2019

Describing the Impact of Low Socioeconomic Status on School Performance

Barry Linden Cropp II
Philadelphia College of Osteopathic Medicine

Philadelphia College of Osteopathic Medicine

Department of School Psychology

DESCRIBING THE IMPACT OF LOW SOCIOECONOMIC STATUS

ON SCHOOL PERFORMANCE

By Barry Linden Cropp II

Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Psychology

May 2019

DISSERTATION APPROVAL

This is to certify that the thesis presented to us by Barry Cropp on the 2nd day of April,

2019, in partial fulfillment of the requirements for the degree of Doctor of Psychology,

has been examined and is acceptable in both scholarship and literary quality.

COMMITTEE MEMBERS' SIGNATURES

Chairperson

Chair, Department of School Psychology

Dean, School of Professional & Applied Psychology

Acknowledgements

The inspiration to achieve such a tremendous feat has not only humbled but also inspired me so much. Without the thoughts, prayers, and actions of many, I would not be the man I am today.

First and foremost, I want to give all honor and praise to my Lord and Savior Jesus Christ. Without Him none of this would be possible. I would then like to thank my mother and father, Adrienne Everett-Bey and Barry Cropp. Their foundation, love, and support created this ambition in me. Mom, thank you! Thank you for believing in me when others did not, thank you for always going above and beyond for me, and thank you for your selflessness. I have achieved because of your sacrifices, and for that I am eternally grateful. To my father, Barry Cropp, thank you for your encouragement and manhood. I hope I did what you asked of me. Thank you to Stanley Pugh. I appreciate you "scrap." To my Brothers, Aaron, Staccato, Keon, Jamal J, Rasheem, Mark, Mike, Tony, Jerome, and Jamaal L, thank you. Friendship and family are truly essential to the soul. Also, a big thank you to anyone who has ever doubted, discouraged, or did not believe in me. That motivation and encouragement to press forward will never die!

To my dissertation chair, Dr. Diane Smallwood, thank you for your push and guidance. I am incredibly grateful for your wisdom, reassurance, patience, and confidence in me. You are truly a gift, and I am elated that you chose me to carry out this task. Thank you also to Dr. Katie Tresco for your honesty, insight, and mentorship. This process has been slightly easier due to your diligence. To my third chair, mentor, and professor, Dr. Rochelle Robbins, words cannot express how much I honor you. You have been nothing short of incredible since I met you years ago. Your countless understanding,

words of wisdom, encouragement, and thoughtfulness have been a driving force for my success. I would not be here without you! Thank you very much for everything. To all my supporters along this path, including Dr. Starosta, Ms. Pat, Ms. Izard, Dr. Morgan, and Ms. Williams, thank you!

I also want to thank all my professors and staff at PCOM who have enlightened or helped me, Star Hill, my host of friends and family, my colleagues and cohort, and anyone who has ever believed in me. I share this journey and these words with you as humble and as grateful as I could ever be. Thank you from the bottom of my heart. I will continue to complete the work as a psychologist for a brighter tomorrow. With love, light, and hope, Dr. Barry Linden Cropp II.

Abstract

This study used archival school data compiled during the 2017-2018 school year to analyze the impact of family income, as determined by student eligibility for free- or reduced-lunch benefits, on several measures of school performance. This study was based upon an investigation of the effects of income on three dependent variables: academic performance, school attendance, and need for behavioral management interventions. Participants included 165 male students in third through fifth grade who attended a single elementary school in the mid-Atlantic region of the United States. Indicators of school performance were derived from data routinely collected and maintained in students' cumulative school records. Comparative statistics were used to determine the significance of intergroup (i.e., high and low family income) differences on standardized testing, school attendance, and referrals for behavioral management. In summary, the findings related to the three research hypotheses did not support any systematic relationships between family income levels and three measures of school performance. A series of statistical analyses comparing family income, as determined by eligibility for free-/reduced-lunch benefits, with (a) measures of academic performance in reading/language arts and mathematics, (b) school attendance, and (c) need for school-based behavioral management services did not show any significant relationships among these variables. Additional comparisons related to school performance showed significant differences between African American and Caucasian students when race was identified as the dependent variable.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1

INTRODUCTION

The impact poverty has on academic and behavioral profiles has been widely researched during the past several decades. Scientists believe that continued interest in socioeconomic status (SES) is imperative, although they have never reached complete consensus on what it actually represents (Liberatos, Link, & Kelsey, 1988; McLoyd, 1997). Partially, the research completed by these scientists was conducted to determine if poverty decreases academic and behavioral success. Many researchers believe that environmental factors are the largest predictors of success, whereas others believe that the value system that surrounds the family is a larger predictor. Regardless of any belief system, a connection exists between income and academics (Jabaruddin, Alimuddin, & Manda, 2016), and one must consider various factors that may play a large role within their relationship.

Because SES is based upon societal factors, including education, occupation, and income, many values are placed upon SES. How one describes or may understand the particular value often is based on one's personal perspective. The research literature has noted that different ideals are attributed to families of different SES (Jabaruddin et al., 2016).

Some families may place a priority on religion as they instill in their children values and morals, followed by academic, behavioral, economic, and, lastly, social values (Jabaruddin et al., 2016). As such, SES affects individuals differently. Families of low and medium SES engage in different roles (Jabaruddin et al., 2016). According

to studies, family systems at the lower end of SES usually include the father as the primary income earner, while the mother completes the internal tasks around the home, such as being the teacher (Jabaruddin et al., 2016). However, families of a higher SES do not have a set value system on specific roles in the identification of family values, as both parents educate the children and actively earn income. One should note that these differences have be identified in studies conducted outside of the United States; more information may be needed to confirm these social patterns in families within the United States (Jabaruddin et al., 2016).

Discipline practices as related to low and high SES vary as well, especially with respect to academic performance. Families of higher SES usually have different socialization values and extend advice, storytelling, punishment, and rewards instead of harsh criticism (Jabaruddin et al., 2016). Since education in families of higher SES is usually different as opposed to religious values in families of lower SES, social and educational value systems should also be addressed (Jabaruddin et al., 2016).

A large distinction exists between family and the impact of low SES. One critical area is the use of supports by parents and families to establish academic success (Mayo & Siraj, 2015). Defining low and high SES,, determining where each is mostly prevalent and why, and identifying a student's academic performance are also important endeavors (Mayo & Siraj, 2015). Discussing practical interventions that may be beneficial to the student for academic progression is just as important as discussing how low SES may be combated (Mayo & Siraj, 2015). These factors have been identified steadily to describe the impact that low SES has on academic performance.

The topic of low SES is relevant to many psychological and social barriers that may exist. It is a catalyst to individual success rates behaviorally and academically and suggests how students may perform in difficult circumstances. As shown by empirical studies, children and families of lower SES are less successful academically and behaviorally than children from families and peers who have many more resources (Bradley & Corwyn, 2002). Although many efforts have been made to combat and reduce the effects of socioeconomic inequality on academic progression, circumstances and factors throughout a child's schooling still are relevant and result in many barriers to academic achievement for children from middle- and working-class backgrounds (Bradley & Corwyn, 2002). Students of low SES are disadvantaged, as resources and availability of services are limited. Even so, does this hardship mean that these students cannot succeed? Family systems and dynamics appear to be one of the leading indicators of success within families of low SES. Many studies have demonstrated that educational success and parental SES level have a large impact on childhood outcomes (Mayo & Siraj, 2015).

The Effective Provision of Pre-School, Primary and Secondary Education (EPPSE) is a longitudinal study done in the United Kingdom that has followed children aged 3 to 16 years of low SES (Sylva, Melhuish, Sammons, Siraj-Blatchford, & Taggart, 2008, 2012). The relevance to the United States of the EPPSE study is indicated through understanding the dynamic between level of resources for families of low SES and academic outcomes. Parental engagement with their children, rather than simply SES, was also extremely important for children's learning and academic outcomes (Melhuish et al., 2008). Parents have a direct effect on their children's

socialization practices, as they help their children learn and experience through participation. Parents are responsible for directly engaging with their children by regulating and managing their access to learning, such as allowing their children to learn with others in many contexts, for example, (pre)school (Rogoff, 2003; Feinstein et al., 2008). Different experiences have been completed within different groups or cultures, and they have all been adapted to help children develop the skills and knowledge each culture considers most valuable (Feinstein et al., 2008; Rogoff,2003).

The current study attempted to give clarity to the importance of SES and its relationship to values and family systems, as well as to determine its correlation with low performance on academic tasks and behavioral management. Also of interest was engaging in a study in which the literature and other educators could contribute interventions and problem-solving strategies to combat the difficulties of low SES.

Low SES has a significant impact on academic performance and parental involvement, even from a young age. Children of higher SES typically have higher involvement in parent-sponsored activities, such as tutoring and parent-teacher organizations (PTO), thus enabling more resources to intervene with deficiencies that the students may possess (Park, Stone, & Holloway, 2017).

Statement of the Problem

Students from low SES or low-income households display lower academic and behavioral performances than students coming from high SES or high income households. Lower SES also increases risk factors related to health, job placement, and productivity (Boylan & Robert, 2017). Moreover, poverty levels are associated with higher rates of child maltreatment (Eckenrode, Smith, McCarthy, & Dineen,

2014; Sedlak et al., 2010). Children from families of low SES also have a higher rate of inadequate neurobehavioral development, such as growth retardation and birth difficulties than children from families of high SES (DiPietro, Costigan, Hilton, & Pressman, 1999; Kramer, 1987). These children are more likely to have many deficits, such as asphyxia, birth defects, low birth weight, fetal alcohol syndrome, or a disability (Alberman, & Scott, 2000; Crooks, 1995; Hawley & Disney, 1992; Peoples-Sheps, Guild, Farel, et al., 1998; U.S. Department of Health & Human Services, 2000b; Vrijheid, Dolk, Stone, Wasserman, Shaw, Selvin, Gould, & Syme, 1998).

Early health problems often emanate from poor prenatal care, maternal substance abuse, poor nutrition during pregnancy, maternal lifestyles that increase the likelihood of infections (e.g., smoking, drug use), and living in a neighborhood that contains hazards affecting fetal development (e.g., toxic waste dumps; U.S. Department of Health & Human Services, 2000a). After birth, infants born into families of low SES are more likely to suffer injuries and to die compared to families of high SES (Overpeck, Brenner, Trumble, Trifiletti, & Berendes, 1998; Scholer, Hickson, & Ray, 1999).

Summary

Low SES affects not only academic performance of students, but also other factors, including neighborhood, behavior, and health (Boylan & Robert, 2017). Individuals of a higher SES may exhibit a different context and advantage in regard to risk factors (Boylan & Robert, 2017). Residents of neighborhoods of a higher SES usually experience less morbidity, less obesity, fewer behavioral risk factors, fewer

cardiovascular health problems, and less mortality as opposed to their counterparts of lower SES. Overall, low SES creates systemic disadvantages for students. Research and continued support will hopefully bridge the gap between behavior, academic performance, and success for students of low SES and students of higher SES. Although difficult, positive results may be achieved.

Research Question

This dissertation was based on the following question: What is the impact of family income on academic performance, school attendance, and school behavior?

CHAPTER 2

LITERATURE REVIEW

Research has shown that communities of higher socioeconomic status (SES) have a much more progressive impact on academics and increased positive behavioral management of students than do communities of lower SES. The literature describes the impact of lower SES on behavior and academic performance, as well as of other factors that may inhibit students' progression based on backgrounds and risk factors.

Currie (2009) documented that children of low SES have worse health on a very broad range of measures, including fetal conditions, physical health at birth, incidence of chronic conditions, and mental-health problems, that later influence educational and labor market outcomes than children of high SES. During childhood, SES is implicated in many diseases, including respiratory illnesses (Cohen, 1999; Haan, Kaplan, & Syme, 1989; Johnston-Brooks, Lewis, Evans, & Whalen, 1998; Klerman, 1991; Rosenbaum, 1992). Low SES is also associated with an increased likelihood of dental caries (U.S. Department of Health & Human Services, 2000b), high blood lead levels (Brody et al., 1994; Starfield, 1982; Tesman & Hills, 1994), iron deficiency (Starfield, 1989; U.S. Department of Health & Human Services, 2000b;), stunting of growth (Brooks-Gunn & Duncan, 1997; Korenman & Miller, 1997; Kotch & Shackelford, 1989), and sensory impairment (Starfield, 1989; U.S. Department of Health & Human Services, 2000b; Wilson, 1993). These outcomes associated with low SES also exacerbate other deficiencies, including inadequate nutrition, exposure to tobacco smoke, failure to get recommended immunizations, and inadequate access to healthcare (Pollitt et al., 1996; Raisler, Alexander, & O' Campo,

1999; Sandel & Scharfstein, 1999; U.S. Department of Health & Human Services, 2000a,b).

