

5-23-2016

# Socioeconomic status and its relationship to educational resources

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**SOCIOECONOMIC STATUS AND ITS RELATIONSHIP TO EDUCATIONAL  
RESOURCES**

by

Christene M. Sledge

A Thesis

Submitted to the  
Department of Psychology  
College of Science and Mathematics  
In partial fulfillment of the requirement  
For the degree of  
Master of Arts in School Psychology  
at Rowan University  
April 22, 2016

Thesis Chair: Roberta Dihoff Ph.D.

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## **Acknowledgements**

I would like to thank my parents Carla and Herman Sledge for making it possible for me to return to school. I would also like to thank my best friend and future husband Mark Simone for supporting me and putting up with me throughout my educational endeavors, as well as the rest of my family Simones and Sledges alike. Lastly, I would like to thank Professor Daniel Davis who encouraged me to pursue graduate level education and taught me to challenge self-imposed barriers to future success.

## **Abstract**

Christene Sledge

### **SOCIOECONOMIC STATUS AND ITS RELATIONSHIP TO EDUCATIONAL RESOURCES**

2016

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Master of Arts, School Psychology

The relationship between socioeconomic status and access to educational resources was examined. According to a national report on school funding, New Jersey rates third in the nation for equality in school funding (Baker, Sciarra and Farrie 2015). Although disparities in school funding are lower than average, students of low socioeconomic status are still at a disadvantage when entering school. The ways in which school districts spend their money was believed to be affected by the socioeconomic status of the students who attend their schools. Literature was reviewed on the ways in which socioeconomic status has been associated with various health and developmental issues that can effect a child's success in school, as well as family and parenting factors that can lead to a child's degree of readiness for the demands of school. Aside from health and family influences, differences were also found in what non-academic services were necessary for schools to provide such as meals, which left less funding available for extra-curricular activities found to improve overall academic performance and a student's motivation for staying in school at the high school level. In this current study, budgets of several New Jersey school districts were examined and compared to the New Jersey Department of Education's district factor grouping scores which represent a school district's socioeconomic status. Though a linear relationship was not found, the significance of equal funding, yet unequal life circumstances was discussed.

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## **Chapter 1**

### **Introduction**

The relationship between socioeconomic status and a child's access to educational resources in public school was evaluated. The information gathered in this study is of extreme importance because although it is widely believed that academic success comes from personal perseverance and motivation, children of low socioeconomic status are at a disadvantage in the public education system. Nearly one million people live in poverty in New Jersey and over 646,000 of them are children, a number that accounts for one third of all of the children in the state (O'Dea, 2014). By understanding the many disparities in education and the different needs of students of different socioeconomic status, educational funding and services can be improved to ensure that children have the same opportunities in public school regardless of what school they attend, instead of setting up children of low socioeconomic status for even more disadvantages and exacerbating an already unequal situation.

### **Hypothesis**

This study examined the relationship between socioeconomic status (SES) and a child's access to educational resources such as reading specialists, teacher aides, and extracurricular activities in the state of New Jersey. A prediction of this study was that schools of low SES students spend less money on educational resources and more on other services that are not related to academics such as administrative costs, high teacher turnover, and food programs. Because the need for other services is higher in low SES schools than higher SES schools, low SES students do not receive the same educational advantages of higher SES students even though they have comparable budgets. For



educational funding purposes, the state of New Jersey has rated schools based on a variety of factors which are good indicators of socioeconomic status. This method is called District Factor Grouping (DFG). In this study, DFG and the New Jersey Taxpayers Guide to Educational Spending, which is a breakdown of the budgets of different schools, are examined in order to determine if there is a difference in the way that school budgets are spent and in what areas those differences lie.

### **Significance of the Study**

There is a sizeable gap between the academic achievement of students from different social classes in America. While some may argue that this gap is due to lack of personal motivation, there are many adversities that children who grow up in poverty face, while children of higher socioeconomic status have more advantages and opportunities to do well in school. Students who come from poor families are more likely to have cognitive difficulties, difficulty reading, less social support, are more likely to have difficulties in academic settings and drop out of school before completion. By adjusting school funding so that students have the same educational resources, not just the same amount of funding, public education can become more of the equal opportunity it is commonly believed to be. Lower levels of education are highly correlated with crime and long term poverty. It is important to break cycles of class reproduction so that poverty is not perpetuated by poor education and poor life chances.

### **Definitions**

According to the American Psychological Association, “socioeconomic status is commonly conceptualized as the social standing or class of an individual or group. It is often measured as a combination of education, income and occupation. Examinations of

socioeconomic status often reveal inequities in access to resources, plus issues related to privilege, power and control” (2007).

