiliency in the child, or the ability to cope with these risk factors, may account for variations in social behavior, academic performance, and relationships with family and peers.

Resilience can be defined in many ways. Garmezy (1994, as cited in VanBreda, 2001) explains the term as "skills, abilities, knowledge, and insight that accumulate over time as people struggle to surmount adversity and meet challenges" and an "ongoing and developing fund of energy and skill that can be used in current situations." When defining resilience in children, it can also be explained as "the capacity of those of who are exposed to identifiable risk factors to overcome those risks and avoid negative outcomes such as delinquency and behavioral problems, psychological maladjustment, academic difficulties, and physical complications" (Rak & Patterson, 1996, p. 368). Homeless children experience many of these factors are therefore at high risk of developing social inadequacies related to education, mental health, and physical health (Masten, 1992).

Masten (2000) identified numerous risk factors for behavior problems in homeless children to include "living with just one parent; less than a high school education in the mother; a history of divorce in the family; maltreatment; witnessing violence; death of a

parent; and foster placement." Furthermore, the risk factors increase during foster placement or living in shelters and can vary dramatically between children (Masten, 2000).

Why, then, are some children able to adapt and avoid these behaviors and others not? Several factors in the existing literature are mentioned as effective in developing resilience. Of these, hardiness, learned resourcefulness (also experience), and locus of control are prominent factors (Van Breda, 2001). Self-efficacy develops "as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994).

A 20-year longitudinal study in Minneapolis found that the children who were resilient and overcame adversity had more resources available to them, both internal and external (Masten, 2000). Those who had fewer protective resources were not as resilient when faced with adverse conditions and situations (Masten, 2000). Interestingly, the children growing up in shelters who have competent, caring parents have many of the same traits and protective factors as their housed counterparts (Masten, 2000). Studies show that "homeless children with parents who are involved in their education, communicate high expectations and facilitate school attendance and homework, have far better academic achievement than children without the advantages of an effective parent" (Miliotis, Sesma, & Masten, 1999).

# Social and Academic Needs and Academic Performance

Homeless children face more barriers than their housed peers when attempting to enter the public school system. The five most commonly cited obstacles are: 1) residency requirements: Many states require enrollment be conducted by a parent or legal guardian. In the case of homeless children, they are often separated from parents and placed with friends or relatives. 2) Guardianship requirements: a child must reside with a parent or legal guardian in order to be enrolled with the proper paperwork, 3) special education needs: one study suggests that homeless children have a high level of unmet need for evaluation of services for special needs; a service they are entitled to under federal law, (Zima et al, 1997) 4) missing or incomplete records: children who are transient tend to lose paperwork from school to school and are often unable to account for periods of time in between schools, and 5) lack of transportation; a seemingly obvious obstacle for many homeless persons, but a necessary one, when considering more than 26 million children in the United States live far enough from the public schools that they must depend on school busses each day for transportation (American School Bus Council, 2008).

According to the U.S. Department of Education, (2004):

Residency requirements, guardianship requirements, delays in transfer of school records, lack of transportation, and lack of immunization records often prevent homeless children from enrolling in school. Homeless children and youth who are able to enroll in school still face barriers to regular attendance: while 87%

of homeless youth are enrolled in school, only 77% attend school regularly.

One outcome of the studies conducted in the 1980s and 1990s, and possibly the most significant to affect children of homeless families to date, is the McKinney-Vento Act. The McKinney-Vento Act sought, in part, to remove these barriers and provide the means by which homeless children could receive educational opportunities in a manner equal to their peers.

## McKinney-Vento Homeless Assistance Act

In his introduction of the McKinney-Vento Act to the Senate floor, Al Gore noted the following:

[McKinney] is an essential first step towards establishing a national agenda for action to eradicate homelessness in America. No one in this body should believe that the legislation we begin considering today is anything more than a first step towards reversing the record increase in homelessness (Congressional Record, p. S3683, March 23, 1987).

The McKinney-Vento Homeless Assistance Act (PL 100-77) was the federal government's response to homelessness, with Title VII authorizing four major programs which assist homeless children and their families: the Adult Education for the Homeless Program, the Education of Homeless Children and Youth Program, the Job Training for the Homeless Demonstration Program, and the Emergency Community Services

Homeless Grant Program (National Coalition for the Homeless, 2006). The McKinney-Vento Act has been amended four times since its inception, primarily to expand the scope of its impact on the homeless population and to strengthen provisions as written in the original legislation. An evaluation of the HUD McKinney-Vento programs in 1995 concluded that the programs "have assisted significant numbers of homeless persons to regain independence and permanent housing and at reasonable costs" (U.S. Department of Housing and Urban Development, 1995).

The McKinney-Vento Homeless Assistance Act serves to help homeless students in a number of ways. The Act authorizes many federal programs to include those that specifically target homeless children and their families such as the Education for Homeless Children and Youth program (EHCY) and the Consolidated Runaway and Homeless Youth Programs which include a basic center program and a transitional living program, aimed to assist them in the transition from homelessness to various housed living situations.

The McKinney-Vento Act provides legislature that guarantees participation in programs for which the child is eligible, such as tutoring and nutrition programs. This is necessary to lessen the impact of negative outcomes of homelessness to include a rate of hunger among homeless children twice that of their housed peers, an increase in learning disabilities, and the likelihood of regular disruption from academic activities (APA, 2014).

In addition to funded program resources, amended legislature to the Act of 1989 prohibits discrimination and segregation of homeless students, requires that the state and

local educational establishments provide transportation for these students, and affords them the right to a public education equal to that of their housed peers, regardless of their living situation.

Nationwide, the number of homeless children has increased to approximately one million, an increase of about 30% between 2004 and 2009 (Harwell, 2009). The daily count of homeless persons in Florida has risen from 49,916 in 2007 to 55,599 in 2009 (Florida's Council on Homelessness, 2010). In 2009, the Florida Department of Education documented 49,104 school-aged children as homeless, a rate that has been steadily increasing over the past decade. Forty two percent are under the age of six (Harwell, 2009). Of these, 1,322 are from Seminole County (Appendix A). It is important to understand that these figures are expanded to include those living in hotels, motels, and campgrounds, as well as those living with others due to lack of sufficient housing.

In summary, there is a substantial amount of literature supporting a variety of needs for homeless children and their families to include psychological, social, and academic needs. While the most basic need of the homeless is to be housed, little research has been conducted on the effect of living arrangements among homeless students and its relationship to academic performance. This study will support existing literature and provide further research on preferred housing arrangements for homeless students.

# CHAPTER 3 METHODOLOGY

## Theories

For many years, controlling a child's behavior was directed by what adults thought a child needed, rather than research-based information of what children truly need; that is, what contributes to optimal and positive growth and development of the child (California State University, San Bernardino, 2014). As discussed above, a substantial amount of research supports a variety of psychological, social, and academic needs of homeless children. Scientists have long sought to apply theory to the behaviors of children as they relate to needs. Erikson, Maslow, Alderfer, and others expanded on the research of theorists before them, providing us with a framework to explore results of academic performance among homeless students under various living conditions.

Erikson's theory of psychosocial stages describes eight time-related developmental changes that occur throughout a person's lifespan (Erikson, 1968). Erickson's theory can be applied in the classroom and is recognized as a tool that can help teachers create an age appropriate classroom environment where students are able to build relationships and learn new concepts in comfort and without fear. The eight-stage life cycle identifies goals and challenges at each interdependent stage that influence development in later stages. Teachers may encourage developing socio-emotional development at various ages/stages by designing classroom activities using Erikson's theory. For example, Erickson describes the elementary school years as those where positive personal achievement and peer relationships are necessary in order to feel

competent, build self-esteem, and have a sense of belonging. Age appropriate tasks might include those that allow the child to set and work toward realistic goals or opportunities to engage in activities in which the child cam experience success (Woolfolk & McCune-Nicolich, 1984). Bowlby (1969) found that healthy early childhood development requires "secure attachment to a trusted caregiver with consistent caring, support and affection early in life." There is also a large body of research that indicates the "significance of primary caregivers (and by extension, families) on children's long-term development" (Shonkoff & Phillips, 2000). Two stages of Erikson's theory, in particular, are helpful in understanding how children develop during the school ages of 5-18. These stages focus on school and social relationships.

Stages four and five occur during early childhood and continue throughout adolescence. Erikson maintained that conflict in each of these stages acted as a turning point in development that either led to successful completion of that stage, or a failure to achieve that quality (Cherry, 2011).

Of these stages, two are especially relevant to this study: Industry vs. Inferiority and Identity vs. Role Confusion. These occur between the ages of 5 and 18, typically during the elementary, middle, and high school years. Industry vs. Inferiority occurs during elementary school years (5-11), when the child will develop (or fail to develop) a sense of accomplishment based on the reactions of parents, teachers, and peers (Cherry, 2011). During the Identity vs. Role Confusion stage, children develop self-esteem and a sense of self (Cherry, 2011). This occurs generally between the ages of 12 and 18 (junior high and high school), when children who fail to develop feelings of independence and

ability to control certain aspects of their lives will "remain unsure of their beliefs and desires" and be "insecure and confused about themselves and the future" (Cherry, 2011).

Peter Townsend (1979) explains relative deprivation as the "lack of resources to sustain the diet, lifestyle, activities and amenities that an individual or group are accustomed to or that are widely encouraged or approved in the society to which they belong." The term "relative deprivation" is used to describe measurements of social, political, and economic deprivation from a social science perspective (Bayertz, 1999) and is inextricably associated with social exclusion and poverty (Poverty Site, 2011).

Schweitzer et al. (1994) proposed a multi-causal model of homelessness in adolescents in which emotional, cultural, and social deprivation were assessed. Results supported a deprivation model of adolescent homelessness, with significantly lower assessments for homeless adolescents in all three categories than the control group (Schweitzer et al., 1994).

Cultural Deprivation theorists argue that many children from working class homes lack the books and learning materials necessary to develop a child's intellectual skills, allowing him to progress in school. Douglas (1964) found that parents' attitudes are directly related to a child's academic performance. Working-class parents were less likely to visit schools, discuss their child's performance with teachers, and encourage or show interest in their child's academic progress, resulting in the child developing a lower level of motivation to achieve higher academic excellence (Douglas, 1964). Bernstein and Young (1967) conducted research that indicates a mother's choice of toys has a significant influence on the intellectual development of the child and that middle-class

mothers are more likely to provide their children with toys and learning tools which help develop critical thinking and reasoning skills.

Because of the many variables affecting homeless children, which research has shown to affect child development, more than one theory can be applied to the proposed correlation between child homelessness and academic progress. Abraham Maslow's theory of motivation is also referred to in this study because it describes the effects of needs and lack thereof, in children at various developmental stages in their lives. These stages are crucial to the development of trust in children, beginning at the moment of birth (Oswalt, 2008). While Erickson focuses on relationship needs and the development of attributes such as self-esteem, self-identity, and competence through the formation of these relationships, Maslow enforces basic needs for human life and survival as a means to achieving positive relationships. This "step" method provides a guide as to what a person must have in order to thrive and strive for the next level in a hierarchy of needs. Alderfer was able to expand on Maslow's theory and show how in some situations, certain needs could go unmet for a period, with others compensating for their absence. This is seen in the case of homeless children with permanent housing needs being unmet and another form of housing substituted with laws such as the McKinney-Vento Act and No Child Left Behind Act in place to assist the child in keeping some degree of normalcy, despite his homelessness.

Maslow's theory of motivation is a hierarchy depicted as a pyramid, with basic needs as the first level that must be achieved before higher levels can be attained. Level one depicts the satisfaction of basic human physiological needs such as oxygen, food,

shelter, water, clothing, and a place to sleep. Level two provides for safety and security of the individual and consists of such needs as family, social stability, health, employment, and property (Maslow, 1954).

The third level of Maslow's hierarchy is love and belonging. This tier represents the ability to have intimate connections with friends and family, which is followed by self-esteem, where confidence, uniqueness, respect for others, and achievement are attained. The fifth tier is self-actualization. This is where the individual recognizes his or her own creativity, morality, and spontaneity, and experiences acceptance, purpose, meaning, and has an understanding of his or her inner potential (Maslow, 1954). Homelessness results in a lack of one or more of these necessary basic needs. The importance of family and safety/security by way of adequate housing is evident in both theories for normal development in the child. In using these theories as a model, this study aims to explore the relationship between a student's housing and parental situation and the child's academic development in school.

Unlike Maslow, who argued the individual progresses upward along a hierarchy of needs, Clayton Alderfer's ERG Theory proposes a frustration regression factor, whereas an individual who may not have met the lower needs of Maslow's hierarchy, could compensate in other areas of existence, relatedness, and growth. The existence needs correlate with Maslow's lower hierarchy needs to include physiological and safety needs. Relatedness refers to the individual's desire to uphold interpersonal relationships, which correspond to Maslow's needs for acceptance and belongingness. The growth

needs of ERG refer to the self-actualization and self-fulfillment tier of Maslow's model, to include a desire for personal development (Alderfer, 1967, 1969).

Alderfer contends that this three-need relationship does not need to be met in any specific order, as does Maslow's six-tier hierarchy, more than one need may be operative at the same time. Furthermore, if a higher-level need is unattainable, an increase in desire to satisfy a lower-level need occurs. This is the frustration regression factor (Alderfer, 1967; 1969). Both needs theories are hierarchical. However, if a higher-level need is unsatisfied, frustration regression pushes the individual to satisfy more lower-level needs (Alderfer, 1980).

Research on the study of homelessness often refers to both Maslow and Alderfer with regard to how needs are met.

## Theoretical Framework

The intention of this study is to examine relationships between the types of living arrangements experienced by homeless students, to include whether those arrangements involve habitation with one or more parent or legal guardian, and the results of overall academic performance as measured using FCAT scores. Additional considerations that may affect resiliency, such as access to medical care, nutritious food, and relationship to family, are explained by Erickson and Maslow as basic needs. The following will describe the necessity of these needs and the resulting outcome on a child when these needs are not met.

Both Erikson and Maslow explored human needs at various stages of development. Erickson purported that the school years held two critical periods in a person's life: first when a child's development relies heavily on the influence of teachers, parents, and peers, and later when they develop a sense of self-esteem that has an effect on their ability to succeed in the future (Cherry, 2011). Maslow maintained that certain basic needs must be met before other accomplishments and milestones could be achieved (Maslow, 1954). Homeless children are often lacking basic needs as described by Maslow. With the obvious lack of housing noted, there are also other needs that often go unmet such as food and medical care.