Although other implications, such as health disparities, are connected to low SES, research regarding positive impact show that some parents of low SES use supports to establish academic success for their children (Mayo & Siraj, 2015). The research also defines the differences between low and high SES, as well as the measures that identify a student's academic performance (Mayo & Siraj, 2015). The interventions used to increase academic performance of students of low SES are also relevant, as is the research on the societal values placed on academic success, the impact of school attendance on academic performance, the importance of assessing parenting-style differences, and the impact of SES on behavioral management for students (Mayo & Siraj, 2015).

Parental Support Systems

Research indicates that parents and families have ways to encourage and motivate students to perform their best academically. From background characteristics to parenting style, the literature consistently supports the notion that parents influence children's school performance (Ishak, Low, & Lau, 2012). Parents are the strongest advocates for students' academic success; their relationship to their children and their role in shaping their children's academic functioning and social and psychological development are critical (Vasquez, Patall, Fong, Corrigan, & Pine, 2016). Because the relationship between the parent and child is one of the most significant across the lifespan, parental influence and the factors that make children who they are often can be recognized in the mannerisms the children display

(Vasquez et al., 2016). Evidence shows that children who have a connected relationship with their parents and form a warm, trusting, and strong rapport exhibit a likelihood of flexibility, curiosity, and self-reliance within the classroom, as well as decreased behavioral problems and higher self-esteem (Cox, 2002; Linwood, 2006).

Parental autonomy has also been a frequently included factor in strategies and practices that have been successful for the improvement of students' academic progress (Vasquez et al., 2016). Parents who increase their interactions with their children and allow their children to believe their thought processes and actions are their own (Deci & Ryan, 1987) improve their children's academic outcomes and psychological, social, and physiological functioning (Chirkov & Ryan, 2001; Ferguson, Kasser, & Jahng, 2011). Strategies and experiences that come from the different perspectives of the parents ensure that the students have the ability to make their own choices, thus the reasoning behind the importance of parental support (Vasquez et al., 2016). Parents who are autonomous usually do not use excessive controlling language and contingencies and acknowledge their children's perspectives and ideas, encourage their children to experiment, and allow their children to make their own choices (Deci & Ryan,1987). Motivational nurturing and resources come from parents who support autonomy. They rely on a series of actions, such as using flexible language and providing explained rationales that may be used personally to explain the importance of behavior, when they communicate with their children (Reeve, 2009).

The child's behavior and the parent's response to that behavior are connected to academic progression. The child's academic performance shows that successful

responsiveness is useful and needed for overall progress. For instance, in a conversation or discussion about homework, the parent who is autonomous may first ask for the child's input on how to complete the academic assignment as opposed to completing it for them. Such parents are engaged in the encouragement and motivation of the child to complete the academic task (Vasquez et al., 2016). However, a parent who is controlling and does not use autonomy may show the child exactly how to do the homework and demand minimal or little input from the child (Vasquez et al., 2016).

Although research on autonomous parents supports children being independent and also supports higher academic functioning and psychological and social matriculation, evidence-based measures should be identified in order to assess the magnitude and relationship of those outcomes (Vasquez et al., 2016). The use of adaptive measures, psychosocial instruments, and psychological assessments also give variable conclusions regarding how autonomous parents provide progression for the child's academic success (Vasquez et al., 2016).

Additional supports that parents use for positive academic performance of their children include factors of self-determination. The self-determination approach states that three universal and psychological needs underlie the meaning of achievement and human motivation: competence, autonomy, and relatedness (Deci, 1980). As discussed earlier, parental support for positive performance relies heavily on autonomy; however, the literature also discusses the importance of competence and relatedness. Competence is when children believe they can master their environment within a certain skill set (Vasquez et al., 2016). Relatedness is met when

a child feels secure in his or her community, family, or group and has developed an attachment (Vasquez et al., 2016). Parents use these supports in order to continue to motivate and help establish academic success for their children. While children develop relatedness, autonomy, and competence, they can easily strive for academic success over time.

Based on the psychological needs for functioning, one can reasonably presume that when a child's need for autonomy, competence, and relatedness is supported by parents, the child's motivation, psychological well-being, and academic outcomes are likely to be optimally supported (Vasquez et al., 2016). Parental use of additional supports to establish their children's academic success has been a staple in the overall progress of their children. The research shows that not only the child's aptitude improves with academic fostering, but also his or her overall well-being. When parents support their children with autonomy and self-determination, they are impacting their children's future livelihood.

The Difference Between Low and High SES

Now that the importance of parental support to a student's academic performance has been noted, an understanding of the difference between low and high SES is necessary. Studies have shown that SES is structured as a hierarchy (Case, Iuzzini, & Hopkins, 2012; Magee & Galinsky, 2008). These hierarchies then power the dynamics of social relationships (Case et al., 2012; Magee & Galinsky, 2008). The differences of hierarchy between families of low SES and families of high SES are significant to health disparity, lower academic progress, higher risk factors for cardiovascular diseases, and other health ailments (Glymour, Avendano, & Kawachi,

2014). Although SES can be described in more than one way, occupation, income, education, and social relationships are documented key components to the understanding of SES Wilson1983). The best way to combine these factors is not clear (Bradley & Corwyn, 2002). By definition, SES is the social standing or class of an individual or group. It is often measured as a triple combination of education, income, and occupation (American Psychological Association, 2007). SES is fundamentally used to gauge an individual's position or status in the hierarchy of society (Stricker, 1980). SES is also considered to be a good indicator of health, well-being, and advancements to individuals' neighborhood resources (Glymour et al., 2014).

When gathering specific statistics, one's ability to decipher and understand the differences between and low and high SES is of most importance. Low and high SES emerged from the Great Recession in the United States during the 1930s. Owing to the economic crisis, education was a catalyst to protect against unemployment (Batruch, Autin, & Butera, 2017). To avoid joblessness, high educational attainment was a necessity; however, social-class inequalities were also accessed to provide forms of social protection from others, especially minorities who were identified by education and social status (Batruch et al., 2017). Differences among persons based on low and high SES were clearly the result of these inequalities.

Characteristics of high SES are consistently high levels of education, high-income neighborhoods, social status among social hierarchies, and social relationships among affluent people. It functions as an organization of prestige within the community (Batruch et al., 2017). From an educational standpoint, higher SES is

a hierarchical scale that corresponds to academic performance (Sabbagh, Resh, Mor, & Vanhuysse, 2006). Owing to these hierarchies, students classified within this high SES group have access to resources and information not available to those from lower SES groups. These specific differences of class create higher benefits of income, education, and social status. Although students of low and high SES are supposed to be treated equally, the literature points out that inequality was created by design.

At present, resources have improved for students of lower SES; however, benefits of low and high SES are still relevant and project students' overall health, academic performance, and social functioning. To encourage and promote social mobility and the importance of social justice, the educational system has a duty to offer all students an equal chance to learn and grow, regardless of where they are from or of their social background. The reality, however, supports systematically more repeated grades, underperformance, and dropouts for students from low SES backgrounds (The Organization for Economic Co-operation and Development, 2014). Simply stated, students of higher SES have greater opportunities to perform higher academically, gain access to more educational resources, earn more academic privileges, attend better schools, and garner greater reputations (Felouzis & Charmillot, 2013). On the contrary, students from communities of lower SES have declining educational resources, social status, and educational benefits.

Students from lower income households usually come from working families and have fewer educational opportunities than students from higher income households. The occupations for workers of high SES include influential positions, such as physicians, judicial-system employees, and governmental staff (Batruch et al.,

2017). Workers of lower SES occupy blue-collar and lower wage positions. Additionally, families of higher SES have different means to provide their children with many services and goods, as well as social connections that directly benefit them. Children from families of low SES lack the resources to gain access to the same benefits, putting them at a higher risk for developmental difficulties (Brooks-Gunn & Duncan, 1997).

Low SES and high SES also differ in their relationships to academic performance. The relationship between SES and intellectual/academic competency levels has been discovered over a span of time. Evidence shows that the association between cognitive performance and SES begins at infancy (McCall, 1981). Documentation from numerous studies suggests that poverty and even low levels of parental education are associated with IQ later in childhood and lower levels of school achievement (Alexander, Entwisle, & Dauber, 1993; Bloom 1964; Duncan, Brooks-Gunn, & Klebanov., 1994; Escalona 1982; Hess, Holloway, Price, & Dickson, 1982; Pianta, Egeland, & Sroufe, 1990; Walberg & Marjoribanks, 1976; Zill, Moore, Smith, Stief, & Coiro, 1995).

These achievement gaps show a difference between low and high SES and indicate that the environment of children can affect their outcomes academically. Prediction of academic outcomes needs more research, but evidence from existing research continues to show the disparity.

Academic Performance

The elements of academic performance must be identified. Academic performance is the measurement of a child's learning (Mayo & Siraj, 2015).

Academic performance can be assignments within the classroom; homework;

functional academics, such as curriculum measures; and other measures that show

student progress (Mayo & Siraj, 2015). Academic performance is based on

interventions that are practical to the student. These performances are garnered by

involvement of other practices and strategies, such as parental support,

communication, emotional functioning, and behavior.

Academic performance outside of school. Teachers' reports have verified

that more consistent homework practices, better school communication with parents,

and strong parental supports have resulted in greater efficacy with mathematics and

have some socioemotional outcomes. When children receive stronger parental

support, their reading and prosocial behaviors improve as well (Sylva et al., 2008).

Positive academic performance is based not only on functioning in the classroom, but

also on the resources outside of school that are used to increase learning.

Academic performance is also based on emotional support and

communication, according to the success rates of interventions that have been proved

successful. Research has shown that verbal communication and positive emotional

support are beneficial for the progression of learning and appropriate behavior (Mayo

& Siraj, 2015). Students who received messages from parents regarding how they

were doing in school with academics, behaviors, and socialization have been said to

feel happy, encouraged, supported, and inspired (Mayo & Siraj, 2015). Students,

however, who were not encouraged or supported by parents felt uninspired and

displayed more difficulty with their academic performance (Mayo & Siraj, 2015). The

children who continued to exceed above expectation and received emotional support

for their schooling and learning displayed higher academic achievement, performed

better behaviorally, and had greater positive attitude toward teachers, learning, and

school because they were given help to become motivated to do well academically

(Mayo & Siraj, 2015).

Academic performance of students of low SES. Academic performance can

also be linked to resources in education, as well as the student's overall poverty level.

Research regarding poverty suggests that a student's chronological age can be

different than their developmental age if they have grown up in lower income

communities (Lynch, 2017). Often, these students are faced with particular hardships

that affect not only their academic performance, but also their ability to thrive in their

environment. The gap is wide between low-income students and students with an

economical advantage and is a predictor of future academic trajectory (Lynch, 2017);

however, low SES does not have to be an overwhelming obstacle for students to

succeed. (Lynch, 2017).

Many factors can contribute to the increase of academic performance of

students who come from households of low SES. First, attention to cognitive

capacity must be increased (Lynch, 2017). These factors are not based on the

student's lack of effort, but on the student's brain working more efficiently and

effectively (Lynch, 2017). Cognitive capacity, which can be taught, is the process of

the student's mental action that helps complete brain decisions on how to learn, recall,

and reflect information in order to solve problems (Lynch, 2017). In order to increase

productivity, educators must understand that academic performance is also not

predisposed to a student's DNA (Lynch, 2017). Educators must realize that all

students' cognitive functioning is not the same because they are influenced by life experiences (Lynch, 2017). Experience affects a child's overall impulse regulation, socialization skills, working memory, and cognitive control (Lynch, 2017).

Additionally, high academic performance is also related to working memory, which predicts a child's academic success (Lynch, 2017). Students from low incomes typically have a lower working memory (Lynch, 2017) than students from higher-income families. Working memory, however, can also be learned by the student, as it is teachable based on higher order thinking (Lynch, 2017).

To combat decreased academic performance of students of low SES, a qualified teacher should be hired and retained (Lynch, 2017). Teacher quality has been a large factor with students of low SES and has been vital to their success. In order to increase academic performance, a teacher who teaches cognitive capacity has been more sufficient than a teacher who has not, and, has also yielded higher results (Lynch, 2017). Thus, a teacher's input and style not only have been optimal for success, but also have motivated and created higher brain functioning within the classroom (Lynch, 2017).

