

The Effect of Evidence Based Interventions on the  
Achievement of Middle School Students Living in Poverty

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## Abstract

The purpose of this study was to determine whether or not evidence-based one-on-one supports affect the academic achievement of students living in poverty. The measurement tool was a series of teacher-created comprehension quizzes given at intervals during novel units in the language arts classroom. During this study, students categorized as living in poverty were provided with one-on-one support and interventions in the classroom. Students' quiz scores were assessed and compared to scores students achieved prior to the implementation of the study to determine whether or not achievement was impacted by the interventions provided. The results of the study indicated that several students improved academically, but there were fluctuations in their improvement over time. The results were not conclusive enough to suggest that there is a direct correlation between one-on-one interventions and the academic performance of students living in poverty.

# CHAPTER I

## INTRODUCTION

Studies conducted by researchers reveal that living in poverty can have a negative effect on students' academic performance at school due to several factors. "Growing up and living with persistent poverty is detrimental to one's psychological, physical, and educational health" (Wadsworth et al., 2008, p. 156). Students who live in low-income households often suffer from a lack of parental support, inadequate food and nutrition, and the resources they need to be successful.

Often, students who live in poverty dwell in single parent households or in households where parents are not present in the evenings because they are working non-traditional work schedules or second jobs to make ends meet. These parents do not have the same amount of time to help their children study and complete homework as parents who work traditional schedules. Students who do not receive the same level of academic support from their parents as their peers who live in wealthier households likely will struggle academically.

Students who live in poverty generally are under more stress as a result of their families' economic status according to the study referenced above. These children often worry about their families, their siblings, and their futures in ways that students living in more economically comfortable households do not. Students who live in poverty also experience hunger and nutrition deficiency because their parents are struggling to provide, making it difficult for them to focus on academic work.

Students who lack academic support at home need to receive additional support in the classroom in order to stay on pace with their peers and be successful academically. It is important for teachers to provide this support to close the achievement gap between students

living in poverty and their peers. Providing one-on-one support to these students in the classroom is one way to engage them and help improve their academic performance in classroom activities and assignments, develop positive study habits, and perform more successfully on informal and formal assessments.

The researcher became interested in exploring the relationship between poverty and school performance in her role as an eighth-grade language arts teacher at a public middle school in Maryland. She observed that students who live in poverty struggle academically, especially with regard to study habits and she wished to learn more about how to provide assistance to help students living in poverty become more academically successful.

This study examined the relationship between providing individualized support to students living in poverty and their academic achievement.

### **Statement of Problem**

Living in poverty has negative implications for the academic performance of a child, as revealed through research studies cited in this paper. The purpose of this study was to assess the effectiveness of one-on-one support within the classroom in overcoming the obstacles to student achievement presented by poverty. Research cited above suggests that providing additional support to students who live in low-income or single-parent households can help them to overcome the barriers within the academic setting that their home situation creates.

### **Hypothesis**

With four students in this modified case study it is possible to run statistical analysis using non-parametric approaches but the numbers in the sample are so small that this approach is not particularly useful and thus no statistical hypothesis will be posited.

## **Operational Definitions**

### **Poverty**

Poverty is defined formally as “the state of being extremely poor” or living in financial hardship that impacts everyday life. For the purpose of this study, students were identified as living in poverty if they qualified for medical billing assistance, which is granted based on income thresholds within the household.

### **Intervention**

For purposes of this paper, an intervention is defined as any level of support provided to help a student to access and understand the curriculum at his or her grade level. Interventions can be formal programs implemented school wide or can be supports implemented within the classroom to assist individual or groups of students academically.

## CHAPTER II

### REVIEW OF THE LITERATURE

The middle school environment is designed and intended to develop students' academic and intellectual abilities in various content areas while also supporting them in their path to becoming functioning members of society. A blend of academic progress and personal growth must occur in order for students to succeed in the middle school setting and beyond. Many middle school students thrive in this environment and progress through middle school to become informed, healthy, and happy contributing members of society.

However, some students are facing obstacles, such as poverty, which can prevent them from reaching their full potential as students and as human beings. According to the National Center for Education Statistics (NCES), "research finds that risk factors, such as having a parent who did not complete high school, living in a single-parent household, and living in poverty, are associated with poor educational outcomes, including low achievement scores, having to repeat a grade, and dropping out of high school" (2017, para. 1). During this critical developmental period, these students need supports available to help them to overcome such obstacles.