Educational resources refer to any program, activity, or faculty that add to the enhancement of learning. These resources include smaller teacher to student ratios, on-site librarians, classroom aides, classes in music, art, foreign language, theater, etc. , speech, physical, and occupational therapists, extracurricular activities such as sports and clubs, and any other programs, activities, or faculty that provide academic support, broaden a child’s knowledge, or encourage involvement in school.

### **Limitations and Assumptions**

While school funding and resources are important factors in education, it is important to understand that success in school is also greatly influenced by home environments, poverty and parental involvement. These variables are not covered in this research, but it is mentioned in the literature review due to extreme importance. It is assumed in this research that children who have more access to resources and whose parents have more access to resources, will do better in school and receive a better education which in turn leads to more promising life chances.

## **Chapter 2**

### **Literature Review**

The institution of public education does not occur in a vacuum. Rather, it is immersed in a web of politics, budgets, endless reforms, and controversies. As a society, we expect public schools to educate young children and transform them into knowledgeable adults who will be able to join the workforce and become productive members of society. We expect students to do well so that they can graduate high school, possibly go to college, and be able to financially support themselves. We see people who do not finish school as a drain on society, and often the blame is put entirely on that individual. What we often fail to see is that every student who comes to school is a product of the environment in which they live, not solely the product of the public education system. It is therefore of utmost importance that we are able to recognize the different needs of students who come from different home environments, provide resources where they are needed, and fund schools accordingly so that they can provide those resources.

#### **How New Jersey Public Schools are Funded**

New Jersey public schools have undergone many changes over the past few decades regarding how districts receive funding, how much funding they receive, and where the funding comes from. School districts in New Jersey are funded by a combination of municipal property taxes and state aid (New Jersey Dept. of Education, 2005). For this reason, children in wealthier areas with higher property values and taxes and lower population densities had better funded schools, smaller student to teacher ratios, more academic resources, more extra-curricular activities and academic

enrichment such as music, art, and foreign language classes than their lower SES counterparts. Over the years, several attempts to decrease funding disparities have been made.

In 1985 the school funding formula was based primarily on property taxes, and was deemed unconstitutional in the court ruling of *Abbott v. Burke* on the grounds that a thorough and efficient system of public schools must be made available to all students, and that students in certain districts were receiving inadequate education due to low school funding (Staff, 2011). Due to this legislation, low-income districts were identified by the New Jersey Legislature, the State Board, and the Commissioner of Education and labeled as Abbott Districts. Districts that qualified for Abbott remedies were funded at the same level as the highest funded districts in the state. This piece of legislation has been extremely controversial and has undergone thirteen revisions over the past thirty years (Librera, 2005).

### **District Factor Groupings**

District Factor Groupings (DFG), first developed in 1975, are a major component to how the Abbott districts were classified, and are still in use today to determine the overall socioeconomic status of a given school district. DFGs were originally developed in the 1970's for the purpose of comparing statewide assessments across demographically similar school districts (NJ Dept of Ed, 2004). DFG has eight categories represented by letters A, B, CD, DE, FG, GH, I and J, with A representing the lowest SES school districts. DFGs are calculated using the six following variables that are believed to represent SES:

- 1) Percent of adults with no high school diploma

- 2) Percent of adults with some college education
- 3) Occupational status
- 4) Unemployment rate
- 5) Percent of individuals in poverty
- 6) Median family income.

The methods for calculating DFGs using these variables are complex, and because they rely heavily on information from the census, there are limitations to the accuracy with which they can categorize districts. For example, some school districts serve a large number of students who live in other areas, so the census data from the area where the school is located does not accurately reflect the student population of that district. Areas where fewer than seventy people filled out the census or more than half of the school-age population attended private schools did not receive a DFG score.

Other means for determining whether a district qualifies for Abbott remedies include low student achievement and educational adequacy. The No Child Left Behind act (NCLB) and the Core Curriculum Content Standards (CCCS) are the federal and state monitoring systems to determine educational adequacy, respectively. To determine educational adequacy, the State of New Jersey considers the following factors:

1. Statutory monitoring results
2. Variety of course offerings
3. Teacher qualifications and experience
4. Teacher/pupil ratios
5. Student attendance
6. Dropout rates

7. Ability of grade 3 students to read at grade level
8. Statewide test scores
9. Other local achievement indicators as approved by the district (New Jersey Dept. of Education, 2005, Section 1:B).

Schools can be classified and declassified as Abbott districts based on these two criteria.