Genetically programmed sensitive periods occur in the brain early in a child's life, when "the developing child is disproportionately sensitive to the influences of the external environment" (Barker, 1992; Bronfenbrenner, 1986; Wadsworth, 1997 as cited in Irwin et al, 2007). "The development that occurs in the early years provides the essential building blocks for a lifetime of success in many domains of life, including economic, social and physical well-being" (Irwin et al, 2007).

Many homeless children are developmentally delayed with elementary-aged school children falling as much as two academic years behind their peers (Kozol, 1988). There is also a strong body of evidence indicating the importance of peer relationship in the development of social skills in the child. Peer relationships provide models for the child that shapes various social behaviors, attitudes, and perspectives (Hartrup, 1976; Johnson & Johnson, 1978; Wahler, 1967).

As the child reaches adolescence there are important cognitive and biological changes occurring (Eliot & Feldman, 1990). Research indicates this is a time when there is an increased risk of depression, behavior/conduct disorders, suicide, and drug and alcohol use (Adams & Gullotta, 1989). To further confirm this research, and in agreement with Erikson, Laible, Carlo, and Raffaelli (2000) noted, "One important factor that distinguishes adolescents who navigate the transition with success and those who do not is the quality of relationships the adolescent has with both parents and peers."

The model shown (Figure 1) shows the variables described by Maslow and Erikson and how they may affect overall academic performance in the areas of math, reading, and science. Maslow's hierarchy of needs indicates that a child's basic needs must first be met in order to be successful in other areas of his life and identified self-esteem, as one of these basic needs. Erikson (1968) also noted that a failure to cope with new social and academic demands in a child's life results in feelings of inferiority, or a lack of self-esteem. As the child becomes an adolescent, he must develop a sense of self and personal identity. Failure to do so will lead to role confusion and a weak sense of self. The research continues to confirm this literature. Neill (1990) found that "self-esteem and the child's attitude toward school were significantly related to academic achievement."

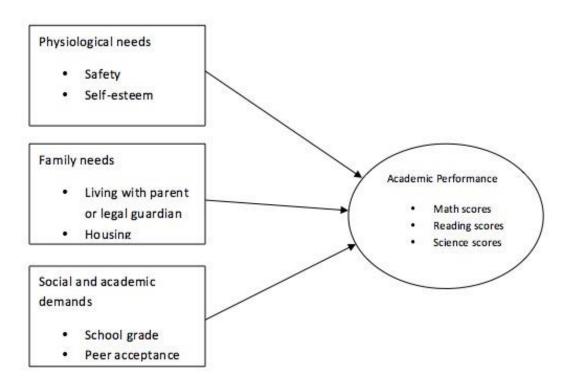


Figure 1. Theoretical framework of academic performance of homeless students.

Erikson's stages of psychosocial development occurring during the school years cusp at sixth grade (age 12) and twelfth grade (age 18). These are the points where the fifth stage, identity vs. confusion, begins and ends. Development of the child in grades three through twelve can be explained by examining benchmarks in the fourth and fifth stages. However, the onset of intimacy vs. isolation (end of high school, age 19) cannot be ignored, since it is successful completion of the earlier stages that prepare a child for a positive transition into continuing stages (Erikson, 1968). Children in the twelfth grade are exiting stage five and entering stage six, where they begin to focus on intimate relationships with others. Those who have failed to develop a strong sense of self during the fifth stage may have difficulty forming long-term relationships. These are the older

high school students who are also more likely to suffer from isolation and depression, which can affect performance.

Erikson's development theory posits that at school age, children extend beyond home and start focusing on schooling (Erikson, 1968). Academic performance becomes the center of attention in place of play. At this stage, pursuing self-esteem and desiring for better performance dominate the psychological development of the students. However, if basic needs of living such as home, bathing, sleeping and love of family could be satisfied, as Maslow suggests, students may not develop a mood of inferiority and failure at beginning and eventually lose their desire and motivation of accomplishment and self-actualization in school. For example, at elementary school age, students are supposed to develop their reading and writing skills. Missing the development of those skills due to family and psychological factors would adversely affect their academic performance in these areas that would be reflected in their tests. Homeless students are a group of students who lack of basic needs and thus are subject to the negative impacts of their family and psychological deficiencies. Therefore, homeless students are more likely to experience lower academic performance. In addition, individual social and academic variations are also make differences in terms of the development of homeless students. These factors may include age, gender, school, language spoken, and race. For example, language barriers that affect the students' ability to follow directions adequately produce a feeling of inferiority. In summary, a conceptual framework is developed to illustrate the proposed relationship in a diagram (Figure 1).

The relationship between housing arrangement and academic performance can be explained as such: Maslow (1954) identifies housing as a basic need. Shelters and hotels, while they provide a structure, are often noisy and crowed, which is not conducive to a learning or sleeping environment. Additionally, shelters for women and children may exclude the male head of household, thereby separating the family and decreasing parental involvement. Sharing a home, or doubling-up, could possibly provide more amenities for a child such as internet access, but these living arrangements can also separate families and parents from children and add to the number of residents in the home, increasing noise levels and reducing privacy. Cars, parks, campgrounds, public spaces, abandoned buildings, substandard housing, bus or train stations, and other similar settings do not provide a child with any stability or resources necessary for productive learning. These living situations remove the child from the community and peers and produce further barriers such as lack of transportation and loss of records (birth certificates, school records, immunizations, etc.). So while options such as doubling-up may provide more resources than hotels or shelter, which provide a better structure than cars, parks, and other transient facilities, none appear to offer permanent housing while living with parents or guardians and the resources that provide a child with optimal learning opportunity. Permanent housing provides a child with stability and the ability to place roots within a community or neighborhood where relationships can develop among peers. Children who become transient in the school system experience disruption in their lives. They are exposed to a number of stressors through constant changes, which add to the disparity of their existence when compared to their peers. "The stress of

homelessness in children can lead to insecure attachments to others, poor self-esteem, and dysfunctional personality development" (Hart-Shegos, 1999). According to Bassuk and Rubin (1987), homeless students experience high levels of anxiety and depression and often have difficulty making friends. Erikson (1968) describes the need during the school-aged years (roughly 5-18) as one that relies heavily on acceptance by peers, teachers, and parents, and helps to build self-esteem. Failure to meet this need can cause uncertainty in one's own ability to succeed, or perform, and academic performance suffers as a result.

The ability of a child to live with his or her parent(s) or legal guardian may be a significant factor in successful academic performance of children. Maslow (1954) identified love and belonging, to include family and a sense of connection, as essential components in the hierarchy of needs. Children at a young age begin to develop a sense of trust in parents and caregivers who are reliable, caring and affectionate (Erikson, 1968). When parents are involved in the child's activities, the child receives a positive message from the parents and has more of an interest in those activities. Moving to a shelter, hotel, or other less stable environment often decreases the independence of the family and increased their reliance on others, which makes the parent less of a provider. These living arrangements often take the parent out of the picture entirely (sent to stay with relatives, foster care, etc.). In a 2004 survey of 27 cities, 56% of homeless family respondents were required to separate in order to gain admittance to emergency shelters (U.S. Conference of Mayors, 2004). When the parent is less able to care for the child, the child sees the parents as less of a caregiver or provider. A lack of trust may develop in

the child and he does not receive the positive reinforcement and encouragement that a parent supplies. Without active parental involvement, student performance suffers (Davey et al., 2000). Furthermore, studies have shown that children fare better with their parents than in foster care.

A major tenet of current child welfare policy is that children are almost always better off with their parents. Workers have been trained...in the importance of family preservation. The goal of family preservation is an essential underpinning of any progressive child welfare program.

(Besharov, 1989)

School characteristics are important to academic performance because it can affect the types of resources and peer influence to which a student has access and is exposed. Schools and peers have the ability to be strong motivators for a child. Maslow (1954) explains that once a person meets the basic physiological needs of hunger and thirst, one will be motivated to progress up the hierarchy and strive for the next stage of safety and security, then on to the next stage of love and belonging, self-esteem and recognition, and so on. For a homeless child, these needs may not be met at any level, but the motivation for self-esteem, peer acceptance, and recognition through academic means still exists. Erikson (1968) describes school and social relationships as events in a person's life that can produce long-term feelings of competence and self-worth if basic needs are met or low self-esteem and feelings of inferiority if they fail to be met. Motivation for a child to succeed academically and in social relationships depends on the kind of support he receives from his school and his peers. Poor relationships and

resources yield low academic performance. This forms a relationship between academic performance and school characteristics/peer acceptance.

# Hypothesis Development

Based on the theoretical framework and rationale, four hypotheses are developed as follows:

H<sub>1</sub>: Homeless students living in single-family homes or shared residences are more likely to achieve higher academic performance scores than children living in shelters, hotels, cars, and other temporary living facilities, holding other student factors constant.

According to Maslow's hierarchy of needs, a person requires certain basic needs before they can advance in other areas such as education. Families in Transition (2015) states one in four of the 2001 (numbers current as of June 2014) homeless students in the Seminole County school system do not have access to daily nutritional food and move an average of two to three times each year. An analysis of multiple studies on adequate consumption of a nutritional breakfast and academic performance among school children indicates there is evidence that students who eat a nutritional breakfast may have improved cognitive function, which affects memory, school attendance, and test grades (Rampersaud et al., 2005).

A higher level on Maslow's Hierarchy of Needs would be knowledge and personal belongings not related to sustaining life, such as computers and access to the internet. The homeless often lack the skills necessary to operate computers (Bure, 2005;

LeDantec & Edwards, 2008) and they are not likely to have access to internet while living in cars, public parks, or many hotels/motels. Lack of access also appears to be the biggest issue for those living in shelters, as computers, if they are available at all, are only available during certain times, libraries often have waiting lists and long wait times, and internet cafés where online access might be obtained are cost prohibitive (Taylor, 2011). Additionally, a primary concern in shelters is safety and theft (Robertson, 2011) so many occupants will not have these devices in shelters. Therefore, if the basic need of housing is not first met, students are less likely to have other tools necessary for successful academic performance such as adequate nutrition and access to computers.

H<sub>2</sub>: Homeless students living with parents or legal guardians are more likely to achieve higher academic performance scores than children who do not have parents or legal guardians, holding other student factors constant.

Erik Erikson's psychosocial theory of development discusses the importance of parental involvement in a child's ability to thrive. For the first six years of a child's life, the parent is the primary source of knowledge and comfort, providing a critical impact on a child's social and cultural identity, and personality development into adulthood (Erikson & Erikson, 1998). Positive parental involvement helps a child develop normally and successfully progress from each stage of Erickson's Life Stages to the next.

Therefore, children who are living with parents or legal guardians should show higher academic performance than children who do not have parental involvement.

H<sub>3</sub>: Homeless white students are more likely to achieve higher academic performance scores than homeless children of color (Black, Hispanic, and other).

Poverty is the primary cause of homelessness and income disparities exist in minority populations. In 2014, the income gap widened between whites and minorities to its highest point since 1989, with white household wealth now at 13 times the median wealth of black households, and more than 10 times that of Hispanic households (Kochhar & Fry, 2014). Maslow's theory expresses a hierarchy of needs, where unmet basic needs such as a lack of housing, or the financial ability to sustain oneself with adequate housing, can prevent a person from achieving a higher level of self-actualization. Policies put in place by primarily white policy-makers tend to benefit white students and put black students at an unintentional disadvantage (Ladson-Billings, 1998). Income disparities can worsen the lack of basic needs met by families in order for children to thrive academically.

H<sub>4</sub>: Grade level of homeless students is significantly linked to academic performance: as grade level increases, academic performance decreases.

Erikson's stages of psychosocial development explain how the fifth stage, identity vs. confusion, cusp at sixth and twelfth grades. Homeless students often they lack the physical requirements needed in earlier stages, which allow them to progress from one stage to the next. According to Erikson's development theory, school age children who have developed normally, psychosocially, have successfully moved beyond the single focus of home (parents, siblings, etc.) and started focusing on school (Erikson, 1968), making academic performance and self-esteem of primary importance. If a child has not successfully moved from one stage to the next, we should observe significant negative changes in performance around the sixth and twelfth grades, where these changes would

naturally occur during normal development. Furthermore, studies confirm 6<sup>th</sup> grade failure rates are a predictor for 12<sup>th</sup> grade fail rates; up to 60% of children who fail 6<sup>th</sup> grade will not successfully complete high school (Balfanz et al., 2007). If a negative change in 6<sup>th</sup> grade scores is observed, we should also see a negative change in 12<sup>th</sup> grade scores.

# CHAPTER 4 RESEARCH METHODOLOGY

The following will discuss the demographic information for Seminole County. According to the 2010 U.S. Census, Seminole County is home to 436,041 people, with 183,781 housing units (2013 estimates) and a rate of 11.3% living below the poverty level (Unites States Census Bureau, 2015). The 2013 Council Report on Homelessness identifies 17.8% of the Florida homeless population as children under the age of 18 (Department of Children and Families, 2013).

All students in Florida are required to take an assessment exam in specific subject areas to ensure they are learning the material set forth in the Sunshine State Standards. These standards were created by teachers in the mid 1990s and contain the basic skills children should be able to comprehend at the various grade levels in the subject areas of math, reading, science, and writing (Florida Department of Education, 2015). By analyzing this data, we can determine whether or not students, or groups of students, are meeting the minimum requirements for education established by the state.

## **Data Sources**

This study consists of a secondary data analysis of de-identified student data collected by the Florida Department of Education. There are many challenges to obtaining data on the homeless student population. In addition to their transiency, their status as minor children means school records are private. Homeless students are not identified by name in records and contact for survey questionnaires require multiple

"permissions." It is because of these limitations the following data sources were chosen for this study. Existing demographical information on Seminole County and the Seminole County School District is available publicly and FCAT from non-identifying data is available for students identified as homeless by the Florida Department of Education standards.

Seminole County is located in Central Florida, a place where people from all over the world gather for fun. The region has much to offer in the way of sunshine and recreation such as theme parks, beaches, sporting events, concerts, and the most prominent space center in the world. Sadly, it is also a place where many people fall through the cracks of government's social service networks. According to the Current Population Survey (CPS) 2010 Annual Social and Economic Supplement (ASEC), the poverty rate between 2008 and 2009 "increased for children under 18 (from 19.0% to 20.7%) and people aged 18 to 64 (from 11.7% to 12.9%). Beth Davalos, liaison for the Seminole County School District, runs a number of programs to assist homeless children during this transition. She aims to pull these children from the cracks and provide them with the tools they need to succeed. Davalos stated in a CBS interview that the enrollment rates in Seminole County schools are increasing by five to fifteen each day.