Academic performance is vital to all students' well-being and outlook on life. To increase positive performance, parent participation, qualified teachers, and positive supports continue to be beneficial for all students.

Academic Interventions for Students of Low SES

For students from low SES backgrounds, providing academic interventions is critical. Interventions increase students' chances of developing and using higher skillsets inside and outside the learning environment. With these interventions in

place, collaboration appears to be the most effective way to meet the challenges and needs of the families that have children involved in the educational structure of communities of low SES (Clark & Fiedler, 2003; Cox, 2002). Research has shown that SES can predict educational success (Björklund & Salvanes, 2011). Evidence suggests that early-childhood interventions catapult school readiness and academic success (Chittleborough, Mittinty, Lawlor, & Lynch, 2014).

Academic interventions for students of low SES are essential to the progress they can make, even outside of content areas. Environmental differences between children of low and high SES have been thought to disrupt educational achievement from the beginning stages, as well as academic trajectory. Families of high SES are more likely than families of low SES to provide a rich language and literacy environment (Hart & Risley, 2003), to have different parenting practices, and to direct additional resources to early-childhood education, healthcare, nutrition, and enriching spare-time activities (Esping-Andersen et al., 2012). Academic interventions for students of low SES can be formulated to address the strains placed on these students, as well as their difficulties with academic concepts. Persons working within this population should be conditioned not only for specific academic issues but also for outside interventions to increase wellness. Interventions beyond the classroom, such as role model interventions, early-childhood intervention programs, parent-training programs, and health interventions, may all increase academic achievement of students of low SES. These specific areas tie into the constraints by which the children of low SES are challenged (Esping-Andersen et al., 2012). Specific

interventions that encourage low SES progression within academic areas are discussed in the following sections.

After-school interventions. After-school programs, which implement after-school interventions, including local initiatives, municipalities, and community organizations, provide a safe location and academic support (Esping-Andersen et al., 2012). Coaches, mentors, and role models can help with student decision making and can implement specific reading and mathematics program interventions (Esping-Andersen et al., 2012).

Computer-assisted interventions. Computer-assisted instruction interventions use computers and software programs to try to enhance student achievement. These programs provide students and teachers with direct diagnostic feedback regarding students' reading progress, as well as supplemental mathematics instruction (Esping-Andersen et al., 2012).

Content change interventions. Effective interventions for students of low SES also include content changes, such as teaching content in both English and students' native languages, as well as increasing focus on natural numbers and operations, geometry, and measurement; phonemic awareness; vocabulary; and reading comprehension (Esping-Andersen et al., 2012).

Cooperative-learning interventions. Cooperative learning or peer-assisted learning interventions include students working together in pairs or small groups in a systematic and structured manner. Examples include students acting as pedagogical instructors for each other, as when more able students help less able students (Esping-Andersen et al., 2012).

Feedback and monitoring interventions. Feedback and progress-monitoring interventions allow teachers or students to receive detailed information about a student's development. The objective is to customize instruction to the individual student's needs. These interventions also have included students being paid to read books, families receiving extra resources in relation to students' academic performance, or teachers receiving bonuses for teaching in low-performing schools (Esping-Andersen et al., 2012).

Increased resource interventions. Students also benefit from increased resources without entailing a specific change to the pedagogical content or methods. Examples are increased academic supports and personnel development, including additional training for school teachers and administration (Esping-Andersen et al., 2012).

Psychological interventions. Psychological/behavioral interventions focus on improving educational achievement through improving social-cognitive skills, mitigating problematic behavior, and changing expectations or beliefs. Examples of these interventions include programs for students who act out, school-wide programs in socioemotional learning, play therapy, and stereotype threat interventions (Esping-Andersen et al., 2012).

Small-group interventions. Additional interventions include small-group instruction, summer programs, and tutoring interventions. Small-group instruction interventions include students placed in smaller groups instead of regular-sized classes. These interventions foster different learning techniques, such as cooperative learning and tutoring (Esping-Andersen et al., 2012).

Summer programming interventions. Summer programs include typical interventions that supply students with books to read and work with during the summer; this intervention allows some structured introduction and evaluation before, during, and after the summer break, for example, by sending out report cards or phone calls from teachers during the summer (Esping-Andersen et al., 2012).

Tutoring interventions. Tutoring interventions are activities that support students either one-to-one or in a small group (i.e., five students or fewer). Tutors can be professional teachers, paraprofessionals, or even volunteers (Esping-Andersen et al., 2012).

Other interventions have been given to students of low SES; however, they are primarily for middle- and elementary-school-aged children (Esping-Andersen et al., 2012). Multicultural perspectives must be considered to identify academic interventions for students of low SES.

Societal Values of Education

Education is valuable, as it relates to society's measurement of success. Research shows that societal values are placed on doing well within academic constraints, and, how the student performs under these constraints usually shows the aptitude of a student's growth. Rewards are usually offered for good grades. Good grades are perceived to imply a certain level of status and merit, in turn granting student's acknowledgement, material privileges (e.g., admission to universities of higher reputation) and higher regard (Felouzis & Charmillot, 2013).

Society has placed values on education, as they are symbolic of receiving rewards in life (Felouzis & Charmillot, 2013). Outcome measures have stated that

the success of a student in life could be based on the amount of education he or she has received. Employment, college education, income earning potential, and SES are all based on education. Usually, families of high SES have a good chance of becoming successful in society. Society revolves around hierarchy and status, both of which are directly linked to the value of education.

The prominence of SES in education and its perceived impact on achievement go back approximately 100 years (e.g., Holley, 1916; Lynd & Lynd, 1929). Boocock (1972) stated the most consistent and powerful tool to predict school performance is SES. Occupational studies have shown that the higher the academic achievement, the higher the SES of the student's family.

Studies that have spanned several decades address this relationship between societal values and education. Usually, no matter the measure of status assessed, including occupation, principal breadwinner, family income, parent's education, or a combination of all these, this relationship seems to impact how students are viewed (Boocock,1972). Societal value on achievement has been usually understood to show the importance of what others cannot control outside of a school and community setting, such as SES (Boocock,1972). SES has been described as a hierarchy within itself; with high academic achievement comes higher economic status. Economic status equates to the social structure of societal views of individuals. Students who achieve lower academically usually are less effective within society's constraints as opposed to students who achieve higher academically and, thus, have more difficulty with completing education, finding a higher income occupation, and experiencing a decline in social status and overall well-being.

The disparity of lower SES and the values that it has on society is also discussed in the literature. Socioeconomic disadvantage in childhood has been affiliated with reduced ability to benefit from schooling (Hertzman & Power, 2003; Lynch, Law, Brinkman, Chittleborough, & Sawyer, 2010), decreased success throughout schooling (Dearing, McCartney, & Taylor, 2009; Goodman, Gisselmann, & Koupil, 2010), decreased involvement in tertiary education (Bynner, Joshi, & Tsatsas, 2000; Goodman et al., 2010), and increased failures in market success (Fasih, 2008).

Educational outcomes from a lower standard of achievement have been associated with increased welfare dependence (Pape, Bjorngaard, Westin, Holmen, & Krokstad, 2011) and lower skilled jobs with lower median hourly pay rates (Office for National Statistics, 2011). Students of low SES are not as academically successful than students of a higher SES. Although societal values are placed on education, inequality is placed on students of low SES. As stated previously, students of low SES face many more difficulties and have fewer opportunities than students of high SES.

Inequalities in education must be addressed when understanding societal values on academics. Students of different SES may achieve, but the gap between low and high socioeconomic resources has predicated inequalities that cannot be ignored. The disparity among students is evident when identifying societal values of education.

The Importance of Attendance on Academic Performance

Attendance measures have been widely researched, and data show a positive difference in academic performance when students are regularly present and attending

school. Highlighting the effect of absence on the learning process is important. A

missed day of school is a missed opportunity for a child to learn and grow. Owing to

increased accountability within schools, districts, and states, the pattern between

student attendance and learning is a topic being researched much more heavily now

than previously **(**National Center for Educational Statistics [NCES], 2009**).**

      Students learn more by attending school, as opposed to missing days. Students

must be present not only for academic support, but also for enhancing rapport with

instructors. Students who have a better support system and rapport with instructors

tend to do better overall with academic functioning than students who do not.

      The most important rationale for higher-than-average attendance data is the

relationship between student attendance and student achievement. Teacher

effectiveness and ability are the highest pillars of student success, but increased

student absence reduces even the most competent teacher's ability to provide learning

opportunities (Adelman, 2006). The relationship between achievement and

attendance appears at the beginning of a child's school trajectory. A longitudinal study

of young children found that absenteeism in kindergarten was associated with

negative outcomes during their formative years; greater absenteeism in subsequent

years; and lower achievement in reading, math, and general knowledge (Romero &

Lee, 2007).

      Attendance is also known to affect a student's lifelong academic performance.

According to the National Center of Educational Statistics (2009), students who have

poor attendance are more than likely to have more implications (stressors, problems

in school) further along in their academic careers. Owing to absenteeism, these

students who have lower attendance have higher rates of maladaptive behaviors and lower graduation rates from high school than students who have a higher attendance rate (NCES, 2009). These differences in absentee rates were observed as early as kindergarten, and students who eventually dropped out of high school missed significantly more days of school in first grade than did their peers who graduated from high school. In eighth grade, this pattern was even more apparent, and by ninth grade, attendance was shown to be a key indicator significantly identified with high-school graduation (Allensworth & Easton, 2005).

Academic performance has a strong response to attendance rates. Students of lower SES already experience more difficulties than students of high SES. When lower attendance is also involved, additional risk factors result in inadequate progress and achievement for students. According to disciplinary responses from decreased attendance, it was reported that absenteeism usually resulted in the loss of course credits, as well as suspension and detention (NCES,2009). When students are absent, whether excused or not, their opportunity to learn in accordance to their instructional program is taken away.

Overall, students who miss school are further excluded from learning and miss the opportunities to excel because of chronic absenteeism (NCES, 2009). Attendance is key for students of lower SES, as it increases the likelihood of success.

Parenting Styles and Low SES

Children usually develop many of their habits and socialization characteristics from parenting. Parenting practices are defined as specific behaviors that parents use to socialize their children (Darling & Steinberg, 1993). For example,

parents may use different interventions to socialize their children for success, such as completing their homework, attending school functions, and allowing their children to read books (Darling & Steinberg, 1993). Darling and Steinberg (1993) suggested that parenting style is the emotional climate in which parents raise their children. Parenting styles have been characterized by dimensions of parental responsiveness and demandingness (Baumrind, 1991).

Parenting styles may be a response to additional factors that may not involve the student. Many times, parents of low SES exhibit negative attributes (Beckerman, Van Berkel, Mesman, & Alink, 2017). Parental attributions mediate the relation between daily stressors (i.e., low SES, parenting stress, partner‐related stress), parents' own histories of child maltreatment, and harsh and abusive parenting (Beckerman et al., 2017).

Many types of risk factors have strained the ability of parents of low SES to use positive and effective strategies to offer discipline (Beckerman et al., 2017). Underlying characteristics, such as stress, past experiences, and maltreatment, are usually indicated as factors in families of low SES. Future child development predictors usually come from the structures of parenting.

A significant source of stress for parents is dealing with low SES. The family stress model (FSM; Conger & Conger, 2002; Conger & Donnellan, 2007) posits that parents of low SES experience elevated levels of stress because of economic hardships (e.g., low income, high debts, work instability) they encounter. As a consequence, these parents of lower SES are more irritable, harsh, and inconsistent in their disciplinary practices than parents of higher SES. For example, the parenting

styles of parents with low educational levels and unemployment predict harsh

discipline (Dodge, Pettit, & Bates, 1994) and physical abuse. These parents were

found to have a lower level of education, lower income, and lower occupational

level and to be more often unemployed than nonabusive parents (Cappelleri,

Eckenrode, & Powers, 1993; Euser et al., 2013; Sedlak et al., 2010; Whipple &

Webster-Stratton, 1991).

Low SES also causes interparental problems. Increased research shows that

abusive parents and those at risk for abusive parenting are more dissatisfied with their

relationships than high SES parents (Chan, 1994; Salisbury, Henning, & Holdford,

2009), report less support from their partners (Whipple & Webster-Stratton, 1991),

and hold less positive opinions of their partners compared to other parents.