A major controversy regarding Abbott Districts is that this legislature was selective in the students it served, and therefore unconstitutional. The most recent educational funding legislation, the 2008 School Funding Reform Act, enforces a unified formula and increased statewide aid by \$530 million. Created to replace the Abbott district funding formula, the act claims to recognize the additional resources needed to educate at-risk students and guarantees that no district will lose state aid in the future unless its enrollment declines by 5 percent or more within one year (New Jersey School Boards Association, 2008). This act helped increase state aid to all low income districts making New Jersey third in the United States for state effort for educational funding fairness and fourth for state funding distribution (National Report Card, 2015).

### **Previous Research About School Funding**

The Coleman Report in 1966 found that family background was more important than school resources when it came to determining a student's academic success. The study was conducted at a time when previously racially segregated schools were beginning to integrate with one another. Coleman and his research team collected data on over 6,000,000 school children, 60,000 teachers, and 4,000 schools across the United States, and came to the conclusion that per-pupil expenditures have very little relation to student achievement, and that peers are a more influential factor (Tozer & Violas, 2002).

A review of Coleman's research by Samuel Bowles and Henry Levin (1968) found that "because of poor measurement of school resources, inadequate control for social background, and inappropriate statistical techniques used in the presence of interdependence among the independent variables, many of the findings of the [Coleman] Report are not supported". Although many of Coleman's research findings were disregarded due to error, his study brought to light the wide disparities between affluent and poor schools, especially those between predominantly white and black schools (Nonoyama and Willms, 2010). Such studies have brought a lot of focus to the issue of equal funding for schools, especially because equal access to a quality basic education is so fundamental to American ideals about hard work and perseverance in school.

### **Needs of At-Risk Children**

A study by Bao, Romeo and Harvey (2010) found that schools with lower SES students had different fiscal needs than schools with higher SES students. Low SES schools had higher teacher turnover due to lower salaries, which lead to higher hiring costs. Schools from less affluent districts are not able to pay their teachers as much, and as a result, had to hire inexperienced or substandard teachers. Children of low SES are some of the most difficult students to work with, and as a result, teacher retention is not high, while the cost of hiring and training new teachers is draining on a district's budget. An investigation of the cost of high teacher turnover studied five school districts that represented a range of communities and found that "the costs of recruiting, hiring, and training a replacement teacher are substantial" (Barnes, Crowe and Schaefer,2007). They also found that high teacher turnover not only undermines at-risk schools, but scarce dollars are spent on teacher turnover (Barnes, Crowe, and Schaefer, 2007).

Bao, Romeo and Harvey (2010) also found that schools with low SES students spent more money on food services. According to Feeding America, a non-profit organization dedicated to providing food and resources to families in need, 15 million children face hunger, and in 2014 more than 21.5 million students received free or reduced-price meals daily through the National School Lunch Program. “Children facing hunger may perform worse in school and struggle with social and behavioral problems that impact their ability to learn” (Child Hunger, 2015). While free and reduced school lunches are funded by the federal government, there are still costs to running free and reduced lunch programs that are not covered or reimbursed, and must ultimately be paid for by schools leaving schools that offer more meals to students having higher costs to maintain the mandatory free and reduced lunch program.

Students from higher SES schools had more enrichment and extracurricular activities such as art, music and organized sports, all activities that contribute to the quality of education. Lower socioeconomic schools spend more money on things that may not contribute to the quality of education (Bao, Romeo and Harvey, 2010).

**Neurobehavioral effects of poverty.** The American Psychological Association supports the findings that there are neurobehavioral deficits associated with poverty due to lack of financial resources and lack of adequate health care (Marston, 2013). Children from low income families are more likely to have developmental delays than children from middle class families (Hetzner, Johnson, Brooke-Gunn, 2010), and are more likely to be diagnosed with ADHD and Autism (Marston, 2013). Chronic stress, which is a common phenomenon of poverty, is related to underdevelopment of the prefrontal cortex, a portion of the brain responsible for decision making, self-control, and attention



(Marston, 2013). Lead exposure, which stunts dendritic growth and causes mild to severe cognitive deficits depending on the amount of exposure, is found primarily in children of lower SES due to less than optimal living conditions (Clikeman & Ellison, 2007).

***ADHD and Autism.*** A study by Boyle et al. (2011) examined trends in developmental disorders from 1997 to 2008. The study examined data from children enrolled in Medicaid versus children whose parents had private insurance as an indicator of poverty. They found that the relationship between poverty and developmental disorders was statistically significant pertaining to ADHD, learning disabilities, intellectual disabilities, seizures, stammering, and other developmental delays. A study by Flouri et al. (2015) investigated the longitudinal relationship between emotional and conduct problems of children with comorbid ADHD and Autism Spectrum Disorder (ASD) over a span of four years starting at age three. They found that “children with ASD are more likely than children without ASD to come from socioeconomically disadvantaged families” (p. 2,938). They also found that children with comorbid ADHD and ASD who came from disadvantaged families often experienced harsher parenting and maternal psychological distress, and thus had a higher prevalence of conduct and behavioral problems because poor families may not have sufficient resources to provide educational and social support for their children.