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<sup>&</sup>lt;sup>1</sup> Since unrelated individuals under the age of 15 are excluded from the poverty universe, there are 460,000 fewer children in the poverty universe than in the total civilian noninstitutionalized population.

Their struggle, she says, in addition to the living conditions, is also a result of how long the condition lasts. Davalos (2011) stated:

When I first started this program eight years ago, homelessness lasted maybe two, three months. Now with it lasting three, six months, a year or two years, this is when children are developing who they are and their foundation is broken. (Homeless Students, 2011, as cited on CBS, 2011)

According to the Governor's 2010 Report on Homeless Conditions in Florida (as cited from the Fl. Dept. of Education, 2010), there were 41,286 school-aged children homeless during the 2008-09 school year.

The homeless student population of Seminole County, Florida was 1,322 in the 2009-10 school year (Appendix A; Florida Department of Education, 2010.). At any given time there may be as many as 900 homeless students in the public school system and the numbers are increasing annually. On any night in 2013, five states comprised nearly 50% of homeless people in families, nationwide, with Florida having 7% (16,503 people) of the nation's homeless families (U.S. Department of Housing and Urban Development).

The results from the 2009 Point in Time Survey show an overall increase of homeless students in the Central Florida tri-county area of 12.13%. The faster growing county is Seminole with a 37.61% increase in the 5-month period between January and May 2009.

The data in this study was received from the Seminole County School District.

Data from 64 schools are included in the sets received between 2008 and 2010,
representing two school years. This group of homeless students represents the population (100%) of the homeless students in Seminole County during the 2008-2009 and 2009-2010 school years and approximately 2.2% of the Florida homeless student population in 2008-2009 and 2.7% in 2009-2010.

While there appears to be a discrepancy in data between the three areas of academic performance, this is due to the way the FCAT exams are administered annually. Not all grades take all exams every year. FCAT's are administered to youth in grades three through eleven in four subject areas at various intervals. Reading and mathematics exams are administered to grades three through 10. The FCAT writing exam is administered in the fourth, eighth, and tenth grades only. The FCAT science is administered in the fifth, eighth, and eleventh grade levels. Therefore, each analysis includes only the students who have available performance data.

## Research Design

The research design for this study consists of a cross-sectional, non-experimental design using secondary data provided by the Seminole County School District. The sample consists of two years' worth of data: 2008-2009 school year and 2009-2010 school year. The unit of analysis is the child in the public school system during the school year that has been identified as homeless according to the standards set forth in the McKinney-Vento Act.

The available data represents all homeless students registered in the public schools in Seminole County during the schools years 2008-2009 and 2009-2010.

# Criteria for Homelessness

According to Title X of the McKinney-Vento Act, a child is deemed to be homeless if they lack a "fixed, regular, and adequate nighttime residence" (Florida Department of Education, 2009) or are unaccompanied; that is, not in the physical custody of at least one parent or legal guardian. A child (to include migratory children) fits into this category if he or she is living under any of the following housing conditions:

- Shared homes or double-up, usually a result of economic conditions or other hardship;
- Motels, hotels, Federal Emergency Management Agency (FEMA)
   temporary housing, trailer/RV parks, or campgrounds;
- Emergency or temporary/transitional shelters;
- Hospitals (common in cases of abandonment);
- Foster care or in transition waiting for placement in a foster home;
- Any primary nighttime residence not designated for human beings;
- Cars, parks, and other public (common) areas or abandoned buildings;
- Substandard housing, bus/train stations, or other similar living conditions
   (Florida Department of Education, 2009).

Under the McKinney-Vento Act, the school district is responsible for making every effort to identify homeless students. There are many challenges to identifying these students. Children may hide the fact that they are homeless because it is embarrassing. Some children may not even be enrolled due to transiency between school districts. Families may not report their circumstances to the school for fear of losing custody of their children, and some children may not report their status for fear of being returned to a violent home environment. Additionally, families may not know they meet the criteria for homelessness and some school officials may not be informed of their requirements to abide by the McKinney-Vento Act (National Center for Homeless Education, 2014).

School districts must use existing data to help identify homeless students. They are required to collect data on these students, which can be compared to census data and other data source trends to determine whether or not their numbers are accurate. Schools are encouraged to reach out to community shelters, soup kitchens, transitional living facilities, and a host of other agencies, as well as develop partnerships with programs such as Head Start and Early Intervention, to assist in identifying children who are eligible for services under the McKinney-Vento Act. Other strategies for identifying children and youth experiencing homelessness include requiring residency information on enrollment forms, training school staff, reaching out to students, providing information to parents, and an awareness of catastrophic events such as natural disasters which could create homelessness (National Center for Homeless Education, 2014).

There are variations in the type and amount of data collected for each year: it is important to understand that all subjects are not tested every year for all students.

Historically, the reading and math FCAT exams have been administered in grades 3-10. Writing FCAT exams were taken in grades 4, 8, and 10. The science FCAT's have been administered in grades 5, 8, and 10 or 11, depending on the year, since 2003. Students must pass the 10<sup>th</sup> grade FCAT exams in order to move on and graduate; however, if a student fails an exam, he or she may retake the failed portion in 11<sup>th</sup> or 12<sup>th</sup> grade, thus explaining the analysis results for multiple subjects at these grade levels (Florida Department of Education, 2013).

The 2008-2009 data contains 895 observations representing 895 homeless students. FCAT scores are available for many of the student to include 512 reading scores, 521 math scores, and 656 science scores. Each raw score corresponds to a pass/no pass grade of 1-6; 1-3 are no pass grades; 4-6 are passing grades. Additionally, the 2008-2009 data provides information as to which students were living with at least one parent or guardian during the time they were categorized as homeless.

For the school year 2009-2010 there are 1,322 student observations with data available for math and reading FCAT scores only. There are 737 student observations for math scores and 716 for reading. The 2009-2010 data was incomplete at the time of delivery due the FCAT scores not being available from the State of Florida Department of Education. The 2009-2010 data sets do not account for a variable that documents whether or not a child is living with a parent or legal guardian.

# **FCAT**

In the early 1970's the authorization of statewide student assessments was granted (Appendix B). The Florida Legislature approved assessment for school children in 1976 and required an exam for high school graduation. A key measurement in education is the rate of high school graduates; Florida is among the lowest in the nation (Mazzei, 2009). Sections 1008.22, F.S. and 1008.25, F.S. articulate the purpose for the exams and progression requirements for students. Key provisions regarding the No Child Left Behind (NCLB) Act can be found in Appendix II.

In 2001, Congress passed the *No Child Left Behind Act*, initiated by then President George W. Bush. The passing of this Act began a significant advance in the role of the federal government in education, which has previously been focused on inequality issues and the funding of special educational programs and "stimulating educational improvements through research and demonstrational projects" (Herrington & MacManus, 2005).

The first amendment to the NCLB, the Public Education of Children (1998) notes that the text expresses the following:

Declares the education of children to be a fundamental value of the people of Florida; establishes adequate provision for education as a paramount duty of the state; expands constitutional mandate requiring the state to make adequate provision for a uniform system of free public schools by also requiring the state to make adequate provision

for an efficient, safe, secure, and high quality system. (Public Education of Children, 1998)

Title I of the NCLB is a legislative initiative designed to improve the academic progress of disadvantaged students. This portion of the legislation supports the remainder of the document, ensuring that all children, regardless of class or social status, would have an equal opportunity for an education in the public school system, leaving no child behind. Title V of the Act promotes 'informed parental choice' and fosters support for local school districts in efforts to create innovative educational programs (Congressional Record, 2001).

The FCAT is a state assessment exam that is mandated by Federal legislature through the No Child Left Behind Act. "Results from the statewide assessment program are the basis of Florida's system of school improvement and accountability" (Florida Department of Education, 2004). The FCAT exams are used as proof that the NCLB mandates are being met. Florida congress sets policy regarding the testing and the Florida Department of Education (FLDOE) has the responsibility of running and monitoring the program. Typically, the FLDOE will recruit experts from all over the state (annually) who write questions for the exam. The Florida Department of Education (2004) states that 300-400, "Professional item writers employed by the DOE's test-development contractors prepare the first draft of all test questions. Committees of Florida classroom teachers and curriculum supervisors, working with DOE staff, review and revise each test item." The questions are then reviewed to remove any bias, prior to appearing on an exam.

The tests are supposed to reflect the Sunshine State Standards (SSS) and meet those objectives. The Sunshine State Standard is the curriculum framework for Florida that includes "content area<sup>2</sup>, strands<sup>3</sup>, standards, and benchmarks<sup>4</sup>. The Sunshine State Standards provide guidelines for the educational curriculum in Florida" (Florida Department of Education, 2008).

# Qualitative Research

There are many methods of qualitative research to include case study, content analysis, dramaturgical interviewing, ethnography, participant-observation, natural observation, interviews, and others (O'Conner, 2011). Qualitative data focuses on quality (Berg, 1989) and looks at the deeper structure or essence of the data. Survey research is often conducted on the homeless population as a "point in time" survey. This method brings together volunteers from multiple non-profit organizations and sends them out into the areas where the homeless reside, in order to gain a count of homeless persons. While not entirely accurate, areas such as Hudson County, NJ, which conducts this survey on an annual basis, are fairly certain their numbers are near accurate due to

<sup>&</sup>lt;sup>2</sup> "The information or skills contained in an area of study. The content areas (or subject areas) assessed on the FCAT are reading, writing, mathematics, and science" (Florida Department of Education, 2008).

<sup>&</sup>lt;sup>3</sup> "The broad divisions of content in the SSS. For example, in the Language Arts SSS, there are seven strands (Reading, Writing, Listening, Viewing, Speaking, Language, and Literature)" (Florida Department of Education, 2008).

<sup>&</sup>lt;sup>4</sup> "A specific statement that describes what students should know and be able to do. The benchmarks are part of the SSS" (Florida Department of Education, 2008).

the number of volunteers working in the field and the methods they use to draws out the homeless (Speiser, 2015). After many years of conducting surveys such as this, the long term homeless are well aware of the count and look forward to this annual event, as volunteers hand out blankets and food in exchange for answers to a series of questions. This information gained from these surveys is then used by U.S. Department of Housing and Urban Development (HUD) as a tool which assists them in dividing funds among areas of need throughout the year (Moore, 2015, as cited in Speiser, 2015).

#### **Analytical Framework**

The framework diagram (Figure 2) shows an effect of socio-economic, housing arrangement, parental in household status, and school characteristics on homeless students' academic performance. These variables are involved because they are present in the lives of all school-aged children. Age, grade, language, gender, and race can be assigned to all school-aged children, which identify their socio-economic status. The housing arrangements vary from child to child, but all have an identifiable place of habitation. "Living with legal parent or guardian" is either present or not present for each child. Each child is associated with a school that has been ranked according to the Florida Department of Education grading system. The grade-rank system was not used for this study. Prior studies on Socio-economic status, living with parent or guardian, and school characteristics have shown to have an impact on student academic performance. With these variables remaining constant, it is predicted that housing arrangement will also have an effect on the academic performance of school-aged homeless children.

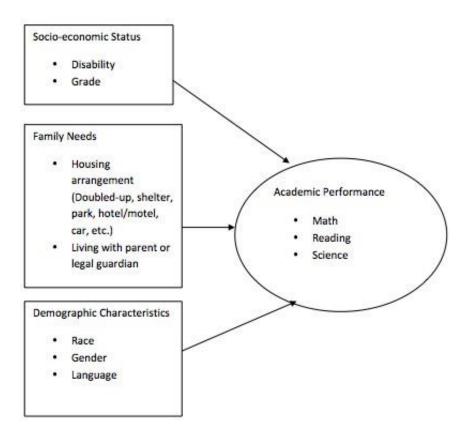


Figure 2. Analytical model of proposed relationships.

#### **Quantitative Analysis**

Both descriptive and regression analyses will be used to answer the proposed research questions. The descriptive statistics will be used to explore the demographic characteristics and trends of changes of homeless students in Seminole County. The descriptive analysis will provide information on continuous variables such as the number of students living in each type of housing situation, the mean scores of children at each grade level, and categorical variables such as gender and race. For continuous variables,

means and standard deviations will be computed. Frequencies and percentages of distributions will be presented for categorical variables.

#### **Study Variables**

#### Dependent Variables

The dependent variable for this study is academic performance, which is observed through measurements of three models, each with a respective dependent variable of FCAT for reading, math, and science (Appendix C). Each of the measurements will be treated as one dependent variable in the regression model.

According to the Florida Department of Education, FCAT scores are measured in three ways: by achievement level, by scale score, and by developmental scale score.

The scale scores range from 100 to 500 for each subject area and grade level and are divided into five categories, from 1 (lowest) to 5 (highest), called achievement levels.

The developmental scale score was introduced to track student progress over time and across grade levels. New student "growth" reports (started in 2002) include student scores reported as an achievement level, a scale score of 100 to 500, and as developmental scale scores. The FCAT developmental scores range from 0 to 3000 across Grades 3-10. (Florida Department of Education, 2010)

This study will use continuous scores ranging from 100 to 500 as the measure of academic performance.

The Florida FCAT's are reported for each student, school, and district. "The scale scores, which range from 100 to 500 for each subject area and grade level, are divided into five categories, from 1 (lowest) to 5 (highest), called achievement levels" (Florida Department of Education, 2008). Measuring at the state, district, and school levels is reported using "average scores and reports showing the percentage of students performing at the five achievement levels<sup>5</sup>" (Florida Department of Education, 2008). Student results are reported using "achievement levels, scale scores<sup>6</sup>, and developmental scale scores<sup>7</sup> are reported, as well as performance on specific content strands; each student's norm-referenced scores<sup>8</sup> indicate the student's ranking against national norms" (Florida Department of Education, 2008).

<sup>&</sup>lt;sup>5</sup> "Five categories of achievement that represent the success students demonstrate with the content assessed on the FCAT Sunshine State Standards (SSS)" (Florida Department of Education, 2008).