In addition, to low SES and interparental problems, parenting styles also result

from parenting tasks and difficult child behavior. Feelings of incompetence, stress,

and unwillingness to discipline a child appropriately have created inadequacies in

parents being supportive and having favorable discipline tactics (Beckerman et al.,

2017). Although unfavorable, these parenting tactics can be combatted. Parents of

low SES have benefited from workshops, cognitive-processing training, therapeutic

and environmental support, and interventions to target parental attributes and tactics

(Beckerman et al., 2017). Parents must recognize that interventions and positive skill

sets can increase parental productivity and combat the difficulties of parenting with

low and irresponsive strategies. For future implications, increased use of parenting

style guidelines and strategies over a specific timespan could increase continued

success of families of low SES.

The Impact of Low SES on Behavior

Studies show that challenging behavior has been impactful within the general population in at least 14 to 20% of the children in home and school settings (Brandenburg, Friedman, & Silver, 1990). These challenges arise from students who are primarily identified as of low SES (Ohmstede & Yetter, 2015). Children typically decrease oppositional behaviors and conduct after the age of 2 years; however, in studies of students who did not receive the same resources, this has not been accurate, and students continued to engage in disruptive and problematic behaviors after adolescence (Ohmstede & Yetter, 2015). As a child continues to engage persistently in these behaviors, the risk factors of poor school performance increase the likelihood of other long-term problems, including substance abuse, low academic profiles, and conduct disorder (Ohmstede & Yetter, 2015). These behaviors show imperative needs for parents to understand and also incorporate effective behavioral strategies (Bennett et al., 1999). Unfortunately, many children with behavioral and emotional needs are not provided the necessary services to address their overall concerns. It has been estimated from school studies that nearly 80% of students in need of mental-health services are not receiving them (Kataoka, Zhang, & Wells, 2002). These students usually come from low SES backgrounds and are allotted only the minimal mental-health services to address behaviors within school (Burns et al., 2004).

Low SES is a barrier for students with problematic behaviors, as students do not have the resources available to them for success. Active parents in home and school settings have been said to increase overall academic performance and decrease discipline problems of their children across both environments (McCarthey, 2000).

Children of low SES may not spend a significant amount of time with their parents and may be guided only by school personnel (Ohmstede & Yetter, 2015). Parents lack of involvement decreases the overall results on positive behaviors, as the time is not customized across both settings. In order to increase overall positive behaviors in children of low SES, building a bridge between the home and school settings is of utmost importance when setting goals to address children's educational and behavioral needs (Sheridan, Eagle, Cowan, & Mickleson, 2001); interventions tailored to students within this particular population must be completed.

Increasing specific bonds within the home and school that build partnerships is the first step. A common responsibility must be shared by parents and schools for educating and appropriately socializing children within communities of low SES (Sheridan et al., 2001). Interactions and rapport between the family and school to create a mutual agreement that supports adjustment, school learning, and the identification of positive school personnel and faculty have proved effective in meeting the needs of students.

Low SES and student behaviors are parallel. Within communities of low SES, students exhibit many difficulties resulting from lack of resources; however, being involved within the community, increasing rapport among families, and fostering school and home collaboration have been shown to improve overall functioning of children. Future research to increase positive behavior of children of low SES should identify mechanisms that engage not only the student but also the family. When the learning environment is structured, behavioral difficulties decrease (Clark & Fiedler, 2003; Cox, 2002).

CHAPTER 3

METHODOLOGY

This study used archival school data compiled during the 2017-2018 school year to analyze the impact of family income, as determined by student eligibility for free- or reduced-lunch benefits, on several measures of school performance. This chapter describes the student population for the study, the measures of school performance that were used, and the procedures for collecting and analyzing the school data.

Participants

Participants included 165 male students in third through fifth grade who attended a single elementary school in the mid-Atlantic region of the United States between September, 2017, and June, 2018. For the purpose of this study, *participants* refers to non-individually-identified students for whom archived school data were obtained and analyzed. No students actively participated in the study, and consent to use school data was given by the superintendent of schools for the school district.

The independent variable of most interest for the study was family/household income as a global measure of socioeconomic status (SES). Student eligibility for the school district's Child Nutritional Program, which provides free- or reduced-lunch benefits, was used as an indicator of family income for this study. Approximately 60%t of the students in the sample were eligible for free or reduced lunch. More detailed demographic information about the study sample, including age, grade, race, and educational placement, is reported in Chapter 4.

Hypotheses

This study was based upon an investigation of the effects of income on three dependent variables: academic performance, school attendance, and need for behavioral management interventions. Three separate hypotheses based on these variables were tested.

Hypothesis 1: Impact of Income on Academic Performance

$H1_0$: No differences in performance on statewide standardized tests and local academic measures will be observed in students from higher and lower income levels.

$H1_A$: Students from higher income families will perform better on statewide standardized tests and local academic measures than students from lower income families.

Hypothesis 2: Impact of Income on School Attendance

$H2_0$: No differences will be observed in percentage of school attendance between students from higher and lower income families.

$H2_A$: Students from higher income families will have a higher percentage of school attendance than students from lower income families.

Hypothesis 3: Impact of Income on Referrals for Behavioral Management

$H3_0$: No differences will be observed in referrals for behavioral assessments and interventions between students from higher and lower income families.

$H3_A$: Students from higher income families will have fewer referrals for behavioral assessments and interventions than students from lower income families.

Measures of School Performance

Indicators of school performance were derived from data routinely collected and maintained in students' cumulative school records. Levels of academic functioning in reading/language arts and mathematics were indicated through performance on statewide standardized testing, as well as through local indicators of instructional supports provided to students. School attendance was reported as a percentage of days present during the 180-day school year. Indicators of behavioral-management interventions were derived from the presence of formal functional behavioral assessments (FBA) that were completed and from local indicators of behavioral supports that were in place for specific students. No personally identifiable information was recorded in the data set maintained for this study. The following sections provide complete descriptions of academic and behavioral measures included in the study.

Measures of Academic Performance

The school district in which this study was conducted participates in a statewide standardized testing program that uses the Smarter Balanced Assessment system (Smarter Balanced Assessment Consortium, 2015). With the Smarter Balanced Assessment system, students take a customized test using a computer-adaptive format, in which questions get harder when students answer correctly and easier when they answer incorrectly. Students in Grades 3 through 5 in the district take Smarter Balanced Assessment achievement tests in mathematics and in reading/language arts.

Smarter Balanced Assessments. The Smarter Balanced Assessment

provides a reporting system that describes achievement levels for the test-taker using

a 4-point scale. Level 4 on the test indicates that the student has met the achievement

standard for the content area and demonstrates progress toward mastery of the

knowledge and skills needed for success in future coursework. At Level 3, the

student has met the achievement standard in the content area and is making progress

toward mastery of knowledge and skills needed for future success. Level 2 indicates

that a student has nearly met the achievement standard and may require further

development of knowledge and skills needed for success in future coursework. Level

1 is the lowest rating and indicates that the student has not met the achievement

standard and needs substantial improvement to demonstrate knowledge and skills

needed for success in future coursework.

Students included in this study were identified as either *proficient* or *not

proficient* on the Smarter Balanced Assessments in reading/language arts and

mathematics. The category of proficient was defined as performance rated at either

Level 3 or Level 4 on the content area testing. The category of not proficient was

defined as performance rated at either Level 1 or Level 2 on the content area

assessment.

The Smarter Balanced Assessment system uses computer-adaptive

assessments, which replace pencil-and-paper tests and can adjust the difficulty of

questions based on student responses. A student who answers correctly receives a

more challenging item, while an incorrect answer generates an easier question.

Students receive a more engaging test experience – one that is more time efficient and

produces more accurate results. The new assessments are designed to provide

accurate measures of achievement and growth for all students, including those with

disabilities and English language learners. Accommodations are made to ensure

assessments are accessible and produce results that are valid for these students. For

students with disabilities, the online assessments address visual, auditory, and

physical-access barriers. These students can take an individualized test at the same

time as other students in their class. Tools have also been developed to help English

language learners demonstrate their knowledge, regardless of their level of

proficiency in English.

Tiered instructional levels in mathematics and reading/language arts.

The school provides tiered instructional supports for students in both mathematics

and reading/language arts through the implementation of a Response to Intervention

(RTI) service delivery system. At Tier 1, students participate primarily in the grade

level instructional program for the content area, with a minimal need for additional

supports beyond the classroom program. Tier 2 provides an intermediate level of

support for students who are close to but not meeting established benchmarks for

grade level instruction in the content area. Typically, students at this level participate

in their classroom reading or math program and also receive additional instructional

supports outside the classroom, such as small-group remedial sessions, that

supplement the classroom instruction.   At Tier 3, students require intensive

instructional support, which may either supplement or replace the classroom program

for reading/language arts or mathematics. Students receive an additional focus on

curriculum-based assessments (i.e., IREADY and STAR programming for math and

reading), are pulled out to work individually with the reading specialist, and spend more time on interventions than students in Tier 2.

For purposes of this study, the assignment of students to specific RTI tiers of instruction was used to designate the degree of instructional support that each student required in both reading/language arts and mathematics. After students go through 12 weeks of any tier without making adequate progress, they are then moved to a higher tier for more intensive interventions. Students receiving Tier 3 supports without making adequate progress are then referred for special-education services.

Behavioral indicators. Students included in the study were identified according to the level of behavioral supports that they required within their educational program. Two criteria were used for this purpose. First, students were grouped according to those who had been referred for a FBA and development of a behavior intervention plan and those students who had not required referrals for behavioral problems.

The FBA comes from what is called a *functional assessment* or *functional analysis* in the field of applied behavioral analysis. It is the process of determining the cause or "function" of behavior before developing an intervention for behaviors that may cause disruptions at school, home, or in the community. The intervention developed should be based on a hypothesized cause (function) of behavior. To do so, the FBA attempts to identify the events that control the display of problematic behaviors. The assessment documents the antecedents (i.e., what comes before the behavior) and consequences (i.e., what happens after the behavior) by observing the individual in each environment where the problem occurs. The FBA also takes into

account clinical interviews of school staff, teachers, and parents (Children's Hospital of Philadelphia, 2016)

A secondary criterion related to the need for behavioral interventions was the identification of students on the school's RTI system of behavioral supports. Similar to the academic RTI structure, students on Tier 1 for behavior are appropriately supported through the general-education program and school-wide interventions in place for all students. Students on Tier 2 for behavior require a moderate number of behavioral supports and may require school-based counseling and other services available to support social and emotional development. Tier 2 students receive some progress monitoring and check-ins with staff. Placement at Tier 3 of the RTI process suggests that students have extreme difficulty with classroom functioning and they either are warranted an FBA or will be receiving one expeditiously. Students in Tier 3 receive progress monitoring daily and also check-ins. They also are provided a behavioral support plan, which may consist of reward incentive charts, behavioral programs that include a point system, and other interventions tailored to the student's behavior.

Procedures

Upon receipt of administrative permission to access student data and Internal Review Board approval of the study, the school psychologist met with school administrators and food-and-service representatives in order to receive information regarding third through fifth-grade boys who were categorized as of low SES and higher SES. The income category was based on eligibility for free- and reduced-lunch benefits.   After obtaining this information, the school psychologist retrieved study

data from student files, after which all identifying personal information was removed

from the data set, with an individual number (1 - 165) assigned to each student.

Information obtained for each student included the following: (a) grade

placement; (b) chronological age; (c) race; (d) total days absent for the school year;

(e) eligibility (yes/no) for free-/reduced-lunch benefits; (f) Smarter Balanced

Assessment level (i.e., proficient or not proficient) for reading/language arts; (g)

Smarter Balanced Assessment level (i.e., proficient or not proficient) for

mathematics; (h) RTI placement level for reading/language arts; (i.) RTI placement

level for mathematics; (j.) RTI placement level for behavior; (k) completion (i.e.,

yes/no) of a FBA; and (l) eligibility (i.e., yes/no) for special-education and related

services. All information obtained was specific to the 2017-2018 school year.

Data Analysis

Descriptive data for the study sample, including information on age, grade,

family income level, referrals for behavior management, school attendance, and

scores on standardized testing, was reported. Comparative statistics (i.e., *t* tests and

chi-square tests) were used to determine the significance of intergroup (i.e., high and

low family income) differences on standardized testing, school attendance, and

referrals for behavioral management.

CHAPTER 4

RESULTS

This study used archival data to determine the relationship between SES and measures of school performance. Data from the 2017-2018 school year were used to make comparisons related to school attendance, behavior, and academic achievement. This chapter presents information about the student population and all of the statistical comparisons that were done.