***Chronic stress.*** According to the American Psychological Association’s Help Center (2015), chronic stress is long term stress that wears down on the mind and body, where a person never sees a way out of a miserable situation and may give up searching for solutions. Chronic stress is associated with poverty, dysfunctional families, war, and internalized traumatic childhood experiences.

A study by Evans, Schamberg and McEwen (2009) identified a relationship between childhood stress and working memory. They hypothesized that chronic stress interferes with the amygdala, hippocampus, and prefrontal cortex which in turn affect working memory. The study determined that “working memory is essential to language comprehension, reading and problem solving, and is a critical prerequisite for long-term storage of information” (p. 6,545). Their study found that allostatic load, a marker of cumulative wear and tear on the body, during childhood is a significant predictor of working memory in young adulthood. They also found that the longer a child experiences poverty, the worse their achievement levels becomes. It is apparent from this study that enduring economic hardship is harmful to a child’s cognitive development.

***Emotional and conduct problems.*** Children who are exposed to poverty, especially long-term chronic poverty, are at risk of behavior problems and are more vulnerable to low self-regulation (Flouri, Midouhas, & Joshi, 2014). A study by Flouri, Midhouas, and Joshi (2014) examined the roles of self-regulation and verbal-cognitive ability in relation to behavioral resilience and socioeconomic disadvantage. They found that “socioeconomic disadvantage is strongly associated with childrens' emotional (internalizing) and behavioral (externalizing) behavior” (p.1,043). They also found that verbal cognitive ability is strongly associated with SES. Children with higher verbal cognitive ability are better able to advocate for themselves, gain access to resources, and are better at problem solving and conflict resolution. Children who are economically disadvantaged but have a higher verbal cognitive ability are “better equipped to find solutions for stressful situations, or even to avoid them” (p.1,045). The study looked at poor children with high and low self-regulation, and the high and low self-regulation of

children not in poverty. They found that for internalizing problems, the gap between poor children with high and low self-regulation was wider than the gap between high and low self-regulation in children who were not living in poverty. Being able to regulate one's emotions is an important life skill, and growing up in poverty is a major indicator that one will not have the resources to learn that skill.

***Lead exposure.*** Lead exposure during childhood, even at low levels, is a critical public health issue. Lead based paint was commonly used in houses until 1978 when it was deemed environmentally hazardous (Environmental Protection Agency, 2015). Paint would peel and fall to the floor where an infant or toddler could easily pick it up and eat it, or the dust from lead based paint would get into the air and enter the body through the lungs. Since lead based paint was banned for household use, several laws have been put into place regarding its proper abatement or containment. Many of these procedures are costly and have therefore been avoided by homeowners who can't afford them, or landlords who take advantage of tenants who are ignorant to the damaging effects of lead-based paint. The New Jersey Department of Health reported that "poverty during childhood puts children at increased risk for living in run-down or poorly maintained older (pre-1950s) housing, and this increases a child's chances of exposure to chipped and peeling lead paint" (2015). According to the National Association of Healthy Housing, lead exposure has been connected with neurological damage, decreased IQ, seizures, and other health issues unrelated to educational outcomes. Low level, long term exposure to lead may have a greater effect on IQ than single instance of high exposure, and low level exposure can only be determined by a blood test, so a family may not know that their child is being exposed to lead for a long time. Lead exposure has been associated with

ADHD and antisocial behavior, a contributing factor for conduct disorder. Lead exposure has also been associated with learning disabilities, decreased phonological awareness as well as lower math skills. Because lead exposure is so damaging to children in particular, the New Jersey Department of Health's Child and Adolescent Health Program has kept records of all blood lead screenings of New Jersey children since 1999. Clinical laboratories are required to report these results in order to provide data to identify risk factors for lead exposure (New Jersey Department of Health, 2015). Children of low socioeconomic status are at a greater risk for lead exposure, which is a contributing factor to poor educational outcomes.

### **Influence of Home Environment on Academic Achievement**

Some studies determine that although poverty is not a factor as to whether a child is born with special needs, it is a determining factor as to whether a child is referred for special education and other academic services. Children born into poverty have many risk factors including toxin exposure, malnourishment, premature birth, parental drug abuse, and lack of supervision which can result in traumatic brain injury. Children born into poverty also have less time with their parents due to long working hours, which can contribute to limited verbal interaction, slow vocabulary development, social skills development, all which contribute to children being less prepared to enter school than their advantaged counterparts (Zorigan and Job, 2010).