<sup>&</sup>lt;sup>6</sup> "A score used to report test results on the entire test. FCAT SSS scale scores range from 100 to 500 and are determined by which test questions the student responded to correctly. FCAT NRT scale scores are solely determined by raw score point totals" (Florida Department of Education, 2008).

<sup>&</sup>lt;sup>7</sup> "A type of scale score used to determine a student's annual progress from grade to grade. The FCAT Developmental Scale for Reading and Mathematics ranges from 86 to 3008 across Grades 3–10. On the Student Report, the DSS is called the 'FCAT Score'" (Florida Department of Education, 2008).

<sup>&</sup>lt;sup>8</sup> Norm-referenced scores are student individually, or in groups, that compare the performance of one group of students to the national sample of students, called the norm group. (Florida Department of Education, 2008)

The mathematics portion of the FCAT is tested using the FCAT NRT<sup>9</sup>. Mathematics content consists of the following:

- Number sense and operations
- Patterns, relationships, and algebra
- Data, statistics, and probability
- Geometry and measurement (Florida Department of Education, 2008)

Students are required to use "logical reasoning and non-routine problem-solving strategies" (Florida Department of Education, 2008) in response to mathematics questions on the FCAT. Mathematic content is the criteria by which each test question is classified (Florida Department of Education, 2008).

Like the mathematic portion of the test, the FCAT reading questions are tested using FCAT NRT. These questions are based in functional, literary, and informational literature. The questions are classified by initial understanding, interpretation, critical analysis, and strategies (Florida Department of Education, 2008).

#### FCAT Reliability

Reliability of the FCAT is measured by its "consistency over alternate forms of the test" (Florida Department of Education, 2001). The FCAT used four types of reliability coefficients to determine consistency in the measurement of knowledge: internal consistency, test-retest reliability, inter-rater reliability, and reliability of

<sup>&</sup>lt;sup>9</sup> The FCAT NRT is part of the *Stanford Achievement Test Series*, *Tenth Edition*, copyright © 2003 by Harcourt Assessment, Inc.

classifications (Florida Department of Education, 2004). All four tests measure the coefficient as a number between 0.00 and 1.00, with 0.00 indicating no consistency in the reliability of test scores, and 1.00 representing perfect consistency reliability. Internal consistency testing is used for ongoing testing programs (Florida Department of Education, 2004).

The Florida Department of Education uses Cronbach's Alpha for its statistical reliability testing. This is an appropriate test because the responses are scored on a scale from 0-4. Cronbach's Alpha shows consistency at .88-.93 in both the math and reading portions of the exam, over a three year period at all tested grade levels, making the FCAT a reliable measure of testing educational achievement in Florida's public school students (Florida Department of Education, 2004).

#### **FCAT Validity**

"Validity refers to the extent to which the test measures the characteristic it is supposed to measure" (Florida Department of Education, 2004). Because the FCAT measures the student's academic achievement and validity is not directly observable, we rely on content-related evidence, criterion-related evidence, and construct-related evidence, which indicate the presence of absence of validity in these measurements (Florida Department of Education, 2004).

Certain steps have been taken to ensure high validity in the content of the FCAT tests. According to the Florida Department of Education (2004), these include

- Skills and standards deemed acceptable determined by both educators and citizens;
- Test item specifications written;
- Tests written by the guidelines established in the specifications;
- Pilot tests administered to random students at appropriate grade levels for each item;
- Items reviewed for bias with regard to cultural, ethnic, gender, and language concerns;
- Review also conducted by both teachers and instructional specialists;
- Psychometric properties determined through field-testing;
- Psychometric standards used to construct test items; and
- Tests constructed equal to the base test so that the content and test statistics match.

The Florida Department of Education (2004) states that the "evidence of reliability and validity supports the claim that FCAT is technically sound and meets or exceeds the professional standards for standardized achievement tests."

It is important to note that while there are two years of data available, this is not a longitudinal study, since the data is not identical for both years. Additionally, this study analyzes only the 2008-2009 data, as the 2009-2010 data does not contain information on whether or not the student is living with a parent; the accompanied variable is not present in this dataset.

### **Independent Variables**

The first independent variable is housing arrangement. This is a categorical variable that describes the living situation of each child. They are categorized by the US Department of Education as 1) Living in emergency or transitional shelters, FEMA Trailers, abandoned in hospitals or awaiting foster care, 2) Sharing the housing of other persons due to loss of housing, economic hardship or a similar reason; doubled-up, 3) Living in cars, parks, campgrounds, public spaces, abandoned buildings, substandard housing, bus or train stations, or similar settings, 4) Living in hotels or motels, or 5) Primary nighttime residence is unknown. Because the categories do not reflect the severity of the living conditions for each child, we treat this variable as dummy variables to examine the impact of different housing arrangement on the academic performance.

The 2008-2009 data provides us with a categorical variable called "living with parent or legal guardian," with which we can determine whether a child was living with one or more parents or legal guardians. The variable is measured in two ways: 1) The student is homeless (or student eligible for homeless services) but does not meet the definition of an unaccompanied youth, or 2) the student is a homeless youth (or student eligible for homeless services) who is not in the physical custody of a parent or guardian. This variable will be recoded into dummy variable for analysis.

While the independent variable "living with parent" provides information as to whether or not a student is living with at least one parent, the data does not describe how involved the parent is with the child's academics.

The child's grade is a dummy variable and is measured from 3-12 with 3 being third grade reference group and 12 being twelfth grade. Each grade is identified with its respective number: third grade = 3, fourth grade = 4, and so on.

#### Control Variables

The socio-economic factors and school characteristics are control variables in this study (Table 1). Socio-economic factors include the disability, grade, language, gender, and race of each student. Language is a categorical variable and is identified as "English" or "Spanish." Gender is also a categorical variable and is identified as "Male" or "Female."

Race is a categorical variable and is paced in the following categories:

- White, Non-Hispanic: A person having origins in any of the original peoples of Europe, North Africa or the Middle East.
- Black, Non-Hispanic: A person having origins in any of the black racial groups in Africa.
- Hispanic: A person of Mexican, Puerto Rican, Cuban or South or Central
   American origin or other Spanish culture or origin regardless of race.
- Asian or Pacific Islander: a person having origins in any of the original peoples of the Far East, Southeast Asia, the Pacific Islands or the Indian subcontinent.
- American Indian or Alaskan Native: A person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition.

# • Multiracial: A person having parents of different racial/ethnic categories

Table 1
Variables, Attributes, and Measures

Variable	Attribute	Measure
Gender	Describes the gender of the student	Male, Female
Race	Description of race or ethnicity of student	White, Black , Hispanic, Other
Accompanied	Describes whether or not child was living with an adult	Living with parent/legal guardian, living without parent/legal guardian
Ability	Describes identified exceptionalities of the student	Missing, disabled, gifted
Language	Describes primary language spoken in child's home	English, Spanish
Grade	Academic grade enrolled in at time of study.	3,4, 5, 6, 7, 8, 9, 10, 11, 12
Homeless	Describes living situation of child	Living in emergency or transitional shelters, FEMA Trailers, abandoned in hospitals or awaiting foster care.
		Sharing the housing of other persons due to loss of housing, economic hardship or a similar reason; doubled-up.
		Living in cars, parks, campgrounds, public spaces, abandoned buildings, substandard housing, bus or train stations, or similar settings.
		Living in hotels or motels.
		Primary nighttime residence is unknown.
Reading FCAT Score	Florida Comprehensive Assessment Testing Reading portion	Range of scores 100 - 426
MathFCAT Score	Florida Comprehensive Assessment Testing Math portion	Range of scores 100 - 500
Science FCAT Score	Florida Comprehensive Assessment Testing Science portion	Range of scores 100 - 412

Public schools in Florida are ranked each year on a school accountability report that includes the school grade, AYP, and school report card (Florida Department of Education, 2011). The Bureau of Accountability Reporting administers programs that "focus on calculating and reporting school grades and adequate yearly progress (AYP) for schools, districts, and the state in compliance with the federal Elementary and Secondary Education Act (NCLB Act of 2001)" (Florida Department of Education, 2011). These characteristics may provide insight into the average scores of all students at each school and the overall picture of student performance, but will not be included in this study due to difficulty in obtaining further data.

#### **Statistical Analysis**

Regression models are used because relational hypotheses are to be tested while controlling confounding variables. Since there is only one dependent variable for each model and the literature does not suggest a non-linear relationship, we assume the hypothesized relationship is linear, and multiple linear regression is appropriate.

This study will use multiple linear regression models to test the proposed hypotheses. The linear regression model will be used to explore relationships between variables by fitting a linear equation to the existing data. There are five principle assumptions that justify the use of the linear regression model: 1) linearity of the relationship between independent and dependent variables, 2) independence of errors, or no serial correlation, 3) normality of error distribution, 4) homoscedasticity, a constant

variance of errors versus time or prediction of any independent variable and 5) no multicollinearity relationship between independent variables.

Regression models are used because relational hypotheses are to be tested while controlling confounding variables. Since there is only one dependent variable for each model and the literature does not suggest a non-linear relationship, we assume the hypothesized relationship is linear, and multiple linear regression is appropriate.

Three regression models will be conducted to examine the relationship between each of the academic performance and its associated factors.

Where:  $\alpha$  represents intercept of the model,  $\beta$ s represent regression coefficients of independent variables and  $\varepsilon$  represents random error of the model. Student characteristics include sex, race, accompaniment, disability, language spoken, and grade. Model performance will be tested by using  $R^2$  to explain the proportion of the explained variance.

#### **Hypothesis Testing**

Hypotheses 1, 2, 3, and 4 are tested using the multiple regression models and the SAS 9.2 data analysis software, based on 2008-2009 data. For hypothesis 1, the housing variable will be treated as dummy variables based on the number of the categories. Each of the dummy variables will be compared to the reference variable in terms of its impact.

```
\begin{split} Y_{fcatread} = & \ \alpha + \beta_1 \ (Sex) + \ \beta_2 \ (Race \ 1) + \ \beta_3 \ (Race \ 3) + \ \beta_4 \ (Race \ 4) \\ & + \beta_5 \ \Big( ^{10}Accompany \Big) + \ \beta_6 \ \Big( LEP^{11} \Big) + \ \beta_7 \ \Big( ESE^{12}1 \Big) + \ \beta_8 \ (ESE \ 2) \\ & + \beta_9 \ (Language) + \ \beta_{10} \ (Grade \ 4) + \ \beta_{11} (Grade \ 5) + \beta_{12} \ (Grade \ 6) \\ & + \beta_{13} (Grade \ 7) + \ \beta_{14} \ (Grade \ 8) + \ \beta_{15} \ (Grade \ 9) + \ \beta_{16} \ (Grade \ 10) \\ & + \beta_{17} (Grade \ 11) + \ \beta_{18} \ (Grade \ 12) + \ \beta_{19} \ \Big( Homeless^{13} \Big) + \ \varepsilon \end{split}
```

<sup>12</sup> ESE indicates the student has been identified as one who has an exceptionality disability). These include orthopedically or visually impaired, receiving occupational or physical therapy, speech or language impaired, deaf or hard of hearing, emotionally handicapped, specific learning disabled, gifted, hospital/homebound, dual-sensory impaired, autistic, traumatic brain injured, developmentally delayed, or has other established conditions or health impairments.

<sup>13</sup> Homeless is an indication the child is living in emergency or transitional shelters, FEMA trailers, abandoned in hospitals or awaiting foster care, sharing the housing of other persons due to loss of housing, experiencing an economic hardship or a similar reason, doubled-up, living in cars, parks, campgrounds, public spaces, abandoned buildings, substandard housing, bus or train stations, or similar settings, living in hotels or motels. Or the primary nighttime residence is unknown.

<sup>&</sup>lt;sup>10</sup> Accompany represents the accompaniment of a child by one of more parents or legal guardians.

<sup>11</sup> LEP indicates the child is/was a) not born in the U.S. and whose native language is other than English; or was born in the U.S. but who comes from a home in which a language other than English is most relied upon for communication, b) an American Indian or Alaskan Native and comes from a home in which a language other than English has had a significant impact on his or her level of English language proficiency; and who as a result of the above has sufficient difficulty speaking, reading, writing or understanding the English language to deny him or her opportunity to learn successfully in classrooms in which the language of instruction is English, c) classified as limited English proficient and is enrolled in a program or receiving services that are specifically designed to meet the instructional needs of ELL students, regardless of instructional model/approach, d) being followed up for a two-year period after having exited from the ESOL program, e) in the 3rd-12th grade, tested fully English proficient on an Aural/Oral Test and is Limited English Proficient pending the Reading and Writing assessment or the student is in K-12th grade, answered "yes" on the Home Language Survey question "Is a language other than English spoken in the Home?" and is pending aural/oral assessment, f) one for whom a two-year follow-up period has been completed after the student has exited the ESOL program. This code also applies to John M. McKay Scholarship students who were formerly in an English Language Learners program.

```
\begin{array}{lll} Y_{fcatmath} = & \alpha + \beta_1 \ (Sex) + \beta_2 \ (Race \ 1) + \beta_3 \ (Race \ 3) + \beta_4 \ (Race \ 4) + \beta_5 \ (Accompany) \\ & + \beta_6 \ (LEP) + \beta_7 \ (ESE1) + \beta_8 \ (ESE \ 2) + \beta_9 \ (Language) + \beta_{10} \ (Grade \ 4) \\ & + \beta_{11} (Grade \ 5) + \beta_{12} \ (Grade \ 6) + \beta_{13} (Grade \ 7) + \beta_{14} \ (Grade \ 8) \\ & + \beta_{15} \ (Grade \ 9) + \beta_{16} \ (Grade \ 10) + \beta_{17} (Grade \ 11) + \beta_{18} \ (Grade \ 12) \\ & + \beta_{19} \ (Homeless) + \varepsilon \end{array}
```

```
\begin{array}{lll} Y_{fcatsci} = & \alpha + \beta_{1} \ (Sex) + \beta_{2} \ (Race \ 1) + \beta_{3} \ (Race \ 3) + \beta_{4} \ (Race \ 4) + \beta_{5} \ (Accompany) \\ & + \beta_{6} \ (LEP) + \beta_{7} \ (ESE1) + \beta_{8} \ (ESE \ 2) + \beta_{9} \ (Language) + \beta_{10} \ (Grade \ 4) \\ & + \beta_{11} (Grade \ 5) + \beta_{12} \ (Grade \ 6) + \beta_{13} (Grade \ 7) + \beta_{14} \ (Grade \ 8) \\ & + \beta_{15} \ (Grade \ 9) + \beta_{16} \ (Grade \ 10) + \beta_{17} (Grade \ 11) + \beta_{18} \ (Grade \ 12) \\ & + \beta_{19} \ (Homeless) + \varepsilon \end{array}
```

For example, if shelter is the reference group, the regression coefficient (beta) of single house will be used to test if homeless students living in single-family homes are more likely to achieve higher academic performance scores than children living in shelters. If the beta is statistically significant and is positive, it means that the hypothesis is partially supported regarding the comparison between those living in single–family homes and shelters. On the other hand, if beta is statistically significant and negative, it means that homeless students living in single-family homes are less likely to achieve higher academic performance scores than children living in shelters.