The population for the study included a total of 165 male students in Grades 3, 4, and 5 from a single elementary school in the mid-Atlantic region of the United States. Table 1 provides a summary of demographic information for the sample.

Table 1

Student Demographics

_____

Variable	Categories	Number	Percent
Grade	Grade 3	47	28.5
	Grade 4	57	34.5
	Grade 5	61	37.0
Age	8 years	31	18.8
	9 years	54	32.7
	10 years	55	33.3
	11 years	24	14.5
	12 years	1	.6
Race	African American	51	30.9
	Caucasian	97	58.8
	Hispanic	12	7.3
	Asian	4	2.4
	Native American	1	0.6

Free/reduced lunch	Yes	100	60.6
	No	65	39.4
Educational placement	General education	124	75.2
	Special education	41	24.8

Hypothesis 1: Impact of Income on Academic Performance

To test Hypothesis 1, scores from the Mathematics and Reading/Language Arts portions of the Smarter Balanced Assessment, as well as the assigned tier levels of the response to intervention (RTI) program for students, were used as measures. Overall, no statistical differences were found among income groups for any of the academic measures; consequently, the null hypothesis related to academic performance could not be rejected.

Smarter Balanced Assessment testing in mathematics. A chi-square analysis was done to compare expected with actual frequencies of numbers of students who were proficient and not proficient in the mathematics portion of statewide testing. Within the entire population, a total of 97 students were proficient and 68 were not proficient in mathematics. Fifty-five students receiving free or reduced lunch were proficient, and 45 students were not proficient. For students not receiving free or reduced lunch, 42 students were proficient in mathematics, and 23 students were not proficient. Table 2 presents a summary of values for the chi-square analysis of mathematics standardized scores by income levels. This comparison, $\chi^2(1, n = 165) = 1.503, p > .20$, shows a nonsignificant relationship between standardized test scores in mathematics and income levels.

Table 2

Smarter Balanced Assessment (SBA)/Mathematics x Free/Reduced Lunch (FRL)

SBA Mathematics	Receives FRL	Does not receive FRL	Total
Proficient	55 (55.0%)	42 (64.6%)	97 (58.8%)
Not proficient	45 (45.0%)	23 (35.4%)	68 (41.2%)
Total	100 (60.6%)	65 (39.4%)	165(100.0%)

Note: Smarter Balanced Assessment is the state-wide standardized assessment used to determine levels of academic proficiency in reading/language arts and mathematics.

RTI supports for mathematics. As noted previously, the school uses a tiered system of interventions to provide academic supports for students based on their progress in the general-education program. A chi-square analysis was done to determine the relationship between income levels (as indicated by eligibility for free-/reduced-lunch benefits) and the need for instructional supports in mathematics. Tier 1 for mathematics, which provides minimal supports beyond the general-education program, included 74 students who received free and reduced lunch; 51 students at Tier 1 did not receive free and reduced lunch. Tier 2 for mathematics, which provides an intermediate level of instructional support, included 18 students receiving free-/reduced-lunch benefits and six students not receiving free/reduced lunch. Intensive supports (i.e., Tier 3) included eight students who received free and reduced lunch and eight students who did not receive free and reduced lunch. Table 3 presents a summary of values for the chi-square analysis of mathematics RTI supports by income levels. This comparison, $\chi^2(2, n = 165) = 2.940, p > .20$, shows a nonsignificant relationship between RTI supports in mathematics and income levels.

Table 3

Mathematics RTI Supports x Free/Reduced Lunch (FRL)

Mathematics RTI	Receives FRL	Does not receive FRL	Total
Tier 1 - Minimal	74 (74.0%)	51 (78.4%)	125 (75.8%)
Tier 2 - Intermediate	18 (18.0%)	6 (9.2%)	24 (14.5%)
Tier 3 - Intensive	8 (8.0%)	8 (8.0%)	16 (9.7%)
Total	100 (60.6%)	65 (39.4%)	165(100.0%)

Note: Response to Intervention (RTI) Mathematics describes the level of interventional support students receive in mathematics. Students on Tier 1 receive minimal instructional supports beyond the general instructional program for assigned grade. Students on Tiers 2 and 3 receive additional instructional supports in addition to the classroom instructional program for assigned grade.

Smarter Balanced Assessment testing in reading/language arts. A chi-square analysis also was completed to compare expected with actual frequencies of numbers of students who were proficient and not proficient in the reading/language arts portion of the Smarter Balanced Assessment. A total of 105 students were proficient in reading/language arts, and 60 were not proficient. Fifty-nine students receiving free-/reduced-lunch benefits were proficient, and 41 were not proficient. Among students who did not receive free/reduced lunch, 46 were proficient and 19 were not proficient. Table 4 shows a summary of values for the chi-square analysis of reading/language arts standardized test scores by income levels. This comparison, $\chi^2(1, n = 165) = 2.358, p > .12$, indicates a nonsignificant relationship between performance on standardized testing in reading/language arts and income levels.

Table 4

Smarter Balanced Assessment (SBA)/Reading/Language Arts x Free/Reduced Lunch (FRL)

_____

SBA Reading/Lang	Receives FRL	Does not receive FRL	Total
Proficient	59 (59.0%)	46 (70.8%)	105 (63.6%)
Not proficient	41 (41.0%)	19 (29.2%)	60 (36.4%)
Total	100 (60.6%)	65 (39.4%)	165(100.0%)

Note: Smarter Balanced Assessment is the state-wide standardized assessment used to determine levels of academic proficiency in reading/language arts and mathematics.

   RTI supports in reading/language arts. Overall, a total of 116 students were placed on Tier 1 (i.e., minimal supports) for reading/language arts, with 25 students placed on Tier 2 (i.e., intermediate supports) and 24 students on Tier 3 (i.e., intensive supports). Among students receiving free-/reduced-lunch benefits, 73 students were placed at Tier 1 for reading/language arts, with 13 students placed at Tier 2 and 14 students placed at Tier 3. Forty-three students who were not receiving free/reduced lunch were placed at Tier 1 for reading/language arts, with 12 students placed at Tier 2 and 10 students at Tier 3. Table 5 shows a summary of values for the chi-square analysis of reading/language arts RTI supports by income levels. This comparison, $\chi^2(2, n = 165) = 1.091, p > .50$, indicates a nonsignificant relationship between RTI supports in reading/language arts and income levels.

Table 5

Reading/Language Arts RTI Supports x Free/Reduced Lunch (FRL)

Reading/Language RTI	Receives FRL	Does not receive FRL	Total
Tier 1 - Minimal	73 (73.0%)	43 (66.1%)	116 (70.3%)
Tier 2 - Intermediate	13 (13.0%)	12 (18.5%)	25 (15.2%)
Tier 3 - Intensive	14 (14.0%)	10 (15.4%)	24 (14.5%)
Total	100 (60.6%)	65 (39.4%)	165 (100.0%)

Note: Response to Intervention (RTI) for reading/language arts describes the level of interventional support students receive in the reading/language arts program. Students on Tier 1 receive minimal instructional supports beyond the general instructional program for assigned grade. Students on Tiers 2 and 3 receive additional instructional supports in addition to the classroom instructional program for assigned grade.

In total, four separate measures were used to determine the influence of family income (as indicated by eligibility for free-/reduced-lunch benefits) on academic performance of third- through fifth-grade male students in this study. These measures included standardized test scores in reading/language arts, level of RTI supports in reading/language arts, standardized test scores in mathematics, and level of RTI supports in mathematics. None of the four statistical comparisons addressing these measures were found to be statistically significant. Consequently, as noted previously, the null hypothesis related to academic performance (i.e., Hypothesis 1) could not be rejected.

Hypothesis 2*: Impact of Income on Student Attendance

School attendance is generally considered to be an important element in the degree to which students are successful with regard to academic achievement. The second hypothesis for this study addressed the question of whether family income

was a factor in predicting school attendance. To test this hypothesis, a comparison

was done of mean percentages of annual school attendance for students who received

free-/reduced-lunch benefits with those students who did not receive free/reduced

lunch. Within this elementary-school sample of third- through fifth-grade male

students, overall attendance was found to be high, with only seven students having a

daily attendance rate of less than 90%. Within the group of students who received

free-/reduced-lunch benefits, the average attendance rate was 96.3%, and students

who were not receiving free-/reduced-lunch benefits had an average attendance rate

of 95.5%. A significant difference was not found between the two groups for

attendance, $df = 163$, $t = 1.195$, $p > .23$.

Given the high attendance rates for both groups, family income (as defined by

eligibility for free-/reduced-lunch benefits) clearly did not have any systematic

influence on school attendance within this study sample. Thus, with regard to school

attendance, the null hypothesis could not be rejected.

Hypothesis 3: **Impact of Income on Referrals for Behavioral Management**

To test Hypothesis 3, two behavioral indicators were used. First, the number

of students referred for a functional behavioral assessment (FBA) was considered

indicative of a need for behavioral-management interventions. Second, placement of

students on RTI tiers with respect to behavioral interventions was used as an

additional measure of an individual student's need for behavioral-management

services.

FBA referrals. Examination of the data set showed that the small number of

FBA referrals would limit the usefulness of this behavioral indicator. Overall, a total

of only seven students were referred for a FBA during 2017-2018. This number

included two students who were receiving free-/reduced-lunch benefits and five

students who were not eligible for free-/reduced-lunch benefits. Table 6 presents a

summary of values for the chi-square analysis of FBA referrals by income levels.

This comparison, $\chi^2(1, n = 165) = 3.142, p > .08$, was approaching significance, but

as previously noted, the small number of cases limits the usefulness of the data.

Table 6

FBA Referrals x Free/Reduced Lunch (FRL)
_____

FBA Referral	Receives FRL	Does not receive FRL	Total
Yes	2 (2.0%)	5 (7.7%)	7 (4.2%)
No	98 (98.0%)	60 (92.3%)	158 (95.8%)
Total	100 (60.6%)	65 (39.4%)	165 (100.0%)

Note: Referral for a functional behavioral assessment (FBA) is an indicator that a student is experiencing significant difficulties in meeting school and classroom expectations for behavior. The purpose of the FBA is to determine causes, frequency, and intensity of problem behaviors, in order to develop an individualized behavioral support plan for the student.

Behavioral RTI system. The second behavioral indicator used for this study

was the placement of students on tiered levels of behavioral intervention (i.e.,

Behavioral RTI system). Tier 1 for Behavioral RTI, which provided minimal

intervention, included a total of 138 students. Within this group, 85 students qualified

for free-/reduced-lunch benefits, and 53 students were not eligible. Tier 2 for

Behavioral RTI provided intermediate supports, such as small-group counseling or

focused-skills training programs (e.g., social skills, conflict resolution, or anger

management). A total of 16 students were placed at Tier 2 for behavior, 11 of whom

were eligible for free/reduced lunch and five who were not receiving income-related

benefits. Eleven students were placed at Tier 3 for behavior, including four students

who received free/reduced lunch and seven students not eligible for this benefit. Tier

3 provides behavioral interventions, such as individual counseling, individual

behavioral intervention plans, and more restrictive interventions, such as in-school

suspension.

Table 7 presents a summary of values for the chi-square analysis of

Behavioral RTI by income levels. This comparison, $\chi^2(2, n = 165) = 3.209, p > .20$,

indicated a nonsignificant relationship between income and tiered behavioral

interventions.

Table 7

Behavioral RTI x Free/Reduced Lunch (FRL)

_____

Behavioral RTI	Receives FRL	Does not receive FRL	Total
Tier 1 - Minimal	85 (85.0%)	53 (81.5%)	138 (83.6%)
Tier 2 - Intermediate	11 (11.0%)	5 (7.7%)	16 (9.7%)
Tier 3 - Intensive	4 (4.0%)	7 (10.8%)	11 (6.7%)
Total	100 (60.6%)	65 (39.4%)	165 (100.0%)

Note: Behavioral Response to Intervention (Behavioral RTI) is a tiered system of supports provided to students to promote successful school and classroom behavior. Students on Tier 1 for behavior receive minimal supports beyond the general school and classroom supports used to encourage students to follow established rules and behavioral expectations. Students on Tiers 2 and 3 for behavior receive increasing levels of small group and individual supports to address social, emotional, and behavioral challenges.

Taken together, the two measures used to determine the influence of family income on need for behavioral management services did not provide evidence for any systematic relationship between income and school-based behavioral problems. Although the analysis for FBA referrals by free-/reduced-lunch eligibility resulted in a chi-square value that was approaching significance ($p = .076$), the small number of students requiring a FBA limited the meaningfulness of the data. Overall, no evidence supported rejecting the null hypothesis regarding a relationship between family income and problematic school behavior.