**Vocabulary development.** There is a strong relationship between socioeconomic status and the level of readiness that a child shows when entering school. A study by Hart and Risely (1995) showed astonishing differences in early language development between children of different social classes. The study consisted of children between the

ages of one and three from 42 different families evenly representing upper class, middle class, and lower class families requiring welfare support. The researchers visited each family once a month and recorded every word spoken to the children by the parents. At the end of two years, children from the upper and middle class families (with parents more likely to be formally educated) had learned as many words as were *spoken* by the lower class parents to their children. The upper and middle class children heard an average of 11 million words, while the children of lower class families heard an average of 3 million words. When the children entered school and were tested for reading, the upper and middle class children scored significantly higher than the children from lower class families. This wide disparity upon even entering school makes it difficult for poor children to compete academically with their more advantaged peers, and requires academic interventions as early as possible in order to make even a partial comeback.

**Social skills development.** Adequate social skills are an important tool for academic success. Much of the educational process requires getting along with others including teachers, peers, and other school administration. Children begin to learn social skills at home before attending school for the first time, which requires the presence of a parent or other role model to provide opportunities for social interaction. For families who struggle to make ends meet, this might not be as easy a feat as it sounds. Although parents want to supply their children with the best possible learning environments and opportunities for social interaction, this can be less realistic for low-income families to achieve in comparison to families of higher socioeconomic status due to long working hours and parental stress levels (Heyman & Earle, 2000). As a result, children from low socioeconomic families are less prepared for positive, productive social interactions at

school and may require additional help from teachers and other school professionals in order to learn these much needed skills.

### **Social Class and School-Family Relationships**

A study by Annette Laureau (2010) examined the role social class plays in education, from parental perspectives of parent-teacher relationships, to the different understandings of social norms that are taught to children of different social classes. She discovered that working class and poor parents have a very different perspectives of their role as a parent than do middle class parents. Working class and poor parents view teachers as professionals who are more knowledgeable about their children's educational needs than they are. They do not see themselves as stewards of their child's education in the same way that middle class parents do, who see teachers as their equals or even inferiors. Middle class parents are usually much more involved in their children's schooling, communicate regularly with teachers, volunteer more in classrooms, and fight to ensure that their children receive special services when they feel they are needed. Parents of lower socioeconomic status feel that the education of their child is the job of the teacher, which can cause frustration between parent and teacher. Working class and poor parents have a harder time making it to school functions and meetings due to long working hours and/or lack of transportation, and are often not aware of their rights, or the rights of their child when it comes to public education and other services.

Working class and poor parents use directives when speaking to their children and often resort to corporal punishments which does not teach their children socially acceptable methods of conflict management or resolution. Middle class parents tend to negotiate more with their children and discipline usually consists of restrictions of

privileges. This means that children of middle class parents are able to get their needs met more efficiently than other children because they have learned to speak with adults and articulate their point of view. Lareau's main argument is that children of working class and poor families lack the cultural capital (knowledge of informal rules) that middle class children are taught. Schools are run on the expectations of middle class norms, which children of lower socioeconomic status have not had much exposure to.

In order for teachers to successfully interact with children who have grown up in poverty, it is important that they understand how these children can differ from more advantaged children. Children who live in poverty have drastically different lives than middle class children. They can have very high stress levels, which can cause intellectual impairment, and they are less likely to have a nurturing home life because their parents are also stressed about meeting the everyday needs of the family, often working long hours. Children in poverty have little to no extra-curricular activities, and their caregivers are often disengaged and less nurturing; television is a major source of socialization. Because they have not had a wide range of social interactions with adults, children of low SES also have a narrower range of appropriate emotional responses which can cause teachers to misinterpret interactions as rude (Jensen, 2009). As a result of these differences, children from lower socioeconomic backgrounds are more likely to develop negative attitudes about school which can last a lifetime.

### **High School Dropout Rates**

The rate at which students drop out of high school is a huge concern for the welfare of society. Young people who forgo a year of high school are more likely to have mental health problems, report poor physical health, have marital problems, live in

poverty, and commit crimes or be incarcerated (Bjerk, 2012). Without a high school diploma the likelihood of finding gainful employment plummets and leaves few legal avenues for a person to earn a living. Parental level of education is a statistically significant determining factor of a child's educational attainment, and thus, the cycle is perpetuated. With the US economy moving away from manufacturing jobs and becoming more service oriented, a college education is becoming more and more of a necessity for a person to be able to financially support themselves and a family.