Hypothesis 2 is tested based on the living with parent or legal guardian variable. If the regression coefficient is statistically significant and positive, the hypothesis 2 is supported. The statistically significant control variables are also reported and included in the results of regression analysis. Despite a better analytical approach, latent variable-oriented model is not considered because not all students have three FCAT scores available during the study period. By using models such as structural equation model, the

sample sizes we could use to test hypotheses would be much smaller as opposed to testing the hypotheses using three individual regression models.

Hypothesis 3 is based on the independent variables associated with race and ethnicity. These include white, black, Hispanic (non-white), and other, which include Asian, Pacific Islander, Native American, and other mixed races/ethnicities). Regression analysis is used to avoid autocorrelation problems, leaving one variable out and coding it as the dummy variable. The largest group is "white"; therefore, this becomes the reference group in this analysis and white is coded as the dummy variable. The variables combined as "other" were done so due to the small number of students in these categories, leaving the measureable variables as black, Hispanic, and other students, to be measured against the white students.

Hypothesis 4 looks at the grade variable, which includes all grades in which the FCAT was administered: 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12. The 3<sup>rd</sup> grade variable is the baseline for all FCAT scores. The regression analysis required 3<sup>rd</sup> grade to be coded as a dummy variable, against which all other grade levels are measured.

# CHAPTER 5 FINDINGS

This is a retrospective cross sectional study of homeless students in Seminole County using administrative data provided by the schools from school years 2008-2009. The following explains the results of regression analysis with each dependent variable for reading, science, and math FCAT scores. We first hypothesized that homeless students living in single-family homes or shared residences are more likely to achieve higher academic performance scores than children living in shelters, hotels, cars, and other temporary living facilities, holding other student factors constant. Secondly, homeless students living with parents or legal guardians are more likely to achieve higher academic performance scores than children who do not have parents or legal guardians, holding other student factors constant. The significance level is set at 0.05. Therefore, if p is = or < than 0.05, we reject the null hypothesis. If p is > 0.05, we fail to reject the null hypothesis.

#### **Descriptive Results**

There are a total of 895 homeless students in the data set, with 485 identified as male and 410 as female.

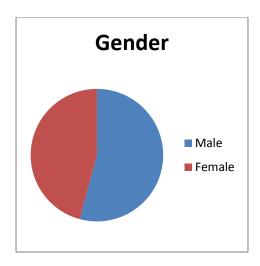


Figure 3. Gender of samples: Male versus female.

Of these, 893 were identified as homeless and living with a parent or legal guardian (188) or homeless and unaccompanied by a parent or legal guardian (788).

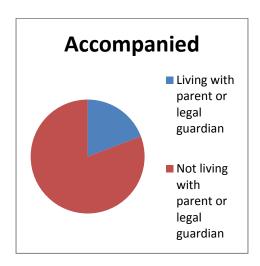


Figure 4. Children living with legal parent or guardian versus those who are not.

Eighty-eight of the children are identified as living in FEMA trailers, abandoned in hospitals, or awaiting foster care. Six hundred sixty two children share a house with other persons due to loss of housing, economic hardship or similar reason. This is often referred to as "doubled-up." The children who are doubled-up make up the largest group of homeless children in this study. Fourteen of the students were identified as living in cars, parks, campgrounds, public spaces, abandoned buildings, substandard housing, bus or train stations, or similar settings. One hundred thirty one were reported to have been living in hotels or motels.

The secondary data does not provide information on tracking siblings in this group or other children who may share family relationships. The data consists of details gathered on each individual child as one unit.

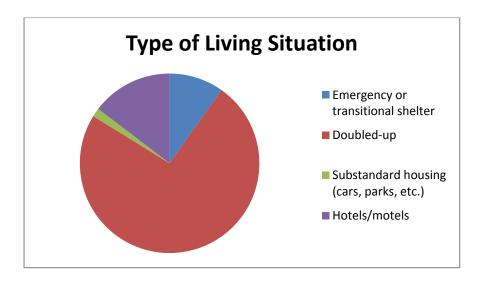


Figure 5. Type of living situation of samples.

There are 345 white students, 277 black students, 206 Hispanic students, four Asian students, one Native American student, and 62 students who identified as mixed race. Due to the low number of Asian, Native American and mixed race students, these were combined and placed into the category "other," containing 67 students.

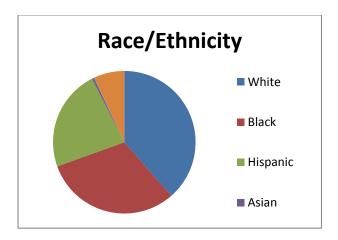


Figure 6. Race and ethnicity of samples.

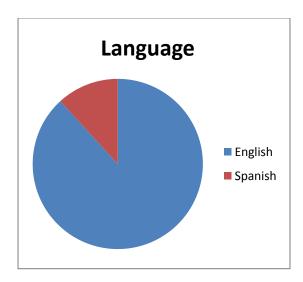


Figure 7. Languages the sample speaks.

Two hundred students were had been identified with a disability and 15 were identified as gifted. Of the 200 students with disabilities, 38 are speech impaired, 19 are language impaired, and two were deaf or hard of hearing. Twenty-five students were identified as being emotionally handicapped and 102 were specific learning disabled. Three students were hospital or homebound and six were identified as autistic. An additional five students were identified as having some other type of health impairment.

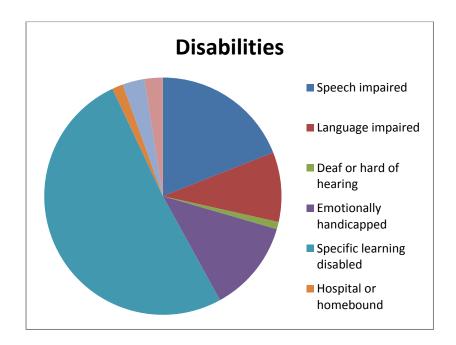


Figure 8. Disabilities of samples.

The number of students in grades 3-12 eligible to take FCAT exams is 596. The number of students in each grade from 3 - 12 are as follows: 87 in 3<sup>rd</sup> grade, 68 in 4<sup>th</sup> grade, 88 in 5<sup>th</sup> grade, 66 in 6<sup>th</sup> grade, 56 in 7<sup>th</sup> grade, 56 in 8<sup>th</sup> grade, 52 in 9<sup>th</sup> grade, 42 in 10<sup>th</sup> grade, 49 in 11<sup>th</sup> grade, and 32 in 12<sup>th</sup> grade. The sum of grades 3-12 is 596.

Table 2
Students Taking FCAT by Grade Level

Grade level: FCAT exams	Number of Eligible Students
3 <sup>rd</sup> grade	87
4 <sup>th</sup> grade	68
5 <sup>th</sup> grade	88
6 <sup>th</sup> grade	66
7 <sup>th</sup> grade	56
8 <sup>th</sup> grade	56
9 <sup>th</sup> grade	52
10 <sup>th</sup> grade	42
11 <sup>th</sup> grade	49
12 <sup>th</sup> grade	32
Total students	596

The minimum score for the reading FCAT exam is 100; the maximum score is 426. The mean average for reading FCAT scores is 295.8. The median value is 300 and the mode is 337.

The maximum score for math FCAT exams is higher than reading at 500, with the minimum score remaining at 100. The mean average of math FCAT scores is slightly higher than the reading scores at 301.5. The median value is 307.5 and the mode is 314.

The science FCAT exam scores are the lowest in all categories of mean, median, and mode, and the maximum score was also lowest at 412. The mean average of science FCAT scores is 291.95. The median score value is 299 and the mode is 311.

Table 3

Mean, Median, Mode, and Standard Deviation of FCAT Scores

FCAT	Mean	Median	Mode	Min	Max	Standard Deviation
Reading	295.80	300	337	100	426	54.15
Math	301.50	307.5	314	100	500	56.32
Science	291.95	299	311	100	412	57.78

## <u>Assumption Tests</u>

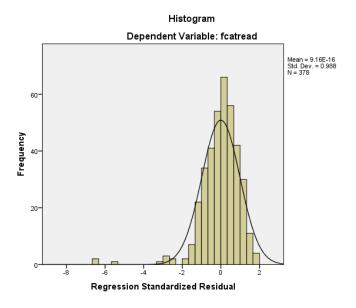


Figure 9. Histogram showing distribution of FCAT reading exams.

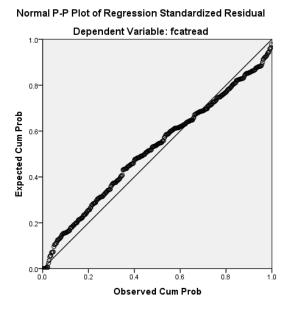


Figure 10. Normal P-P plot showing linearity of FCAT reading exams.

The approximate bell-curve shape in the histogram of Figure 8 shows a generally normal distribution and would appear to come from a normal population. The P-P Plot in Figure 9 appears to be linear; therefore we can assume the assumption of normality has been met.

Similar to the results observed in the histogram of FCAT reading exam scores (Figure 10), the FCAT science exams scores are normally distributed and appear to belong to a normal population. The plot of residuals in the FCAT science exams scores shown in the P-P Plot (Figure 11) fits the expected pattern well enough to support the conclusion that the residuals are normally distributed.

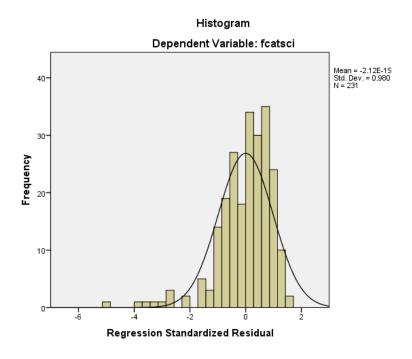


Figure 11. Histogram showing distribution of science FCAT exams.

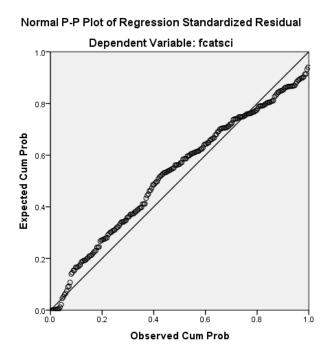


Figure 12. Normal P-P plot showing linearity of FCAT science exams.

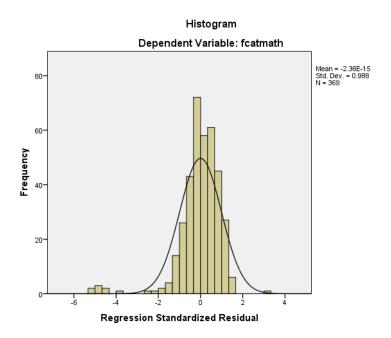


Figure 13. Histogram showing distribution of math FCAT exams.

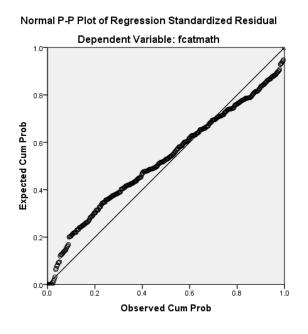


Figure 14. Normal P-P plot showing linearity of FCAT math exams.

The histogram depicting the distribution of math FCAT exam scores in Figure 12 shows a generally normal distribution. The linearity of the pattern in the P-P Plot shown in Figure 13 provides evidence that the measurements are normally distributed.

## Goodness of Fit

The Pearson Chi-square and log likelihood are used to determine goodness of fit for each model. The models achieved a moderate fit to the data. The following are the results of the regression analysis with regard to goodness of fit.

Table 4

Chi-Square Tests: FCAT Reading

Criteria	DF	Value	Value/DF
Pearson Chi-Square	358	867709.82	2423.77
Log Likelihood		-1998.98	

Table 5

Chi-Square Tests: FCAT Science

Criteria	DF	Value	Value/DF
Pearson Chi-Square	349	568145.03	2618.18
Log Likelihood		-1248.84	

Table 6

Chi-Square Tests: FCAT Math

Criteria	DF	Value	Value/DF
Pearson Chi-Square	349	917631.75	2629.32
Log Likelihood		-1966.15	

The FCAT reading scores of homeless students, there are three areas in which the study shows statistical significance in the relationship between homelessness and academic performance: black students, gifted students, and grade 12, with *p* values of .001, .005, and .037, respectively. The relationship between homelessness and gifted student performance in reading is a positive relationship, as these students scored higher than their non-gifted cohorts. Negative relationships occur with regard to race and grade, indicating these students scored significantly lower than others in their respective groups. In particular, homeless black students perform at a lower level than students of others races and children in grade 12 are performing with significantly lower scores when compared to children in grade 3.

There was no statistical significance in the grade variables for 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, and 11<sup>th</sup> grades. Additionally, while the gifted students score significantly higher on reading FCAT exams, there was no statistical significance in the relationship noted in the scores of students with other disabilities. There is also no statistical significance with regard to gender, accompaniment, or in race other than blacks. Hispanics and other minority students showed no change.