Summary of Results Related to the Research Hypotheses

In summary, the findings related to the three research hypotheses did not support any systematic relationships between family income levels and three measures of school performance. A series of statistical analyses comparing family income, as determined by eligibility for free-/reduced-lunch benefits, with (a) measures of academic performance in reading/language arts and mathematics, (b) school attendance, and (c) need for school-based behavioral management services did not show any significant relationships among these variables. Consequently, the null hypothesis could not be rejected for any of the research hypotheses. Several additional analyses were conducted to determine if any other variables might account for observed differences in school performance.

Additional Comparisons

Because none of the original hypotheses for this study were supported by the data, additional statistical analyses were done to determine if any other variables might predict differences in the measures of school performance. The demographic

variable that was of most interest in this regard was race, and multiple comparisons were done with race as the dependent variable.

Race and free/reduced lunch. An initial inspection of the data showed that almost 90% of students in the sample were identified as either African American or Caucasian. Given the small numbers of Hispanic ($n = 12$), Asian ($n = 4$), and Native American ($n = 1$) students in the sample, comparisons by race were done for just the African American and Caucasian groups.

The first analysis looked at whether any differences by race existed among students who were eligible for free-/reduced-lunch benefits. This comparison showed no significant differences between African American ($n = 51$) and Caucasian students ($n = 97$). Table 8 presents data for the chi-square analysis of race by free/reduced lunch. This comparison, $\chi^2(1, n = 148) = .392, p > .500$, indicated a nonsignificant relationship between race and income levels.

Table 8

Race x Free/Reduced Lunch

_____

Free/Reduced Lunch	African American	Caucasian	Total
Yes	31 (60.8%)	64 (66.0%)	95 (64.2%)
No	20 (39.2%)	33 (34.0%)	53 (35.8%)
Total	51 (34.5%)	97 (65.5%)	148 (100.0%)

Race and academic performance. Statistical comparisons using race as the independent variable did show significant differences with regard to measures of academic performance. Table 9 presents a summary of values for the chi-square

analysis of race by performance on the mathematics portion of the Smarter Balanced

Assessment. This comparison, $\chi^2(1, n = 148) = 16.638, p = .000$, indicated a

significant difference between African American and Caucasian students with regard

to performance on statewide testing in mathematics. Inspection of the outcome

distribution (proficient vs. not proficient) showed that African American students

were overrepresented in the group of students who were not proficient on the

mathematics assessment.

Table 9

Race x Smarter Balanced Assessment (SBA)/Mathematics

SBA Math	African-American	Caucasian	Total
Proficient	18 (35.3%)	68 (70.1%)	86 (58.1%)
Not proficient	33 (64.7%)	29 (29.9%)	62 (41.9%)
Total	51 (34.5%)	97 (65.5%)	148 (100.0%)

Note: Smarter Balanced Assessment is the state-wide standardized assessment used to determine levels of academic proficiency in reading/language arts and mathematics.

Similar results were shown for all other analyses of race by academic

performance measures. Table 10 summarizes the chi-square values for race compared

with Smarter Balanced Assessment in reading/language arts. This comparison

indicated that African American students were underrepresented in the group of

students who were proficient on the standardized assessments in reading and

language arts, $\chi^2(1, n = 148) = 15.635, p = .000$.

Table 10

Race x Smarter Balanced Assessment(SBA)/Reading

SBA Reading	African-American	Caucasian	Total
Proficient	21 (41.2%)	72 (74.2%)	93 (62.8%)
Not proficient	30 (58.8%)	25 (25.8%)	55 (37.2%)
Total	51	97	148

Note: Smarter Balanced Assessment is the state-wide standardized assessment used to determine levels of academic proficiency in reading/language arts and mathematics.

Results for comparisons of race with placements on RTI tiers for mathematics, $\chi^2(2, n = 148) = 10.021$, $p = .007$, showed similar patterns of performance, with African American students being underrepresented in placements on Tier 1 and overrepresented in placements on Tier 2 for mathematics. No differences were found in the percentages of African American and Caucasian students receiving intensive supports (i.e., Tier 3) for mathematics. Table 11 summarizes the chi-square values for race compared with Mathematics RTI.

Table 11

Race x Mathematics RTI

Mathematics RTI	African-American	Caucasian	Total
Tier 1 - Minimal	32 (62.7%)	80 (82.5%)	112 (75.7%)
Tier 2 - Intermediate	14 (27.5%)	8 (8.2%)	22 (14.9%)
Tier 3 - Intensive	5 (9.8%)	9 (9.3%)	14 (9.4%)
Total	51 (34.5%)	97 (65.5%)	148 (100.0%)

Note: Response to Intervention (RTI) Mathematics describes the level of interventional support students receive in mathematics. Students on Tier 1 receive minimal instructional supports beyond the general instructional program for assigned grade. Students on Tiers 2 and 3 receive additional instructional supports in addition to the classroom instructional program for assigned grade.

Table 12 summarizes the chi-square values for race compared with Reading/Language Arts RTI. This comparison, $\chi^2(2, n = 148) = 11.786, p = .003$, indicated that Caucasian students were overrepresented in the group of students receiving Tier 1 instruction in reading/language arts and underrepresented in the groups receiving intermediate supports (i.e., Tier 2) and intensive supports (i.e., Tier 3) for reading/language arts. The opposite pattern of placements was indicated for African American students, who were underrepresented in Tier 1 and overrepresented in Tiers 2 and 3. One should note that the observed findings for RTI placements in both mathematics and reading/language arts are not independent of students' patterns of proficiency on statewide achievement tests in both academic areas.

Table 12

Race x Reading/Language Arts RTI

_____

Reading/Language Arts RTI	African-American	Caucasian	Total
Tier 1 - Minimal	26 (51.0%)	76 (78.4%)	102 (69.0%)
Tier 2 - Intermediate	12 (23.5%)	11 (11.3%)	23 (15.5%)
Tier 3 - Intensive	13 (25.5%)	10 (10.3%)	23 (15.5%)
Total	51 (34.5%)	97 (65.5%)	148 (100.0%)

Note: Response to Intervention (RTI) Reading/Language Arts describes the level of interventional support students receive in reading and language arts. Students on Tier 1 receive minimal instructional supports beyond the general instructional program for assigned grade. Students on Tiers 2 and 3 receive additional instructional supports in addition to the classroom instructional program for assigned grade.

Race and behavioral management. Similar to the results for academic

performance, significant differences were found between African American and

Caucasian students on the measures used to assess the need for behavioral

intervention services. Table 13 presents a summary of values for the chi-square

analysis of FBA by race. This comparison, $\chi^2(1, n = 148) = 4.446, p = .035$, showed a

significant difference between groups, with African American students being

overrepresented in the group of students who needed referrals for FBAs. As noted

previously, the total number of FBAs conducted was quite small, thus reducing the

importance of this finding in the overall findings of the study.

Table 13

Race x Functional Behavioral Assessment (FBA)

_____

FBA	African-American	Caucasian	Total
Yes	5 (9.8%)	2 (2.1%)	7 (4.7%)
No	46 (90.2%)	95 (97.9%)	141 (95.3%)
Total	51 (34.5%)	97 (65.5%)	148 (100.0%)

Note: Referral for a functional behavioral assessment (FBA) is an indicator that a student is
experiencing significant difficulties in meeting school and classroom expectations for behavior. The
purpose of the FBA is to determine causes, frequency, and intensity of problem behaviors, in order to
develop an individualized behavioral support plan for the student.

The final comparison looked at race by placement on Behavioral RTI tiers,

and again, significant differences were noted between African American and

Caucasian students on this measure. Table 14 presents a summary of values for the

chi-square analysis of FBA by race. This comparison, $\chi^2(2, n = 148) = 13.811, p =$

.001, showed a significant difference between groups, with African American students being overrepresented in the group of students who needed intensive behavioral supports.

Table 14

Race x Behavioral RTI

Behavioral RTI	African-American	Caucasian	Total
Tier 1 - Minimal	34 (66.7%)	88 (90.7%)	122 (82.4%)
Tier 2 - Intermediate	9 (17.6%)	6 (6.2%)	15 (10.1)
Tier 3 - Intensive	8 (15.7%)	3 (3.1%)	11 (7.4%)
Total	51 (34.5%)	97 (65.5%)	148 (100.0%)

Note: Behavioral Response to Intervention (Behavioral RTI) is a tiered system of supports provided to students to promote successful school and classroom behavior. Students on Tier 1 for behavior receive minimal supports beyond the general school and classroom supports used to encourage students to follow established rules and behavioral expectations. Students on Tiers 2 and 3 for behavior receive increasing levels of small group and individual supports to address social, emotional, and behavioral challenges.

Overall Summary of Results

The overall summary of results leads to a conclusion that the relationship of income (i.e., SES) to attendance, Smarter Balanced Assessment testing, and behavioral management are not significant and show no direct correlation. Additional comparisons to school performance, however, showed a significance when race was identified as the dependent variable, suggesting a direct correlation. Results demonstrated a consistent pattern of underrepresentation of African American students on indicators of academic proficiency and school behavior compared with

their Caucasian peers. These results and some proposed reasons for the observed

differences across groups are discussed further in Chapter 5

CHAPTER 5

DISCUSSION

From the conclusion of all the results gathered in this study, no significant differences were found with respect to family income based on free and reduced lunch and school performance. However, when race was compared as an independent variable, significance was found with respect to academic performance and behavioral indicators.

Interpretation of Results

The concluded results showed that income, based on free and reduced lunch, was not a significant factor when determining the impact of school performance. The results of this study did suggest, however, that students, whether from high or low levels of income, attend school, behave appropriately, and perform similarly academically when the environment provides equal resources. The area identified within the mid-Atlantic region is a small, tightly knit city that has many community supports. As the town has a smaller population than many major cities, many of the students can be identified when out and about. Although separated by high and low socioeconomic status (SES), the commonality is the homey feel where everyone knows someone. This sense of community may contribute to the success of students' attendance, behavior, and academics, as income does not separate students in the school setting, nor their participation in community activities and day-to-day family functioning (e.g., grocery shopping, visiting local stores). Although these data detailed no differences related to income, other indicators, including race, need to be considered.

The data collected indicated differences between the performances of African American and Caucasian students. Behavior and academic scores were disproportionate, even when the students were within the same environment. In this study, African American students were having more difficulty with understanding academic assessments than were Caucasian students. Behavior of African American students was also significant to the study, as these students had more behavioral referrals than did their Caucasian counterparts, although the number of students overall with behavioral difficulty was low. The study also showed African American students were more likely than their Caucasian counterparts to be in more intensive Response to Intervention (RTI) tiers for behavioral management. Possible reasoning for this gap continues the long-debated conversation of overall student equality, intelligence level, differences in climate, and environmental settings, all of which could create differences in school performance. The question then raised is the following: If the students' incomes and attendance are relatively the same, regardless of SES, what is the cause of this gap?

As no single, clearcut answer exists, multiple hypotheses could arise. Do teaching styles differ when an African American student is being taught as opposed to a Caucasian student? Do different cultural factors, such as tone of voice, body language, and posture, decrease overall performance? Do students learn differently when their teacher is of the same race as they are? Are African American students participating in the same numbers as Caucasian students, and if so, is a bias regarding the students being called on (i.e., Caucasian students being able to answer more questions than African American students)? Are small groups and interventions

provided in the classroom taught differently? Do Caucasian students have

environments in and out of the school setting that are different from the environments

of African Americans (e.g., greater access to grade-level or higher materials, books

and educational resources)? Many of these underlying premises stemming from

social status, parental education level, race, and cultural awareness are still prevalent.

Measures to address these questions are needed to boost students' success. The

current study highlights the needs of African American boys. No research supports

differences in the level of intelligence between African American and Caucasian

students; however, assessments, including cognitive and state testing, that have been

given in the past were examined for cultural bias. In order to increase prosperity,

students must have the same opportunities. Additional factors to ensure equal

opportunity for African American boys in areas of interventions, resources, and

learning strategies may need to be communicated when increasing data. More

research would tackle these difficulties and provide solutions to this concern.

Implications for Future Research

Concluded previously, implications for future studies are based on a multitude

of findings. The Study includes the gap between African American male students,

overall school performance and achievement, and academic test scores. Future

research to be considered should also address race and the impact of cultural

awareness within the environment. Additionally, because of the small region and

population used in this study, the conclusion that SES was not a significant factor in

academic performance and attendance, parental levels of education and home

environments should be studied further as potential factors contributing to school performance.