Studies of the reasons for which students drop out of high school show that 45% of students felt that earlier education had poorly prepared them and they were unable to keep up (Azzam, 2007). Preparing children for the academic demands of high school can be a challenge if they are already behind in elementary and middle school. A study by Dr. Donald Hernandez revealed that a student who is unable to read on level by the third grade is four times less likely to graduate from high school than a child who is reading on grade level by that time. If the child comes from an impoverished home environment they are thirteen times less likely to graduate from high school (Sparks, 2011). This information further reinforces the importance of early intervention to ensure that children, especially children raised in poverty, are reading on grade level in their early elementary school years.

A study by McNeal (1995) examined the relationship between extracurricular activities that students were participating in and high school dropout rates. Students were separated into four sub-groupings of activities: athletics, fine arts, academic clubs, and vocational clubs. Students who participated in both athletics and fine arts extracurricular activities were found to be less likely to drop out than were those who did not participate



in any extracurricular activities. Students who participated in extracurricular activities also had less disciplinary infractions. Having something to look forward to at school makes a difference in student attitudes toward school and their desire to remain enrolled. According to Amy Feldman and Jennifer Matjasco (2005), there is a strong positive relationship between extracurricular activities and academic performance. Extracurricular activities are related to lower reports of substance abuse and better mental health among students. They also found that females showed less incidences of sexual activity when engaged in sports activities. Rates of teen pregnancy were lower when adolescent girls participated in 1-4 hours of extracurricular activities a week, and participation in music and drama were related to less sexual activity as well. Males who participated in sports reported a higher level of sexual activity than males who were not athletes, but they were also more likely to use birth control methods.

Teen pregnancy is another critical reason that students drop out of high school. Although teen pregnancy rates have decreased significantly in the past few decades, these decreases have not been across the board. According to the National Campaign to Prevent Pregnancy, in 2008, twenty five (unnamed) persistently low-achieving schools accounted for 16 percent of all teen births in the United States and the *same 25 districts* accounted for 20 percent of all high school dropouts in the United States. Socioeconomic Status has a massive, multifaceted effect on the needs of children in public schools. Because those needs vary so widely by social class, it is unrealistic to assume that all schools and all students need the same resources, funding, and even the same curriculum. In order to help remediate the damage that living in poverty can have on children, special care must be taken to ensure that these children are having their needs met, both physically and

academically. Understanding the types of disorders that are more prevalent among children who are socioeconomically disadvantaged and how to work with them is important for educators to help children reach their fullest potential. Being proactive and helping students earlier instead of later can prevent students from falling so far behind that they are unable to catch up. Aiding students in developing positive attitudes about school and providing extracurricular activities to foster those positive attitudes will help keep some students from quitting school before graduating.

## Chapter 3

### Methods

#### Subjects

Test subjects consisted of public school districts located in the state of New Jersey. A total of eighty school districts were selected to equally represent all eight District Factor Grouping categories, with a total of ten schools per category. Schools were randomly selected among each DFG category.

#### Instrumentation

**District budgetary indicators.** Data was collected from school budgets posted publicly on the 2015 New Jersey Taxpayer's Guide to School Funding website. The following budget categories were examined for each district:

***Indicator 1: Budgetary per pupil cost.*** This category represents a district's general and special revenue funds

***Indicator 2: Total classroom instruction.*** This indicator includes all expenditures associated with direct classroom instruction for both regular and special education pupils educated within the district. It includes the salaries and allocated benefits of teachers, substitutes and teachers' aides (other than secretarial and clerical) as well as the additional compensation paid to teachers for services such as hall monitors, detention, and lunchroom aides.

***Indicator 3: Classroom salaries and benefits.*** This indicator includes the salaries and allocated benefits of teachers, substitutes and teachers' aides (other than secretarial and clerical) as well as the additional compensation paid to teachers for services such as hall monitors, detention, and lunchroom aides. It also includes the amounts paid to

district personnel as well as allocated benefits for the provision of occupational, speech, and physical therapy.

***Indicator 4: Classroom supplies and textbooks.*** This indicator includes the cost of classroom supplies and textbooks for the district's regular and special education, basic skills, bilingual, local vocational and other instructional programs. Supplies such as calculators, microscopes, textbooks, tablets, laptops, workbooks, tests, markers, paper, pencils, paints, and other classroom supplies are included. Filmstrips, periodicals, videos, CDs, and other reference items for specific regular classroom use are also included.