Table 7

Reading FCAT Parameter Estimates in the Regression

			Wald 95% Confidence Limits			
Variable	Estimate	Standard Error	Lower	Upper	Wild Chi- Square	Pr>ChiSq
Sex	0.93	2.656	4.276	6.136	0.12	0.726
Black	-20.376	6.284	32.692	8.059	10.51	0.001*
Hispanic	-4.947	8.661	21.923	12.029	0.33	0.568
Others	0.519	10.307	-19.683	20.720	0.00	0.96
Accompany	3.692	6.49	-9.028	16.412	0.32	0.569
Disb Missing	11.049	5.798	-0.314	22.412	3.63	0.057
Disabled	-10.193	6.032	-22.015	1.6295	2.86	0.091
Gifted	69.078	24.601	20.861	117.296	7.88	0.005*
Language	-5.838	6.149	-17.889	6.214	0.90	0.342
Grade 4	13.402	8.999	-4.234	31.039	2.22	0.136
Grade 5	-4.432	8.805	-21.690	12.826	0.25	0.615
Grade 6	-9.947	9.362	-28.295	8.402	1.13	0.288
Grade 7	10.98	9.734	-8.099	30.059	1.27	0.259
Grade 8	18.216	10.28	1.932	38.364	3.14	0.076
Grade 9	9.521	9.943	-9.967	29.01	0.92	0.338
Grade 10	-6.294	10.156	-26.199	13.61	0.38	0.535
Grade 11	-22.865	15.692	-53.621	7.891	2.12	0.145
Grade 12	-52.557	25.17	-101.888	-3.225	4.36	0.037*
Homeless	-0.978	3.164	-7.179	5.223	0.10	0.757

Table 8
Science FCAT Parameter Estimates in the Regression

			Wald 95% C			
Variable	Estimate	Standard Error	Lower	Upper	Wild Chi- Square	Pr>ChiSq
Sex	-1.431	3.602	-8.491	5.63	0.16	0.691
Black	-45.407	8.105	-61.292	-29.523	31.39	0.001*
Hispanic	-44.631	13.213	-70.527	-18.734	11.41	0.001*
Others	-26.194	12.445	-50.585	-1.803	4.43	0.035*
Accompany	15.198	8.103	-0.864	31.079	3.52	0.061
Disb Missing	-1.956	8.512	-18.64	14.727	0.05	0.818
Disabled	-16.179	8.114	-32.083	-0.276	3.98	0.046*
Gifted	41.699	23.004	-3.389	86.786	3.29	0.07
Language	-1.428	8.683	-18.445	15.59	0.03	0.869
Grade 6	3.542	11.778	-19.542	26.626	0.09	0.764
Grade 7	16.498	13.35	-9.667	42.662	1.53	0.217
Grade 8	6.323	11.307	-15.837	28.484	0.32	0.576
Grade 9	-6.931	12.223	-30.887	17.025	0.32	0.571
Grade 10	2.511	12.818	-22.611	27.633	0.04	0.845
Grade 11	8.236	11.277	-13.867	30.339	0.53	0.465
Grade 12	14.751	13.03	-10.787	40.289	1.28	0.258
Homeless	-2.991	4.062	-10.954	4.971	0.54	0.462

The analysis also shows statistical significance for all non-white races with regard to science FCAT scores, as well as homeless children with disabilities, as shown in Table 2. For black and Hispanic children, p = 0.001; all others p = 0.035. The p value of children with disabilities is 0.046. It is possible that the significance in the relationship between academic performance and disabilities is affected by the disability itself, in

addition to homelessness. The degree of disability or level of intelligence was not available in the data to be considered in this study. Most research on academic performance of students with disabilities focuses on learning disabilities (Lucas and Dong, 2006). Students with disabilities often perform poorly in comparison with their non-disabled peers. There are "present unique problems which adversely affect academic performance, which include level of intellectual functioning, as well as performance in reading, math, and writing" (Hughes & Smith, 1990, as cited in Lucas & Dong, 2006).

No statistical significance was noted in the results of gender or accompaniment. Furthermore, grave level was not statistically significant for science FCAT scores of homeless students. Other variables which showed no degree of statistical significance are gifted and language, indicating these variables may not have an effect on academic performance of homeless students when all other student factors are held constant.

With regard to math FCAT scores, the variables for black children and disability again show statistical significance with a p value of 0.001 and 0.01, respectively. There is a negative statistical significance in  $6^{th}$  grade math FCAT scores, p = 0.002. It should be noted that other studies have shown that the "…child's age was found to be independently associated with academic achievement; older youths scored lower than younger children" (Buckner & Bassuk, 2001). Comer (1988, as cited in Buckner and Bassuk, 2001), found that as children aged, they were more likely to "disengage" from school. This may also help to explain the negative relationship in the  $12^{th}$  grade reading FCAT scores.

Table 9

Math FCAT Parameter Estimates in the Regression

			Wald 95% C Limi			
Variable	Estimate	Standard Error	Lower	Upper	Wild Chi- Square	Pr>ChiSq
Sex	-1.844	2.788	-7.308	3.62	0.44	0.508
Black	-35.098	6.628	-48.089	-22.107	28.04	0.001*
Hispanic	-14.774	8.993	-32.399	2.851	2.7	0.1
Others	-2.104	10.896	-23.461	19.252	0.04	0.847
Accompany	1.129	6.832	-12.261	14.519	0.03	0.869
Disb Missing	1.25	6.035	-10.578	13.078	0.04	0.836
Disabled	-16.469	6.37	-28.953	-3.985	6.68	0.01*
Gifted	63.177	25.616	12.973	113.383	6.08	0.014*
Language	-9.465	6.444	-22.094	3.165	2.16	0.142
Grade 4	-9.667	9.367	-28.026	8.693	1.06	0.302
Grade 5	-3.337	9.166	-21.302	14.627	0.13	0.716
Grade 6	-30.015	9.81	-49.242	-10.788	9.36	0.002*
Grade 7	-11.159	10.232	-31.214	8.895	1.19	0.275
Grade 8	10.438	10.703	-10.54	31.416	0.95	0.33
Grade 9	-12.101	10.525	-32.729	8.528	1.32	0.25
Grade 10	1.288	10.574	-19.437	22.012	0.01	0.903
Grade 11	4.084	19.999	-35.113	43.281	0.04	0.838
Grade 12	1.194	30.088	-57.776	60.165	0.0	0.968
Homeless	-3.352	3.341	-9.9	3.197	1.01	0.316

A positive statistical significance is identified for gifted children with a p value of 0.014. This is not an unexpected result since gifted would indicated the child is already performing above grade level.

Only 6<sup>th</sup> grade shows a statistical significance in math FCAT scores; other grave levels, when compared to 3<sup>rd</sup> grade, did not. The primary language of students, as in the results of other FCAT data, was not a statistically significant factor in scores. No statistical significance was noted in the math FCAT scores of Hispanic children and children of other minority classifications with regard to homelessness. Additionally, accompaniment of a child by a parent or legal guardian did not appear to be statistically significant in the results of this analysis.

#### CHAPTER 6 CONCLUSION AND DISCUSSION

The literature and theory surrounding basic needs of children may lead one to conclude there to be a significant difference in a major area of a child's life such as academic performance, when certain basic needs are unmet. Based on the data provided for this study, a number of statistically significant relationships between variables were identified. The analysis provides the following conclusions to be drawn about the hypotheses:

H<sub>1</sub>: Homeless students living in single-family homes or shared residences are more likely to achieve higher academic performance scores than children living in shelters, hotels, cars, and other temporary living facilities, holding other student factors constant.

The data indicates no statistical significance in the relationship between the type of living situation a student is in and his or her academic performance. All test subjects: math, reading, and science, show no significant relationship to support this hypothesis.

Some variables not included in the data such as resilience of the child and specific amenities to which they had access (Internet, tutoring, etc.) may explain why housing did not affect student performance on FCAT exams. Other causes may include absent variables such as diet, school characteristics, consistent and/or reliable transportation, and individual IQ.

Furthermore, the type of living situation may not be considered so severe as to affect academic performance. For example, a child in foster care still has his or her basic

needs met and is more likely to receive services than a housed child, due to the caseworkers, guardian ad litem, and other personnel assigned to monitor the child's well-being and progress. There were a low number of children living in cars, campgrounds, and other temporary situations in this study. Eliminating the children who have access to stable housing such as those in foster care or who are doubled-up or living with relatives, while increasing the sample size, may affect the results.

H<sub>2</sub>: Homeless students living with parents or legal guardians are more likely to achieve higher academic performance scores than children who do not have parents or legal guardians, holding other student factors constant.

The data indicates no statistical significance in the relationship between a homeless student living with a parent or legal guardian and his or her academic performance. All test subjects: math, reading, and science, show no significant relationship to support this hypothesis.

Some variables not included in the data such as resilience of the child and specific amenities to which they had access (Internet, tutoring, etc.) may explain why living with a parent or legal guardian did not affect student performance on FCAT exams. Other possible causes may include absent variables such as those listed above.

H<sub>3</sub>: Homeless white students are more likely to achieve higher academic performance scores than homeless children of color (Black, Hispanic, and other).

This study shows significant relationships of homeless students between grade level and academic performance, and between race and academic performance.

African Americans, Latinos, Native Americans, and several Asian American subgroups have historically underperformed, academically, relative to their White American counterparts (Aud et al., 2010; Hollins, King, & Hayman, 1994; Jencks & Phillips, 1998; King, 2005; National Assessment of Educational Progress [NAEP], 2011; National Center for Educational Statistics [NCES], 2010, as cited in American Psychological Association, 2012). It is not a surprise, then, that the results of this study show a disparity among minority groups. However, the disparity may become even more difficult to overcome when other factors such as homelessness are present.

Black and Hispanics have a poverty rate twice that of non-Hispanic whites (Gradin, 2011). Income disparity in the Unites States is ever widening. The economy was in a recession during the years this data was collected, in which all income levels declined. Between 2009 and 2012, the first three years of economic recovery after an economic recession, the top one percent regained 36.8% of their income, while the lower 99% of American earners continued to decline, losing an additional .4% (Saez, 2012).

H4: Grade level of homeless students is significantly linked to academic performance: as grade level increases, academic performance decreases.

Hypothesis 4 is partially supported, with mixed results. The study supports the hypothesis and shows a significant relationship between homelessness and academic performance in the 6<sup>th</sup> grade on math FCAT scores and in the 12<sup>th</sup> grade for reading FCAT scores. Other grades showed no significant relationship. There are many explanations for these results, a few possibilities worth mentioning are teacher influence

(Heaverlo, 2011), social changes (Ghezzi, 2011), and drug abuse and dropout rates (Substance Abuse and Mental Health Services Administration, 2013).

High school 12<sup>th</sup> graders, even if they are high functioning students with sufficient credit hours for graduation, must pass reading and math FCAT exams in order to earn their diploma's (Wixon, 2013). Both middle school and high school students may find themselves enrolled in remedial classes to improve FCAT scores, regardless of their grades in class. Sixth grade fail rates are one of four major predictors to high school graduation rates, used to identify up to 60% of students who will not successfully complete the 12<sup>th</sup> grade (Balfanz et al., 2007).

The data indicates several significant relationships between variables; however,  $H_1$  and  $H_2$  failed to reject the null hypothesis. We reject the null hypothesis on  $H_3$  and  $H_4$  because they are identified as statistically significant.

Table 10

Results of Hypothesis Testing

Hypotheses	Outcome variable	Input variable of interest	Result on null hypothesis	
H1	Academic performance	Type of living situation	Fail to reject null hypothesis	
H2	Academic performance	Living with parent or legal guardian	Fail to reject null hypothesis	
Н3	Academic performance	Race	Reject null hypothesis	
H4	Academic performance	Grade level	Reject null hypothesis	

For H1, type of living situation and academic performance, we fail to reject the null hypothesis because there was found to be no significant relationship between variables. Similar results were found with H2 with no statistically significant relationship between the variables living with a parent or legal guardian and academic performance.

There was found to be a significant relationship between academic performance race, with black children performing at statistically significant lower rate than white children on FCAT exams. As a result, we reject the null hypothesis for H3.

The relationship between the variables grade level and academic performance also showed statistical significance in grades 6 and 12. We therefore reject the null hypothesis for H4.

#### **Practical and Policy Implications**

This study contributes to research on homelessness by indicating significance in grade and race with regard to academic performance among homeless students, particularly among black children and 6<sup>th</sup> and 12<sup>th</sup> grade students. There are many practical and policy implications to these results to include evaluation of current programs such as mentoring used to help students study for standardized exams. The cost consideration and feasibility of offering additional services is something the school board would need to assess. Without school characteristics, more information would be needed to determine where the greatest need exists and how available funding would be distributed.

Practical issues include discussion on whether or not programs need to be added or evaluated for changes to increase preparation time for testing, type of materials provided, and if additional tutoring would be beneficial to black students and children in the  $6^{th}$  and  $12^{th}$  grades.

Another practical issue is mentoring. Black students and students in 6<sup>th</sup> and 12<sup>th</sup> grade may need more preparation for state assessment exams. This is a program worth investing in as school-based mentoring has shown to yield long-term results in grade improvement and family relationships, as well as decreased likelihood or drug and alcohol use/abuse (Sipe, 1996).

Policy issues include the direction of grant funding for housing of families with school-aged children, specifically those in middle and high school and/or of black descent. Schools will need to determine whether or not additional support is needed for these categories of students and then creates policies to provide them with the means necessary to achieve their full potential, regardless of their economic status.

Another policy concern is the development of programs to benefit children who are at risk, without violating their civil rights (singling out black children). Not all black children are low performing students, just as not all white children are high performing, regardless of their housing situation. The school board should develop a way to identify children who are at a higher risk of failing the state assessment exams while protecting the civil rights of each child.

#### **Impact on Standardized Testing**

The Florida Standards Assessment (FSA) Exam is replacing the FCAT in spring of 2015. The new exam will require students to "create graphs and use critical thinking skills to respond to questions that are designed to assess higher-order thinking skills" (Wixon, 2014). There are as many concerns about the new test as were addressed with the FCAT. For example, the FSA is computer administered, is interactive (including listening to audio clips to answer questions), and is much longer than the FCAT. Even the writing portion of computer administered exams, which may cause problems for those who are not computer savvy and could inadvertently measure computer skills, rather than writing skills. The length of the test may also affect student performance, with third grade requiring an additional 40 minutes of testing, sixth and seventh grade will require an additional 160 minutes, and high school juniors who did not previously have to take an exam will now be required to test for 270 minutes (National Public Radio, 2014). Because this new exam has not been implemented at the time of this study and no research is currently available on its results, the existing data from student FCAT scores will be used in the analysis.