Additional studies should also pursue ways other than state assessments and RTI tiers to assess academic performance. More measures of student success would allow instructors to be proactive regarding each student's learning style. Students' grades and performance in the classroom with a particular instructor, including race, tone, and style of instructor, would also be vital to improvement. Accommodations and the role of special education in the classroom are also appropriate for exploration. Parent and school resources should also be identified for future research. Programs that increase school academics and parental involvement are vital to increased success. Such programs as after-school tutoring and student clubs (e.g., chess, forensics) are beneficial as well to determine a connection between success and learning environment. The relationship of the teachers' and students' support systems should also be studied. From earlier indications, a student supported across all settings, including home and school, has an increased likelihood of academic and behavioral success.

Implications for Practice

School personnel must take into consideration the understanding of racial awareness and cultural factors. The rapport between the student and the educator could encourage or interfere with student growth as it relates to school performance. One should also acknowledge the population subjects (i.e., K- third-grade male children) may have different results than the older children identified. The impact of SES can also be an implication as to researchers' views of income. Income can be

viewed in a plethora of ways, creating different outcomes of family revenue. Academic performance and the measures used should also be identified as implications for practice. Furthermore, academic performance and an understanding of how students perform on academic assessments can be an implication. The RTI process may also need to be proactive instead of reactionary when working with students. Often, educators wait until cycles are completed to add an increase to academic interventions given for students. For future practice, providing the most intense interventions for students showing immediate deficits appears to be a healthier solution for overall progress.

Limitations of the Study

Limitations of the study include population, performance components, and indicators for SES. The first limitation includes girls not being a part of the population sample. The female population compared to the male population in this school was disproportionate, leading to a decision to exclude girls from the study. This limitation did not give a full picture of overall academic functioning, attendance, and behavioral performance within the entire school. The population size of 165 students was a small sample. Another limitation of the study was the narrow range of grades included in the sample. Although first- and second-grade students from the study could not be assessed through state testing, other indicators of academic progress in the younger grades might merit a look. Additional limitations also include only RTI and state testing as indicators of academic performance. Students' grades, classroom assignments, and curriculum-based measurement scores were not used. Additionally, classroom observations and information regarding

students' behavior during time of assessments were not introduced within the

findings. Students may have performed differently because of locus of control,

behavioral factors (e.g., testing anxiety, fidgeting), medical diagnosis, or other school

variables. Also, free and reduced lunch as the only SES measure used was a

limitation. SES can be determined from various measures that were not considered or

included in the study. The study also did not include specific information about

family characteristics and income for students receiving free and reduced lunch. Data

were given with limited identifying factors of income based on government

regulations and anonymity of students, making it difficult to draw conclusions about

any specific aspects of SES that may have influenced the obtained results..

References

Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college.* Washington, DC: U.S. Department of Education.

Alexander, K. L., Entwisle, D. R., & Dauber, S. L. (1993). First-grade behavior: Its short- and long-term consequences for school performance. *Child Development, 64*, 801–814.

Allensworth E., & Easton, J. Q. (2005). *The on-track indicator as a predictor of high school graduation*. Chicago, IL: Consortium on Chicago School Research.

American Psychological Association, Task Force on Socioeconomic Issues. (2007). *Report of the APA Task Force on Socioeconomic Status.* Washington, DC: American Psychological Association.

Batruch, A., Autin, F., & Butera, F. (2017). Re-establishing the social-class order: Restorative reactions against high-achieving, low-SES pupils. *Journal of Social Issues*, *73*(1), 42–60. https://doi-org.ezproxy.pcom.edu/10.1111/josi.12203

Baumrind, D. (1991). Parenting styles and adolescent development. In R. M Lerner, A. C. Peterson, & J. Brooks-Gunn (Eds.), *The encyclopedia of adolescence* (pp. 746-758). New York, NY: Garland Publishing.

Beckerman, M., Van Berkel, S. R., Mesman, J., & Alink, L. R. A. (2017). The role of negative parental attributions in the associations between daily stressors, maltreatment history, and harsh and abusive discipline. *Child Abuse & Neglect*, *64*, 109–116. https://doi-org.ezproxy.pcom.edu/10.1016/j.chiabu.2016.12.015

Bennett, K. J., Lipman, E. L., Brown, S., Racine, Y., Boyle, M. H., & Offord, D. R.

(1999). Predicting conduct problems: Can high-risk children be identified in kindergarten and grade 1? *Journal of Consulting and Clinical Psychology, 67* (4), 470-480.

Björklund A., & Salvanes, K. (2011). Education and family background. In E. A. Hanushek, S. Machin, & L. Woessmann (Eds.), *Handbook of the economics of education* (Vol. 3, pp. 201–247). Amsterdam, Netherlands: North-Holland.

Bloom, B. (1964). *Stability and change in human characteristics*. New York, NY: Wiley.

Boocock, S. S. (1972). *An introduction to the sociology of learning.* Boston, MA: Houghton-Mifflin.

Boylan, J. M., & Robert, S. A. (2017). Neighborhood SES is particularly important to the cardiovascular health of low SES individuals. *Social Science & Medicine*, 18860-18868. doi:10.1016/j.socscimed.2017.07.005

Bradley, R. H., & Corwyn, R. F. (2002). Socio-economic status and child development. *Annual Review of Psychology, 53,* 371–399.

Brandenburg, N. A., Friedman, R. M., & Silver, S. E. (1990). The epidemiology of childhood psychiatric disorders: Prevalence findings from recent studies. *Journal of the American Academy of Child and Adolescent Psychiatry, 29,* 76–83.

Brody, D. J., Pirkle, J. L., Kramer, R. A., Flegal, K. M., Matte, T. D., Gunter, E.W., & Paschal, D.C. (1994). Blood lead levels in the U.S. population. *JAMA, 272,* 277–281.

Brooks-Gunn. J., & Duncan, G. J. (1997). The effects of poverty on children. *The Future of Children*, 7(2), 55–71.

Burns, B. J., Phillips, S. D., Wagner, H. R., Barth, R. P., Kolko, D. J., Campbell, Y., &

Landsverk, J. (2004). Mental health need and access to mental health services by youths involved with child welfare: A national survey. *Journal of the American Academy of Child and Adolescent Psychiatry, 43,* 960–971.

Bynner J., Joshi, H., & Tsatsas, M. (2000). Obstacles and opportunities on the route to adulthood: Evidence from rural and urban Britain. London, UK: Centre for Longitudinal Studies, Institute of Education, University of London, and the Smith Institute.

Cappelleri, J. C., Eckenrode, J. L., & Powers, J.L. (1993). The epidemiology of child abuse: Findings from the 2nd National Incidence and Prevalence Study of Child Abuse and Neglect. *American Journal of Public Health, 83,* 1622-1624.

Case, K. A., Iuzzini, J., & Hopkins, M. (2012). Systems of privilege: Intersections, awareness, and applications. *Journal of Social Issues, 68,* 1–10.

Chan, Y.C. (1994). Parenting stress and social support of mothers who physically abuse their children in Hong Kong. *Child Abuse & Neglect*, *18*, 261-269.

Children's Hospital of Philadelphia. (2016). Functional behavioral assessment: What is it? Retrieved from https://www.carautismroadmap.org/functional-behavioral-assessment/

Chittleborough, C. R., Mittinty, M. N., Lawlor, D. A., & Lynch, J. W. (2014). Effects of simulated interventions to improve school entry academic skills on socioeconomic inequalities in educational achievement. *Child Development*, *85*(6), 2247–2262.

Chirkov, V. I., & Ryan, R. M. (2001). Parent and teacher autonomy-support in Russian and U. S. adolescents: Common effects on well-being and academic motivation. *Journal of Cross-Cultural Psychology, 32*(5), 618– 635. doi:10.1177/0022022101032005006

Clark, D., & Fiedler, C. R. (2003). Building family-school relationships during the

assessment and intervention process. In M. J. Breen & C. R. Fiedler (Eds.),

Behavioral approach to assessment of youth with emotional/behavioral disorders

(pp. 561–585). Austin, TX: Pro-Ed.

Cohen S. (1999). Social status and susceptibility to respiratory infections. *Annals of the New

York Academy of Sciences*, *896* (1), 246–253.

Conger, R.D., & Conger, K. J. (2002). Resilience in Midwestern families: Selected findings

from the first decade of a prospective, longitudinal study. *Journal of Marriage and

Family, 64*, 361-373.

Conger, R. D, & Donnellan, M. R. (2007). An interactionist perspective on the

socioeconomic context of human development. *Annual Review of Psychology, 58,*

175-199.

Cox, M. J. (2002). Parent–child relationships. In N. J. Salkind (Ed.), *Child development* (pp.

291–294). New York, NY: Macmillan Reference USA.

Crooks, D. (1995). American children at risk: Poverty and its consequences for children's

health, growth, and school achievement. *American Journal of Physical Anthropology,

38*, 57–86.

Currie, J. (2009). Healthy, wealthy, and wise: Socioeconomic status, poor health in childhood

and human capital development. *Journal of Economic Literature, 47,* 87–122.

doi:10.1257/jel.47.1.87

Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model.

Psychological Bulletin, 113, 487–496.

Dearing, E., McCartney, K., & Taylor, B. A. (2009). Does higher quality early child care

 promote low-income children's math and reading achievement in middle childhood?

 Child Development, 80, 1329–1349. doi:10. 1111/j.1467-8624.2009.01336.x

Deci, E. L. (1980). *The psychology of self-determination.* Lexington, KY: Heath.

Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior.

 Journal of Personality and Social Psychology, 53(6), 1024–1037. doi:10.1037/0022-

 3514.53.6.1024

DiPietro, J. A., Costigan, K. A., Hilton, S. C., & Pressman, E. K. (1999). Effects of

 socioeconomic status and psychosocial stress on the development of the fetus.

 Annals of the New York Academy of Sciences, 896 (1), 356–58

Dodge, K. A., Pettit, G. S., & Bates, J. E. (1994). Socialization mediators of the relation

 between socioeconomic-status and child conduct problems. *Child Development, 65,*

 649-665.

Duncan, G. J., Brooks-Gunn, J., & Klebanov, P. (1994). Economic deprivation and early

 childhood development. *Child Development, 65,* 296–338.

Eckenrode, J., Smith, E. G., & McCarthy, M. E., & Dineen, M. (2014). Income inequality and

 child maltreatment in the United States. *Pediatrics, 133,* 454-461.

Escalona, S. (1982). Babies at double hazard: Early development of infants at biologic and

 social risk. *Pediatrics, 70,* 670–675.

Esping-Andersen, G., Garfinkel, I., Han, W.-J., Magnuson, K., Wagner, S., & Waldfogel, J.

 (2012). Child care and school performance in Denmark and the United States.

 Children and Youth Services Review, 34, 576–589. doi:10.1016/j.child

 youth.2011.10.010

Euser, S., Alink, L., Pannebakker, F., Vogels, T., Bakermans-Kranenburg, M.J., & Van Ijzendoorn, M.H.. (2013). The prevalence of child maltreatment in the Netherlands across a 5-year period. *Child Abuse & Neglect, 37,* 841-851.

Fasih, T. (2008). *Linking education policy to labor market outcomes.* Washington, DC: The World Bank. doi:10.1596/ 978-0-8213-7509-9

Feinstein, L., Duckworth, K., & Sabates, R. (2008). *Education and the family: Passing success across the generations.* London: Routledge.

Felouzis, G., & Charmillot, S. (2013). School tracking and educational inequality: A comparison of 12 education systems in Switzerland. *Comparative Education, 49,* 181–205. doi:10.1080/03050068.2012.706032

Ferguson, Y. L., Kasser, T., & Jahng, S. (2011). Differences in life satisfaction and school satisfaction among adolescents from three nations: The role of perceived autonomy support. *Journal of Research on Adolescence, 21*(3), 649–661. doi:10.1111/j.1532-7795.2010.00698.x.

Glymour M.M., Avendano, M., & Kawachi I. (2014). Socioeconomic status and health. In L.F. Berkman, I. Kawachi, & M. M. Glymour (Eds.), *Social epidemiology, 2nd Edition.* (pp. 17-63). New York, NY: Oxford University Press.