***Indicator 5: Classroom purchased services/other costs.*** This indicator includes the expenditures other than salaries, benefits, and cost of classroom supplies and textbooks associated with the direct classroom instruction for the district's regular and special education pupils as well as those related to a district's basic skills, bilingual, local vocational, and other instructional programs. Total classroom purchased services/other costs would include professional-educational, technical and other services purchased for classroom use, such as amounts paid to non-district employees for occupational, speech, and physical therapy, assembly speakers, and standardized subject exams. Costs for the rental or lease purchase of equipment for classroom use are also included here, as are dues and fees for teachers' membership in professional and other organizations.

***Indicator 6: Total support services.*** This indicator includes services supplemental to the teaching process that are designed to assess and improve students' well-being. It also includes expenditures for activities associated with assisting the instructional staff with the content and process of providing learning experiences. Attendance, social work, health and guidance services, educational media/school library services and child study

team services are considered student support services. This area also includes the costs associated with physical and mental health services that are not direct instruction, but are nevertheless provided to students, such as supervision of health services, health appraisal (including screening for vision, communicable diseases, and hearing deficiencies), screening for psychiatric services, periodic health examinations, emergency injury and illness care, dental services, nursing services and communications with parents and medical officials. The expenditures of the guidance office includes counseling, record maintenance, and placement services. The costs for the child study team include salaries and benefits for members related to the development and evaluation of student individualized education programs (IEPs).

***Indicator 7: Salaries and benefits for support services.*** Support services salaries includes the amounts paid to district personnel for the provision of services related to attendance and social work services, health services, guidance services, professional development, and any other activities supplemental to the teaching process that are designed to assess and improve the well-being of students as well as the salaries of child study team members and educational media/school library staff. It includes the full-time, part-time and prorated salaries of attendance officers, social workers, doctors, and nurses, child study team members and their related secretarial and clerical staff. It also includes school library staff, audiovisual staff, educational television staff, staff engaged in the development of computer-assisted instruction and the related secretarial and clerical staff for these activities.

***Indicator 8: Total administration.*** This indicator includes the expenditures related to general administration, school administration, business and other support

services, both business and central. Total administration includes the costs associated with the activities concerned with establishing and administering policy for operating the district, the costs associated with the overall administrative responsibility for the individual schools within the district, and business support services and central support services such as research and development, planning, evaluation, information services, data processing services, and staff services. Included here would be the board of education services and executive administration services such as the superintendent, assistant superintendents, board secretary/business administrator, and treasurer of school moneys. Also included in the definition of administration are the activities performed by the principal, assistant principals, and other assistants while they supervise operation of the school, evaluate staff members, supervise and maintain school records, and coordinate instructional activities. The activities of department heads and the work of clerical staff in support of teaching and administrative duties are also included. The district-wide costs for telephone and communication services, including expenses for postage equipment rental and postage are included here. Total administration includes the cost of forms, office supplies, and other supplies used to perform these functions. It would also include the rental or lease purchase of equipment related to these services, outside workshop fees and the travel of these staff as well as the costs of their dues and fees for membership in professional or other organizations, including a school board association.

***Indicator 8A: Legal services.*** This indicator includes the salaries and benefits for legal services provided by district employees. The costs for legal services provided by non-district employees through purchased professional services are also included in this

subtotal. It should be noted that this indicator includes general fund legal fees only. Excluded are capital outlay legal services and judgments against the district.

***Indicator 9: Administration salaries and benefits.*** Administration salaries includes the amounts paid to district personnel for the provision of services related to general administration, school administration, and business and other support services. This indicator includes the full-time, part-time and prorated salaries of superintendents, assistant superintendents and other general administrators, board secretaries/school business & administrators and other business and central office staff, principals, assistant principals, department chairpersons, and the related secretarial and clerical staff for these activities.

***Indicator 12: Board contribution to the food service program.*** This indicator includes the board's share of expenditures for the district's food service program. It represents the portion of the food service program that is not financed through user fees charged or reimbursements received from the state and federal governments. The full cost of the operations of the food service program is not included here, only the board's contribution to cover a program deficit.

***Indicator 13: Extracurricular costs.*** This indicator includes the amounts associated with board-sponsored athletics and co-curricular activities such as entertainment, publications, clubs, band, and orchestra. It includes the amounts paid to staff to serve as advisors for these activities as well any amounts paid to outside doctors for sports physicals or officials along with any equipment rentals or lease purchases and supplies related to these activities. This also includes any board contributions to cover the deficits of student activity and athletic funds that are not under the district's control.

**Indicator 15: Total equipment cost.** This indicator includes all purchases of items meeting the definition of equipment, whether for instructional or non-instructional purposes. Equipment would include computers, interactive white boards, machinery, tools, trucks, cars, buses, furniture and furnishings. One of the qualifiers for the classification of an item as equipment is that its individual unit cost must exceed \$2,000. If it does not meet the \$2,000 test, it is classified as a supply item.