This literature review begins by discussing obstacles faced by students living in poverty. Section two provides statistics related to poverty and schools. Section three describes the effects of poverty on students at home and the subsequent section discusses the effects of poverty on students in the school setting. The review of literature concludes with a description of evidence-based interventions to assist students who live in poverty.

Poverty is one of the most widespread obstacles faced by students in the United States and through research such as that reported by Blazer of Miami-Dade County Public Schools, it has become evident that poverty directly affects academic performance. Blazer states, "There is a

strong relationship between students' socioeconomic status and their levels of academic achievement” (2009, p. 6). Poverty affects student learning in schools throughout the country. According to recent research, “51% of children in public schools qualified for the lunches [free and reduced meals] in 2013, which means that most of them come from low-income families” (Rich, 2015, para. 2). Although poverty does not stem directly from the school environment, the school still is responsible for providing supports for students who are living in poverty, especially when it affects their ability to perform academically.

### **Statistics Relating to Poverty and Schools**

Poverty levels and socioeconomic status are determined by the United States Census Bureau (USCB), which determines these levels by using “a set of money income thresholds that vary by family size and composition. A family, along with each individual in it, is considered poor if the family’s total income is less than that family’s threshold” (NCES, 2015, p. 277). The NCES collects a wide variety of data related to education which is analyzed to study the effects of student demographics, location, and other student achievement factors. *The Condition of Education: 2015*, quotes the USCB “In 2013, approximately 10.9 million school-age children 5 to 17 years old were in families living in poverty”. NCES data also indicate that the number of children living in poverty has increased consistently over the years and continues to grow.

High poverty schools are defined as schools in which 75% or more of the students are eligible for Free and Reduced Meals (FARM). A student receives a FARM designation when his or her family is identified as a family living in poverty by the USCB. The percentage of students attending high poverty schools grew to 24% in the 2012-2013 school year (NCES, 2015, p. 110).

Demographically, poverty affects students of all races and gender, but some groups have a higher percentage of students living in poverty than do others. For example, the percentage of

African American males and Hispanic males ages 0-17 who were living in poverty in 2012 was 38% and 33% respectively, while the percentage of white males ages 0-17 living in poverty was only 12% (NCES, 2015). This information is critical for schools and teachers because “Research suggests that living in poverty during early childhood is associated with lower than average academic performance that begins in kindergarten and extends through elementary and high school” (2015, p. 11). The study goes on to mention that “Living in poverty during early childhood is also associated with lower than average rates of school completion” (2015, p. 11).

Parental presence and involvement is also a contributing factor to students’ success in school, particularly when the students are living in poverty. “Living with two parents is associated with positive educational, economic, and other life outcomes” (NCES, 2015, p. 11). Data from the NCES indicate that 50% of African American males between the ages of 0-17 lived in homes with their mothers only as parents. Having a second parent and a responsible male influence present is associated with academic and personal success for these young male students and half of them are living without one. Additionally, the single mother is also more likely to be struggling to make ends meet financially than parents in a dual-income home and the mother is not as available to provide academic support to her child. This issue has become more evident in recent years. According to Bianchi of the University of California,

Between 1975 and 2009, the labor force rate of mothers with children under age eighteen increased from 47.4 percent to 71.6 percent. Mothers today also return to work much sooner after the birth of a child than did mothers half a century ago. High divorce rates and a sharp rise in the share of births to unmarried mothers mean that more children are being raised by a single parent, usually their mother. (Bianchi, 2011, p. 16)

A lack of education and skills also leads single or married parents to struggle to find adequate work that will allow them to support a family while also maintaining a healthy work-life balance. Bianchi states “For lower-skill workers, the lack of ‘good jobs’ disconnects fathers from family obligations. Men who cannot find work or have low earnings potential are much less likely to marry” (2011, p. 26). Bianchi also discusses the hardships faced by many women trying to maintain a healthy work-life balance, stating that “For low-income women, many of whom are single parents, the work-family dilemma is how to care adequately for children and work enough hours to support them financially” (2011, p. 26).

### **Effects of Poverty on Students at Home**

The detrimental effects of poverty on an adolescent originate primarily at home. Inadequate food and nutrition, insufficient parental support, and a lack of necessities all can contribute to the negative effects that poverty has on students when they are outside of school. For example, the shifts which mothers and fathers work at their jobs can lead to negative consequences for young adults. A family living in poverty may have one or both parents working a second job or overtime hours to try to make ends meet. Often these hours are in the afternoon and at night, when adolescents would otherwise be spending time with their parents and building stronger relationships with them.