This study may impact the new Florida Standards Assessment Exam indirectly by focusing on some of the known disparities among students. For example, policy-makers have already identified concerns on the new exam with regard to computer-based testing and whether or not the exam will effectively test a student's knowledge of a subject area or if it will measure his computer skills. With further known disparities between black and white students, schools should make an effort to provide all children with the same

opportunity to learn the computer skills they will need to perform the FSA, regardless of whether or not they have a computer available to them where they currently reside. This is even more difficult when dealing with the homeless students, as they are more transient and may not have the luxury of a home computer or Internet access.

### **Academic Implications**

Possibly one of the most significant academic implications of early detection of at-risk students is improved pass rates. This is especially important in the 6<sup>th</sup> grade, as it is a significant predictor in overall high school graduation rates. Improvement in standardized test scores as early as 6<sup>th</sup> grade may increase the percent of students who successfully complete high school.

#### **Limitations and Future Studies**

There are a number of limitations to the study. There is some missing data (test scores) at the time this study was designed which may influence the results and decrease the sample population. Additionally, only one school year recorded data to determine whether or not a student is living with at least one parent or legal guardian. Therefore, the information learned from the 2009-2010 school year will not provide us with an analysis to determine whether living with a parent or legal guardian affects overall academic performance.

The study does not allow for other factors that may affect academic performance to include, but is not limited to, proper medical care, healthy diet, consistent and reliable transportation, individual child IQ, sleep habits, and overall health of the child.

Not all students have three FCAT scores available during the study period. This affects the model type and size used to test the hypothesis. Additionally, there are significant factors and limitations in controlling for subjects that may correlate. Because students do not take all exams in a given year, the data do not allow for testing of correlation of one subject to another.

A limitation in both this study and future research is the ability to conduct survey research with accuracy and adequate response rates. In addition to the obvious difficulty in tracking a highly transient population, it is often difficult to retrieve information from children and schools due to privacy and ethics concerns. Future survey research should be conducted in a controlled environment in conjunction with the school board and involve persons who are able to maintain contact with both the children identified as homeless and the families or caretakers responsible for their academic progress. This will provide the researcher with the ability to track individual children and longevity of homelessness.

An additional limitation is the incapability to explain the study results without survey results. While standardized exam scores are useful for placing a value on knowledge of specific subject areas, they do little to explain the variables that impacted those scores. Survey research can provide a more in depth perspective of how variables

such as eating habits, parental involvement, health issues, and more affect the individual child.

Future studies should include other variables that may affect academic performance and may require further inquiry into how many parents or legal guardians are in the home and whether the child is involved with a mentoring or tutoring program. Additionally, a further breakdown of disabilities would be helpful in determining whether or not the statistical significance between disability and academic performance is directly related to homelessness or if other variables such as the disability itself, is affecting the relationship.

School characteristics such as the race ratio at the school, income, and the size of the school, and number of students in each class were not included in this study. These variables may provide better insight and results in future studies with regard to homelessness and academic performance of students. For example, Schanzenbach (2014) claims class size matters in overall academic performance of children, with larger class sizes harming student outcomes. Additionally, "…increasing class size will harm not only children's test scores in the short run, but also their long-run human capital formation" (Schanzenbach, 2014).

School characteristics, which would add control variables to the model, identify each school by name and/or the number designated to that school, and the school grade. Schools are typically grades are rated as A, B, C, D, and F. Data from the schools would provide a measureable value to the following variables: percentage of students by race, the average family income, and the size of the school (number of students attending).

The benefits of a study of the relationship between housing situations and academic performance, and children living with parents and academic performance, may parameter estimate tables. Will this be help agencies better divert grant funding for temporary housing of homeless children and their families. The economic impacts range from the immediate (basic needs met and improved academic performance) to the long term (continuous improved academic performance, college entry rates of homeless students, employment rates over time, etc.).

In order to improve results in future studies and further understand the various influences on homeless student academic performance, qualitative research should also be incorporated into the research design. To gain qualitative data, a survey would be developed to draw inferences about the homeless population. A cross-sectional, non-experimental research survey will provide qualitative data to assist in drawing conclusions about the study and explain why certain findings are relevant and gain information as to how individual families are affected by homelessness. For example, survey research will help gain a better perspective of the degree of involvement between parent and child, which will strengthen the value of the parental influence variable.

The survey should seek to identify further demographic information, behavioral information, and attitudinal information. Demographic information will help us better understand individual family dynamics such as specifically with whom the child lives. For example, we can gain a better understanding of how children are placed in various living situations, extent of parental involvement, and with which parent or legal guardians the child(ren) reside, rather than just a number of children living with at least one parent

or legal guardian. Sibling relationships could be identified through survey data, providing data on the impact of homelessness on families as a family unit, in addition to that of the individual child.

Behavioral information will provide data as to whether a family member has suffered emotional trauma involved with attending an event for homeless families, or being labeled a "family in need." Attitudinal information ranks responses using a Likert scale with "satisfaction" as the unit of measurement. The scale is ranked from lowest to highest, with one indicating no satisfaction was gained and five indicating the recipient was completely satisfied. This will provide the qualitative data on how their homelessness affects the academic performance of the children in the home.

Future research should include variables that were not available for this study to include diet, health, sleep habits, extent of parental involvement, drug use/abuse, dropout rates, teacher involvement, school characteristics, family income, sibling information, extracurricular involvement, significant social changes such as puberty, divorce, or death in family, and many other dynamics which could potentially affect academic performance.

It should be noted that an attempt to gather survey information for this study failed to yield reportable results. It was expected that many of the recipients would not respond to the survey and certain portions of questions answered may be deemed invalid due to lack of response. While the response rate does not necessarily reflect the statistical reliability of the survey because response rates and statistical confidence are not linear, results of the survey were insufficient to draw conclusions about the homeless population

and no inferences could adequately be drawn from the data obtained by the survey. Furthermore, multiple attempts to obtain more (and more current) data from the Department of Education, Seminole County, organizations that had conducted previous survey's on similar target populations, and personnel who provided original data, but who have moved on to other positions, were unsuccessful. Researchers interested in future studies should consider focusing on partnering with the school liaisons in order to develop questions and improve response results. These questions should inquire about demographic, behavioral, and attitudinal data on homeless students and include family characteristics and traits that are unavailable in the secondary data collected by the schools.

## APPENDIX A HOMELESS STUDENT COUNTS

#### FLORIDA DEPARTMENT OF EDUCATION BUREAU OF FEDERAL EDUCATIONAL PROGRAMS HOMELESS STUDENT COUNTS 2009-2010 THROUGH 2002-2003

DISTRICT	DISTRICT NAME	2009-2010 HOMELESS	2008-2009 HOMELESS	2007-2008 HOMELESS	2006-2007 HOMELESS	2005-2006 HOMELESS	2004-2005 HOMELESS	2003-2004 HOMELESS	2002-2003 HOMELESS
01	ALACHUA	446	707	616	554	499	276	2,375	<11
02	BAKER	191	153	72	46	40	0	0	0
03	BAY	641	700	685	600	1,455	494	717	421
04	BRADFORD	122	<11	<11	<11	<11	<11	<11	0
05	BREVARD	965	478	205	70	90	<11	0	0
06	BROWARD	2,953	1,807	1,596	1,608	2,260	1,980	1,519	665
07	CALHOUN	47	12	<11	13	37	11	<11	0
08	CHARLOTTE	441	376	366	498	663	1,639	287	223
09	CITRUS	371	483	469	612	327	296	61	<11
10	CLAY	824	816	695	489	603	444	296	<11
11	COLLIER	1,360	814	612	524	586	383	218	21
12	COLUMBIA	380	423	89	61	67	0	0	0
13	DADE	4,268	2,581	2,382	2,203	490	1,578	1,481	1,286
14	DESOTO	223	193	257	313	749	758	52	0
15	DIXIE	60	12	15	16	12	0	0	0
16	DUVAL	947	2,144	1,931	1,663	1,509	37	113	315
17	ESCAMBIA	1,237	1,036	878	709	1,130	1,822	346	<11
18	FLAGLER	246	166	71	<11	41	<11	0	0
19	FRANKLIN	126	140	110	<11	<11	0	0	0
20	GADSDEN	713	689	725	555	409	374	69	0
21	GILCHRIST	27	<11	<11	0	<11	<11	0	0
22	GLADES	18	<11	<11	<11	0	0	0	0
23	GULF	<11	<11	<11	<11	42	0	0	0
24	HAMILTON	342	251	236	258	287	333	153	<11
25	HARDEE	146	49	71	91	152	154	<11	0
26	HENDRY	139	74	95	148	<11	<11	0	0
27	HERNANDO	242	207	156	265	98	67	0	0
28	HIGHLANDS	61	37	64	88	117	64	56	54
29	HILLSBOROUGH	3,124	2,054	2,073	2,051	818	599	449	0
30	HOLMES	24	<11	<11	0	<11	0	0	0
31	INDIAN RIVER	347	349	209	108	80	143	0	0
32	JACKSON	119	182	139	96	37	0	0	0
33	JEFFERSON	<11	<11	<11	0	<11	0	<11	<11
34	LAFAYETTE	141	105	89	146	92	24	0	0
35	LAKE	2,162	778	324	195	122	<11	0	0
36	LEE	1,143	1,030	839	638	459	776	498	275
37	LEON	523	329	309	284	304	317	165	0
38	LEVY	263	114	88	14	18	13	<11	0
39	LIBERTY	22	23	16	11	12	0	0	0

Source: Survey 5 Student Demographic Format and Federal State Indicator Format

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#### FLORIDA DEPARTMENT OF EDUCATION BUREAU OF FEDERAL EDUCATIONAL PROGRAMS HOMELESS STUDENT COUNTS 2009-2010 THROUGH 2002-2003

	2009-2010 2008-2009 2007-2008 2006-2007 2005-2008 2004-2005 2003-2004 2002-2003								
DISTRICT	DISTRICT NAME	2009-2010 HOMELESS	2008-2009 HOMELESS	2007-2008 HOMELESS	HOMELESS	2005-2006 HOMELESS	2004-2005 HOMELESS	2003-2004 HOMELESS	2002-2003 HOMELESS
40	MADISON	57	89	43	35	28	340	noweress 0	0
41	MANATEE	1.684	1.770	1.574	1.778	1.998	2.415	1.329	943
42	MARION	1,691	1,675	1,060	941	715	1.076	814	533
43	MARTIN	68	48	42	23	39	0	<11	<11
44	MONROE	298	317	243	166	92	212	224	275
45	NASSAU	298 145	54	105	53	58	20	<11 <11	0
									•
46	OKALOOSA	482	335	451	28	14	15	15	0
47	OKEECHOBEE	203	130	60	147	162	125	0	0
48	ORANGE	1,324	2,467	1,811	817	121	504	237	<11
49	OSCEOLA	1,364	1,251	1,213	1,294	978	1,169	345	<11
50	PALM BEACH	1,960	1,339	801	1,479	1,729	1,317	827	90
51	PASCO	2,093	1,815	1,599	1,428	1,754	1,490	757	364
52	PINELLAS	2,462	1,870	962	938	578	118	554	0
53	POLK	2,219	2,024	1,662	1,552	1,414	1,828	417	0
54	PUTNAM	720	623	525	615	807	936	782	0
55	ST. JOHNS	344	149	86	46	0	<11	<11	<11
56	ST. LUCIE	222	72	27	86	96	0	0	0
57	SANTA ROSA	1,328	943	996	1,229	2,057	2,367	293	253
58	SARASOTA	872	1,006	1,068	851	762	688	255	146
59	SEMINOLE	1,322	1,008	632	616	829	721	310	72
60	SUMTER	124	105	47	<11	<11	0	0	0
61	SUWANNEE	322	387	257	166	72	17	0	<11
62	TAYLOR	73	101	75	<11	<11	0	0	0
63	UNION	121	51	52	15	<11	0	0	0
64	VOLUSIA	1,889	1,973	1,977	1,384	1,235	815	370	221
65	WAKULLA	108	283	173	<11	20	<11	16	<11
66	WALTON	40	36	316	211	320	12	<11	0
67	WASHINGTON	165	22	0	<11	17	0	0	0
	TOTALS	49,104	41,286	34,375	30,878	29,545	28,805	16,430	6,201

Source: Survey 5 Student Demographic Format and Federal State Indicator Format

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## APPENDIX B KEY PROVISIONS OF THE NO CHILD LEFT BEHIND ACT

State	States must implement annual state assessments in reading and mathematics in grades 3-8 and at least
assessments	once in grades 10-12, and in science at least once in each of three grade spans: 3-5, 6-9, and 10-12.  Assessments must be aligned with challenging state content and academic achievement standards.  States must provide for participation of all students, including students with disabilities and limited English proficient (LEP) students. States must provide for the assessment of English language proficiency of all LEP students.
Adequate	States must set annual targets that will lead to the goal of all students' reaching proficiency in reading
Adequate yearly progress (AYP)	and mathematics by 2013-14. For each measure of school performance, states must include absolute targets that must be met by key subgroups of students (major racial/ethnic groups, low-income students, students with disabilities, and LEP students). To make AYP, schools and districts must meet annual targets for each student subgroup in the school, and must test 95 percent of students in each subgroup. States also must define an "other academic indicator" that schools must meet in addition to proficiency targets on state assessments.
Schools	Title I schools and districts that do not make AYP for two consecutive years are identified for
identified for improvement	improvement and are to receive technical assistance to help them improve. Those that miss AYP for additional years are identified for successive stages of interventions, including corrective action and restructuring (see below). To leave identified-for-improvement status, a school or district must make AYP for two consecutive years.
Public school	Districts must offer all students in identified Title I schools the option to transfer to a non-identified
choice	school, with transportation provided by the district.
Supplemental educational services	In Title I schools that miss AYP for a third year, districts also must offer low-income students the option of supplemental educational services from a state-approved provider.
Corrective actions	In Title I schools that miss AYP for a fourth year, districts also must implement at least one of the following corrective actions: replace school staff members who are relevant to the failure to make AYP; implement a new curriculum; decrease management authority at the school level; appoint an outside expert to advise the school; extend the school day or year; or restructure the internal organization of the school.