**District factor groupings.** District Factor Grouping (DFG) scores were obtained from the New Jersey Department of Education's website. DFGs are categories that represent the overall socioeconomic status of a school district and are calculated using information from the most recent census on the six following variables that are believed to represent SES:

- 1) Percent of adults with no high school diploma
- 2) Percent of adults with some college education
- 3) Occupational status
- 4) Unemployment rate
- 5) Percent of individuals in poverty
- 6) Median family income.

### **Procedures**

The independent variable in this study, socioeconomic status represented by District Factor Grouping scores, was paired with the dependent variable, resources available to students and for each school district. Once that information was obtained, school district was then compared to other school districts with different DFG scores.



## **Statistical Analysis**

Regression was used to determine how educational resources available to children change based on socioeconomic status, as well as the costs of other services that may not contribute to a child's educational experience but are necessary expenses.

## **Chapter 4**

### **Results**

The study sample included five districts from each DFG category, and examined the budgets of each district. After regression analysis was complete, the results found that there was no linear relationship between DFGs and the amount each district allotted funding to the examined budgetary categories.

Total per pupil budgets varied for each district with the highest budget at \$20,826 and the lowest at \$10,367. The mean per pupil budget was \$14,876 with a standard deviation of \$2,480. Twenty five percent of districts had a per pupil budget in the \$15,000 range. While the rest were somewhat evenly distributed between \$10,367 and \$19,000.

DFG category A had the most variance in per pupil budgetary expenditure with the highest amount at \$20,826 and the lowest at \$11,217. The remaining three districts in this category had a mean of \$17,252. The district with the \$20,826 budget spent significantly more on classroom salaries and benefits and legal costs than other districts in DFG category A. This school district was also the only district in the study that was previously an Abbott district.

## **Chapter 5**

### **Discussion**

#### **Conclusions Regarding SES and Access to Educational Resources**

Although no relationship was found between DFG categories and budgetary allocations of funding, there is importance to be gleaned from these findings. As discussed in chapter two, children come to school with varied degrees of readiness, and much of the difference has been found to be associated with socioeconomic status. Children who come from low SES families are more likely to have emotional regulation and behavioral issues, be more impulsive, have more trouble focusing in class, have less developed vocabularies, and less supportive home environments than their more advantaged peers. It seems reasonable based on this information, that schools with students of low SES should spend more money on resources such as reading specialists, academic support staff, classroom aides, smaller student to teacher ratios, and after school academic support to help bridge this academic disparity. More resources should also be made available to parents to provide information about nutrition, positive child-rearing techniques, and to provide quality child care in order to enable parents to provide for their children.

Extracurricular activities such as sports and fine arts have been shown to help students maintain interest in school, improve academic performance, and decrease the risk of teen pregnancy. Many low SES students are dissuaded to join these activities because of extra costs for things like equipment and uniforms. Practices for these activities also usually take place after school, so if a student's family does not have transportation and relies on the school bus to get the student home, it may not be feasible

for the student to take part in the activity. By allocating funding for equipment and uniforms, and making busses available for an after school pick up if needed, schools can make extracurricular activities more easily accessible for students who need them the most.

In order for these changes to be take place, school districts must be funded accordingly. At this point in time, with school districts having significant cuts to their budgets, such improvements are not possible. It is only with education finance reform that students will be able to access resources so fundamental to their success in school and in their future lives.

### **Limitations**

Ideally, it would be most effective to examine a more recent report of district factor groupings instead of having a fifteen year difference between the DFG report and the examined school district budget. The most recent reported DFG categories included the years 1999 and 2000 between which several school districts moved up or down amongst categories. Splitting up category A in to two sub-categories of past Abbott districts and regular districts would also have been helpful to see if there was significant funding differences between those districts. Finally, instead of examining the amount of money spent per pupil, it may have been more effective to examine the percentage of the total per pupil budget spent on different budgetary indicators.

### **Future Research**

Socioeconomic status has been associated with poor educational outcomes in many studies. A more effective study would be to examine inter DFG category differences in educational outcomes to determine what school districts are doing that

have successful outcomes for students. It is important to remember, however, that schools are not solely responsible for the educational outcomes of their students; family and community are also major contributing factors. Poverty is a long term problem that cannot be expected to be solved by short term solutions. Many programs have been put in place to help alleviate the many issues that coincide with low SES, but are not funded for long enough because they did not show immediate results. Longitudinal studies of social support programs are essential in finding ways to alleviate the massive disparities that have been documented between the educational outcomes of people based on socioeconomic status.

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