Goodman, A., Gisselmann, M., & Koupil, I. (2010). Birth characteristics and early-life social characteristics predict unequal educational outcomes across the life course and across generations. *Longitudinal and Life Course Studies, 1,* 317–338. doi:10.14301/llcs.v1i4.127

Haan, M. N., Kaplan G. A., & Syme, S. L. (1989). Socioeconomic status and health: Old observations and new thoughts. In J. P. Bunker, D. S. Gomby, & B. H. Kehrer (Eds.),

Pathways to health: The role of social factors, (pp. 176– 233). Palo Alto, CA: Kaiser

Foundation.

Hart, B., & Risley, T. R. (2003). The early catastrophe: The 30 million word gap by age 3.

American Educator, 27(1), 4–9. Retrieved from https://www.aft.org/sites/default/

files/periodicals/TheEarlyCatastrophe.pdf

Hawley, T., & Disney, E. (1992). Crack's children: The consequences of maternal cocaine

abuse. *Social Policy Report, 6*(4), 1–22.

Hertzman, C., & Power, C. (2003). Health and human development: Understandings from

life-course research. *Developmental Neuropsychology, 24,* 719–744.

doi:10. 1080/87565641.2003.9651917

Hess, R. D., Holloway, S., Price, G., & Dickson, W. P. (1982). Family environments and the

acquisition of reading skills. In L. M. Laosa & I. E. Sigel (Eds.), *Families as learning

environments of children* (pp. 87–113). New York, NY: Plenum.

Holley, C. E. (1916). *The relationship between persistence in school and home conditions.*

Chicago, IL: University of Chicago Press.

Ishak, Z., Low, S. F., & Lau, P. L. (2012). Parenting style as a moderator for students'

academic achievement. *Journal of Science Education and Technology, 21*(4), 487–

493. doi:10.1007/s10956-011-9340-1

Jabaruddin, Alimuddin, & Manda, D. (2016). Educational values in different social-economic

status: A study case of six families in Maros Regency. *International Education

Studies*, *9*(6), 223-228.

Johnston-Brooks, C. H., Lewis, M. A., Evans, G. W., & Whalen, C. K. (1998). Chronic stress and illness in children: The role of allostatic load. *Psychosomatic. Medicine, 60*, 597–603.

Kataoka, S. H., Zhang, L., & Wells, K. B. (2002). Unmet need for mental health care among U.S. children: Variation by ethnicity and insurance status. *American Journal of Psychiatry, 159,* 1548–1555.

Klerman, L. V. (1991). *Alive and well? A research and policy review of health programs for poor young children.* New York, NY: National Center for Children in Poverty, Columbia University.

Korenman, S., & Miller, J. E. (1997). Effects of long term poverty on the physical health of children in the National Longitudinal Survey of Youth. In G.J. Duncan & J. Brooks-Gunn (Eds)*, Consequences of growing up poor* (pp. 70–99).

Kotch, J., & Shackelford, J. (1989). The nutritional status of low-income preschool children in the United States: A review of the literature. New York, NY: Ford Foundation.

Kramer, M. S. (1987). Determinants of low birthweight: Methodological assessment and meta-analysis. *Bulletin of the World Health Organization, 65,* 663–737.

Liberatos, P., Link. B. G., & Kelsey, J. I. (1988). The measurement of social class in epidemiology. *Epidemiologic Reviews, 10*, 87–121.

Linwood, A. S. (2006). Parent–child relationships. In K. Krapp & J. Wilson (Eds.), *The Gale encyclopedia of children's health: Infancy through adolescence* (Vol. 3, pp. 1392–1395). Detroit, MI: Gale.

Lynch, J. W., Law, C., Brinkman, S., Chittleborough, C., & Sawyer, M. (2010). Inequalities

in child healthy development: Some challenges for effective implementation. *Social

Science & Medicine, 71,* 1244–1248. doi:10. 1016/j.socscimed.2010.07.008

Lynch, M. (2017). Jumpstarting learning for children in poverty. Retrieved from

https://blogs.edweek.org/edweek/education_futures/2016/09/jumpstarting_learning_f

or_children_in_poverty.html

Lynd, R. S., & Lynd, H. M. (1929). *Middletown: A study in American culture.* New York,

NY: Harcourt Brace.

Magee, J. C., & Galinsky, A. D. (2008). Social hierarchy: The self-reinforcing nature of

power and status. *The Academy of Management Annals, 2,* 351–398.

Mayo, A., & Siraj, I. (2015). Parenting practices and children's academic success in low-SES

families. *Oxford Review of Education*, *41*(1), 47-63.

McCall, R.B. (1981). Nature-nurture and the two realms of development. A proposed

integration with respect to mental development. *Child Development, 52*(1), 1-12.

McCarthey, S. J. (2000). Home-school connections: A review of the literature. *Journal

of Educational Research, 93,* 145–153.

McLoyd, V. C. (1997). The impact of poverty and low socioeconomic status on the

socioemotional functioning of African-American children and adolescents: Mediating

effects. In R. D. Taylor & M. Wang (Eds.), *Social and emotional adjustment and

family relations in ethnic minority families* (pp. 7–34). Mahwah, NJ: Erlbaum.

Melhuish, E. C., Phan, M. B., Sylva, K., Sammons, P., Siraj-Blatchford, I., & Taggart, B.

(2008). Effects of the home learning environment and pre-school center experience

upon literacy and numeracy development in early primary school. *Journal of Social Issues, 64,* 95–114.

National Center for Educational Statistics. (2009). Why does attendance matter? Retrieved from https://nces.ed.gov/pubs2009/attendancedata/chapter1a.asp

Office for National Statistics. (2011). Earnings by qualification. Labour Force Survey, UK, October–December 2010. London, UK: Author.

Ohmstede, T. J., & Yetter, G. (2015). Implementing conjoint behavioral consultation for African American children from a low-SES, urban setting. *Journal of Educational & Psychological Consultation*, *25*(1), 18–44.

Organization for Economic Co-operation and Development. (2014). Education at a glance 2014: OECD Indicators. Paris, France: OECD Publishing.

Overpeck, M. D., Brenner, R. A., Trumble, A. C., Trifiletti, L. B., & Berendes, H. W. (1998). Risk factors for infant homicide in the United States. *New England Journal of Medicine, 339,* 1211–1216.

Pape, K., Bjorngaard, J., Westin, S., Holmen, T., & Krokstad, S. (2011). Reading and writing difficulties in adolescence and later risk of welfare dependence: A ten year follow-up, the HUNT Study, Norway. *BMC Public Health, 11,* 718. doi:10.1186/1471-2458-11-718

Park, S., Stone, S. I., & Holloway, S. D. (2017). School-based parental involvement as a predictor of achievement and school learning environment: An elementary school-level analysis. *Children and Youth Services Review*, *82,* 195-206. doi:10.1016/j.childyouth.2017.09.012

Peoples-Sheps, M.D., Guild, P.A., Farel, A.M., Cassady, C.E., Kennelly, J., Potrzebowski, P.W., & Waller, C.J. (1998). Model indicators for maternal and child health: An overview of process, product, and applications. *Maternal & Child Health Journal, 2*(4), 241-256.

Pianta, R. C., Egeland, B., & Sroufe, L. A. (1990). Maternal stress and children's development: Prediction of school outcomes and identification of protective factors. In J. Rolf, A.S. Masten, D. Cicchetti, K.H. Nuechterlein, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 215–235). New York, N.Y.: Cambridge University Press.

Pollitt, E., Golub, M., Gorman, K., GranthamMcGregor, S., Levitsky, D., Schurch, B., Strupp, B., & Wachs, T. (1996). A reconceptualization of the effects of undernutrition on children's biological, psychosocial, and behavioral development. *Social Policy Report, Society for Research in Child Development, 10*(5), 1–24.

Raisler, J., Alexander, C., & O'Campo, P. (1999). Breast-feeding and infant illness: A dose response relationship? *American Journal of Public Health, 89*, 25–30.

Reeve, J. (2009). *Understanding motivation and emotion* (5th ed.). Hoboken, NJ: Wiley.

Rogoff, B. (2003). *The cultural nature of human development.* New York, NY: Oxford University Press.

Romero, M., & Lee, Y. (2007). *A national portrait of chronic absenteeism in the early grades*. New York, NY: The National Center for Children in Poverty.

Rosenbaum, S. (1992). Child health and poor children. *American Behavioral Scientist, 35*, 275–289.

Sabbagh, C., Resh, N., Mor, M., & Vanhuysse, P. (2006). Spheres of justice within schools: Reflections and evidence on the distribution of educational goods. *Social Psychology of Education, 9,* 97– 118. doi: 10.1007/s11218-005-3319-9

Salisbury, E. J., Henning, K., & Holdford, R. (2009). Fathering by partner-abusive men: Attitudes on children's exposure to interparental conflict and risk factors for child abuse. *Child Maltreatment, 14*(3), 232-242.

Sandel, M., & Scharfstein, J. (1999). Not safe at home: How America's housing crisis threatens the health of its children. Boston, MA: Boston Medical Center, The Doc4Kids Project.

Scholer. S. J, Hickson, G.B., & Ray, W. A. (1999). Sociodemographic factors identify US infants at high risk for injury mortality. *Pediatrics, 103*, 1183–1188.

Sedlak, A. J., Mettenburg, J., Basena, M., Petta, I., McPherson, K., Green, A., & Li, S. *Fourth National incidence study of child abuse and neglect (NIS4): Report to Congress, Executive Summary*. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families.

Sheridan, S.M., Eagle, J.W., Cowan, R.J., & Mickelson, W. (2001). The effects of conjoint consultation results of a 4-year investigation. *Journal of School Psychology, 39*(5), 361-385.

Smarter Balanced Assessment Consortium. (2015). *End of grant report, June 2015.* Los Angeles, CA: Author. Retrieved from http://www.smarterbalanced.org

Starfield, B. (1982). Family income, ill health and medical care of U.S. children. *Journal of Public Health Policy, 3*(3), 244–259.

Starfield, B. (1989). Child health care and social factors: Poverty, class, race. *Bulletin of the New York Academy of Medicine, 65*, 299–306.

Stricker, L. J. (1980). "SES" indexes: What do they measure? *Basic & Applied Social Psychology, 1*(1), 93–102.

Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I., & Taggart, B. (2008). Final report from the primary phase: Pre-school, school and family influences on children's development during Key Stage 2 (7–11). Nottingham, England: Department for Children, Schools and Families.

Sylva, K., Melhuish, E. C., Sammons, P., Siraj-Blatchford, I., & Taggart, B. (2012). Effective pre-school, primary and secondary education 3–14 Project (EPPSE 3–14)—Final Report from the Key Stage 3 phase: Influences on students' development from age 11–14. Nottingham England: Department for Children, Schools, and Families.

Tesman, J. R., & Hills, A. (1994). Developmental effects of lead exposure in children. *Social Policy Report, Society for Research in Child Development, 8*(3), 1–16.

U.S. Department of Health and Human Services. (2000a). *Child Health USA 2000*. Washington, DC: Government Printing Office.

U.S. Department of Health and Human Services. (2000b). *Healthy People 2010*. Washington, DC: Government Printing Office

Vasquez, A. C., Patall, E. A., Fong, C. J., Corrigan, A. S., & Pine, L. (2016). Parent autonomy support, academic achievement, and psychosocial functioning: A meta-analysis of research. *Educational Psychology Review*, *28*(3), 605-644.

Vrijheid, M., Dolk, H., Stone, D., Alberman, E., & Scott, J. E. S. (2000). Socioeconomic inequalities in risk of congenital anomaly. *Archives of Disease in Childhood, 82*,

349–352.

Walberg, H. J., & Marjoribanks, K. (1976). Family environment and cognitive development: Twelve analytic models. *Review of Educational Research, 46,* 527–551.

Wasserman, C. R., Shaw, G. M., Selvin, S., Gould, J. B., & Syme, S. L. (1998). Socioeconomic status, neighborhood social conditions, and neural tube defects. *American Journal of Public Health, 88,* 1674–1680.

Whipple, E. E., & Webster-Stratton, C. (1991). The role of parental stress in physically abusive families. *Child Abuse & Neglect, 15,* 279-291.

Wilson, A. L. (1993). Poverty and children's health. *Child, Youth, & Family Services Quarterly. 16*, 14–16.

Zill, N., Moore, K., Smith, E., Stief, T., & Coiro, M. (1995). The life circumstances and development of children in welfare families: A profile based on national survey data. In P. L. Chase-Lansdale & J. BrooksGunn (Eds.), *Escape from poverty: What makes a difference for children?* (pp. 38–59). New York, NY: Cambridge University Press.