Restructuring	In Title I schools that miss AYP for a fifth year, districts also must begin planning to implement at
	least one of the following restructuring interventions: reopen the school as a charter school; replace
	all or most of the school staff; contract with a private entity to manage the school; turn over
	operation of the school to the state; or adopt some other major restructuring of the school's
	governance. Districts must spend a year planning for restructuring and implement the school
	restructuring plan the following year (if the school misses AYP again for a sixth year).
Highly	All teachers of core academic subjects must be highly qualified as defined by NCLB and the state. To
qualified	be highly qualified, teachers must have a bachelor's degree, full state certification, and demonstrated
teachers	competence in each core academic subject that they teach. Subject-matter competency may be
	demonstrated by passing a rigorous state test, completing a college major or coursework equivalent,
	or (for veteran teachers) meeting standards established by the state under a "high, objective uniform
	state standard of evaluation" (HOUSSE).
Use of research	Schools must use effective methods and instructional strategies that are based on scientifically-based
based practices	research.

Source: Stullich, S., Eisner, E., and McCrary, J. (October, 2007).

# APPENDIX C TABLE OF OPERATIONAL VARIABLES

Definitions	Variable Type
	Dependent
	Dependent Dependent
Describes the living situation of the child:	Independent
A=Living in emergency or transitional shelters, FEMA Trailers, abandoned in hospitals or * awaiting foster care.	
B=Sharing the housing of other persons due to loss of housing, economic hardship or a similar reason; doubled-up.	
D=Living in cars, parks, campgrounds, public spaces, abandoned buildings, substandard housing, bus or train stations, or similar settings.	
E=Living in hotels or motels.	
U=Primary nighttime residence is unknown.	
F=students awaiting foster care *2008-09 data and older. 2009-10 and current are included in A	
Homeless Unaccompanied Youth N=This student is homeless (or student eligible for homeless services) but does not meet the definition of an unaccompanied youth. Y=Yes, This student is a homeless youth (or student eligible for homeless services) who is not in the physical custody of a parent or guardian.	Independent
Z= Not applicable. This student does not meet the definition of a homeless youth (or student eligible for homeless services).	
Using the definitions and the codes given below, indicate the status of the student who has been identified as an English Language Learner (ELL) student. An ELL is one who:  Was not born in the U.S. and whose native language is other than English; or Was born in the U.S. but who comes from a home in which a language other than English is most relied upon for communication; or	Control
	Raw score of reading FCAT exam test results Raw score of math FCAT exam test results Raw score of science FCAT exam test results Describes the living situation of the child:  A=Living in emergency or transitional shelters, FEMA Trailers, abandoned in hospitals or * awaiting foster care.  B=Sharing the housing of other persons due to loss of housing, economic hardship or a similar reason; doubled-up.  D=Living in cars, parks, campgrounds, public spaces, abandoned buildings, substandard housing, bus or train stations, or similar settings.  E=Living in hotels or motels.  U=Primary nighttime residence is unknown.  F=students awaiting foster care *2008-09 data and older. 2009-10 and current are included in A  Homeless Unaccompanied Youth N=This student is homeless (or student eligible for homeless services) but does not meet the definition of an unaccompanied youth. Y=Yes, This student is a homeless youth (or student eligible for homeless services) who is not in the physical custody of a parent or guardian.  Z= Not applicable. This student does not meet the definition of a homeless youth (or student eligible for homeless services).  Using the definitions and the codes given below, indicate the status of the student who has been identified as an English Language Learner (ELL) student. An ELL is one who:  Was not born in the U.S. and whose native language is other than English; or Was born in the U.S. but who comes from a home in which a language other than English is most

	Is an American Indian or Alaskan Native and comes from a home in which a language other than English has had a significant impact on his or her level of English language proficiency;	
	and who as a result of the above has sufficient difficulty speaking, reading, writing or understanding the English language to deny him or her opportunity to learn successfully in classrooms in which the language of instruction is English.	
	LY= The student is classified as limited English proficient and is enrolled in a program or receiving services that are specifically designed to meet the instructional needs of ELL students, regardless of instructional model/approach.	
	LF= The student is being followed up for a two-year period after having exited from the ESOL program.	
	LP= The student is in the 3rd-12th grade, tested fully English proficient on an Aural/Oral Test and is Limited English Proficient pending the Reading and Writing assessment or the student is in K-12th grade, answered "yes" on the Home Language Survey question "Is a language other than English spoken in the Home?" and is pending aural/oral assessment.	
	LZ= The student is one for whom a two-year follow- up period has been completed after the student has exited the ESOL program. This code also applies to John M. McKay Scholarship students who were formerly in an English Language Learners program.	
LEDENTEN (DT	ZZ=Not applicable	0 1 1
LEPENTRYDT LEP_EXITDT	Date student was entered into ELL.  Date student exited ELL. If student is still enrolled,	Control
LEP_EXIIDI	there is not exit date.	Control
SummerSchlTer m	Student attended a summer school term in Seminole County	Control
ENTERDATE	Date student first enrolled in Seminole County public school system	Control
LEAVEDATE	Date student was withdrawn from Seminole County public school system	Control
BIRTHDATE	Childs date of birth	Control

ESE/SrvHndCap	Exceptionality (Disability)	Control
	A N/A	
	B N/A	
	C Orthopedically Impaired	
	D Occupational Therapy	
	E Physical Therapy	
	F Speech Impaired	
	G Language Impaired	
	H Deaf or Hard of Hearing	
	I Visually Impaired	
	J Emotionally Handicapped	
	K Specific Learning Disabled	
	L Gifted	
	M Hospital/Homebound	
	O Dual-Sensory Impaired	
	P Autistic	
	S Traumatic Brain Injured	
	T Developmentally Delayed	
	U Established Conditions	
	V Other Health Impaired	
HomelessDt	Z Not Applicable	Control
Homelessut	Length of time homeless. 0 = less than 3 months	Control
	1 = 3-6 months	
	2 = 6-12 months	
	3 = more than 1 year	
NUM CCHOOL/CCHIN	Student ID on the data sheet	Control
SCHOOL/SCHLN UM	The number designated to a specific school so that it can be identified by number in addition to name.	Control
O.W.	Refer to 10-11_SchAddPr_Revised_Updated_4-	
	2011(1) Excel spreadsheet (Appendix D)	
PRIMARYLNG	Describes the [primary language spoken in the	Control
	child's home	
	EN=English	
	SP=Spanish	
Grade	Equivalent to grade the child is in.	Control
	PK = Pre-kindergarten	
Gender	KG=Kindergarten M=Male	Control
Condo	F=Female	Control

Ethnic/RACIALC AT	W=White, Non-Hispanic: a person having origins in any of the original peoples of Europe, North Africa or the Middle East.	Control
	B= Black, Non-Hispanic: a person having origins in any of the black racial groups in Africa.	
	H= Hispanic: a person of Mexican, Puerto Rican, Cuban or South or Central American origin or other Spanish culture or origin regardless of race.	
	A= Asian or Pacific Islander: a person having origins in any of the original peoples of the Far East, Southeast Asia, the Pacific Islands or the Indian subcontinent.	
	I= American Indian or Alaskan Native: a person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition.	
	M= Multiracial: a person having parents of different racial/ethnic categories.	

# APPENDIX D TABLE OF SEMINOLE COUNTY SCHOOLS

### (SCHOOL/SCHLNUM VARIABLE)

					Ту
Sch.	SASI.	School Name	ServerName	Abrev	pe
0021	021	Hamilton Elementary School	Haes-aa-ncs	HAES	Е
0031	031	Bear Lake Elementary	Bles-aa-ncs	BLES	Е
0041	041	English Estates Elementary School	Eees-aa-ncs	EEES	Е
0051	051	Geneva Elementary School	Gees-aa-ncs	GEES	Е
0071	071	Lake Mary High School	Lmhs-aa-ncs	LMHS	Н
0081	081	Lake Mary Elementary School	Lmes-aa-ncs	LMES	Е
0091	091	Longwood Elementary School	Lees-aa-ncs	LEES	Е
0101	101	Milwee Middle School	Mlms-aa-ncs	MLMS	M
0111	111	Evans Elementary	Eves-aa-ncs	EVES	Е
0121	121	Layer Elementary	LRES-aa-ncs	LRES	Е
0131	131	Lawton Elementary	Lawe-aa-ncs	LAWE	Е
0141	141	Pine Crest Elementary	Pces-aa-ncs	PCES	Е
0151	151	Sanford Middle School	Sfms-aa-ncs	SFMS	M
0171	171	Walker Elementary	Jwes-aa-ncs	JWES	Е
0181	181	Seminole High School	Shs-aa-ncs	SHS	Н
0182	182	Millennium Middle School	Lvms-aa-ncs	LVMS	M
0201	201	South Seminole Middle School	Ssms-aa-ncs	SSMS	M
0202	202	Casselberry Elementary School	Cbes-aa-ncs	CBES	Е
0231	231	Wilson Elementary School	Wles-aa-ncs	WLES	Е
0251	251	Crooms Academy of Info Tech	Crmh-aa-ncs	CRMH	Н
0271	271	Goldsboro Elementary School	Gbes-aa-ncs	GBES	Е
0281	281	Hopper Exceptional Student Center	Hctr-aa-ncs	HCTR	S
0291	291	Jackson Heights Middle School	Jhms-aa-ncs	JHMS	M
0301	301	Midway Elementary School	Mide-aa-ncs	MIDE	Е
		Rosenwald Exceptional Student			
0311	311	Cente	Rwsp-aa-ncs	RWSP	S
0331	331	Highlands Elementary School	Hles-aa-ncs	HLES	Е
0361	361	Rainbow Elementary School	Rnbw-aa-ncs	RNBW	Е
0391	391	Winter Springs Elementary	Wses-aa-ncs	WSES	Е
0401	401	Spring Lake Elementary School	Sles-aa-ncs	SLES	Е

0421	421	Oviedo High School	Ohs-aa-ncs	OHS	Н
0431	431	Lyman High School	Lyhs-aa-ncs	LYHS	Н
0441	441	Carillon Elementary School	Cnes-aa-ncs	CNES	Е
0491	491	Lake Brantley High School	Lbhs-aa-ncs	LBHS	Н
0501	501	Teague Middle School	Tems-aa-ncs	TEMS	M
0502	502	Forest City Elementary	Fces-aa-ncs	FCES	Е
0511	511	Red Bug Elementary School	Rbes-aa-ncs	RBES	Е
0521	521	Idyllwilde Elementary School	Idye-aa-ncs	IDYE	Е
0531	531	Eastbrook Elementary School	Ebes-aa-ncs	EBES	Е
0541	541	Tuskawilla Middle School	Twms-aa-ncs	TWMS	M
0551	551	Lake Howell High School	Lhhs-aa-ncs	LHHS	Н
0561	561	Altamonte Elementary School	Ales-aa-ncs	ALES	Е
0571	571	Journeys Academy	Excel-aa-ncs	JRNY	S
0581	581	Sabal Point Elementary	Spes-aa-ncs	SPES	Е
0591	591	Woodlands Elementary School	Wdes-aa-ncs	WDES	Е
0601	601	Lake Orienta Elementary	Lkoe-aa-ncs	LKOE	Е
0611	611	Sterling Park Elementary School	Stpe-aa-ncs	STPE	Е
0621	621	Rock Lake Middle School	Rlms-aa-ncs	RLMS	M
0651	651	Wekiva Elementary School	Wees-aa-ncs	WEES	Е
0661	661	Keeth Elementary School	Kees-aa-ncs	KEES	Е
0671	671	Greenwood Lakes Middle School	Glms-aa-ncs	GLMS	M
0681	681	Stenstrom Elementary School	Stne-aa-ncs	STNE	Е
0691	691	Heathrow Elementary School	Hees-aa-ncs	HEES	Е
0701	701	Partin Elementary School	Pare-aa-ncs	PARE	Е
0711	711	Indian Trails Middle School	Itms-aa-ncs	ITMS	M
0721	721	Chiles Middle School	Lcms-aa-ncs	LCMS	M
0731	731	Markham Woods Middle School	Mkms-aa-ncs	MKMS	M
0801	801	Bentley Elementary School	Bees-aa-ncs	BEES	Е
0811	811	Wicklow Elementary School	Wkle-aa-ncs	WKLE	Е
0821	821	Crystal Lake Elementary School	CLES-aa-ncs	CLES	Е
0911	911	Winter Springs High School	Wshs-aa-ncs	WSHS	Н
0931	931	Hagerty High School	Esc-Special-ncs	HHS	Н
3518	221	McKay Scholarship	Esc-Special-ncs	SPECIAL	О
7001	001	Seminole Virtual K-12	Esc-Special-ncs	SVIP	О
	1	1	I	1	1

7004	004	Seminole Virtual School	Esc-Special-ncs	SCVS	О
9206	206	Detention Center	Alted-aa-ncs	SPECIAL	О
9207	207	Hospital Homebound	Esc-Special-ncs	SPECIAL	О
9215	215	BOYSTOWN	Alted-aa-ncs	SPECIAL	О
9216	216	SCPS Grove	Excel-aa-ncs	EXCEL	О
9218	218	T.A.P.P. CHILD CARE	Esc-Special-ncs	SPECIAL	О
9219	219	SO. SEMINOLE HOSPITAL	Alted-aa-ncs	SPECIAL	О
9222	222	Rays of Hope Charter School	Esc-Special-ncs	SPECIAL	С
9224	224	SCPS Consequence Unit	Excel-aa-ncs	EXCEL	О
9225	225	John Polk Alternative School	Alted-aa-ncs	SPECIAL	О
9228	228	UCP	Esc-Special-ncs	SPECIAL	С
9229	229	Choices in Learning	Esc-Special-ncs	SPECIAL	С
9705	705	Contracted Services	Esc-Special-ncs	SPECIAL	О
9706	706	ESSS Compliance	Esc-Special-ncs	ESSS	О
9903	903	HEAD START	Esc-Special-ncs	SPECIAL	О
9904	904	Early Intervention	Esc-Special-ncs	SPECIAL	О
N998	998	Home School	Esc-Special-ncs	SPECIAL	О

# APPENDIX E PARENTAL INVOLVEMENT SURVEY QUESTIONS

Parental Involvement (Refer to Appendix F)	The following three variables define parental involvement as they relate to this study.
Reside (Q3)	Describes who the child resides with:  0 = One parent or legal guardian  1= Both parents or legal guardians  2=Foster family  3 = Other relatives  4=Friends  5 = Other
Involve (Q4)	Describes how the adult in the household is involved with the child's school academics and activities:  0=Attends parent/teacher conferences  1=Assists children with homework  2=Attends after school activities  3=Other
Monprog (Q5)	Describes how the adult in the household monitors the academic progress of the child:  0=E-mail  1=Interim reports  2=Report cards  3=Student  4=Telephone calls  5=Other

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