Han and Fox of the *Journal of Marriage and Family* claim that “Previous work has shown an association between mothers’ nonstandard work schedules and children’s well-being” (2011, p. 962). Due to the declining economy, increasing numbers of families have become “dual-earner” families, in which the mother and father both work to earn a living. In these families, children are more likely to perform poorly in academic settings as a result of insufficient parental presence and awareness. Han and Fox report that “having a mother who

worked more years at a night shift was associated with lower reading scores” (2011, p. 962). The research also suggests that other effects could be reduced math trajectories and scores, especially in connection to the father working more years in an evening shift.

In addition to the frequency of having dual-earner and nonstandard work schedules, families who live in poverty generally are more stressed at work than families who are financially comfortable. According to Rothwell and Han, families with economic assets are less likely to experience economic stress than low-income families with few to no assets. They argue that “small fluctuations in income can create large problems within the family, and low-income families have less access to financial and other supportive services” (2010, p. 396) Stress experienced by family members in the work environment frequently affects life at home. Han and Fox state that “parents’ experiences at the workplace may spill over and increase their stress at home. This spillover may influence parents’ personal well-being, and, in turn, impact the parent-child relationship and child well-being” (2011, p. 963). Further, this situation can influence the child’s ability to focus on his or her academic endeavors.

While poverty can create stress for a child indirectly through the stress it causes for parents, it also can cause direct stress for the child. A study conducted by the Department of Psychology at the University of Denver suggests that children also experience poverty-related stress, which can affect the child’s ability to function at home and in school. Results from this study revealed that “poor teens are more likely to engage in problematic behavior having serious physical and social consequences such as substance abuse, criminality, and early pregnancy” (Wadsworth et al., 2008, p. 156). These researchers identified correlations between poverty and school performance in adolescents. Specifically, results indicated that children living in poverty have lower grades, lower school performance, and are more likely to drop out of school before

graduation. The stress created by poverty can have lasting effects on teens because this stress builds daily. The study by the University of Denver refers to these stressors as “poverty-related stress” (Wadsworth et al., 2008, p. 156). These stressors include, but are not limited to conflict within families, discrimination, frequent moving, and exposure to violence. This study also suggested that adolescents living in poverty might experience mental illness because of poverty-related stress.

Homelessness is another major socioeconomic factor that affects the lives of children and adolescents. When a child is homeless, he or she likely is not getting enough sleep or nutrition outside of school. When children who are homeless come to school, they frequently seek a safe-haven that they cannot access outside of school. In accordance with Maslow’s Theory of Hierarchy of Needs, academic study may be one of the last things on students’ minds when they are unsure about where they will be sleeping that night (Maslow, 1943). Maslow’s theory suggests that individuals require their basic needs such as food, water, and rest to be met before they strive to obtain psychological needs and self-fulfillment needs (McLeod, 2013, para. 2). Many students who are homeless may come to school primarily to eat the free breakfast and lunch provided by the school to FARM students to meet those basic needs. It is likely that the stresses associated with homelessness negatively affect children in a variety of ways at school both in terms of achievement and self-fulfillment in the social setting.

### **Effects of Poverty on Students at School**

A variety of studies have been conducted to determine the long and short-term effects of poverty on student achievement and many have found that poverty has a negative effect on students’ academic achievement, specifically in the areas of reading comprehension and mathematics. Highlights from these studies are discussed below.

In a study published in the *Educational Researcher*, researchers grouped students based on socioeconomic status and analyzed their academic achievement and potential trajectories of future academic achievement. Students who were homeless and students with high residential mobility were considered to be at highest risk and were compared to students eligible for FARM and students who were not considered low income or high mobility. This study suggests that homelessness in students in the U.S. is an issue of increasing concern. In 2009-2010, “there were approximately 1 million homeless students identified in U.S. schools” (Herbers et al., 2012, p. 366). This is an increase of about 41% over the two years prior to the 2009-2010 school year.

Student mobility is also a rapidly expanding issue that affects academic success. The aforementioned study states that “Rates of residential mobility also have risen, with at least 1.9 million low-income students between the ages of 9 and 11 moving each year. Students with higher mobility rates and students who are homeless have a much lower trajectory for academic success and achievement, and the number of students living in these conditions is growing year over year” (Herbers et al., 2012, p. 366).

With the homelessness and high mobility rates rising for students, educators and researchers have given increased attention to the effects of these socioeconomic constraints on students’ academic achievement. Their concern has increased as it has become more apparent that students who are homeless and students with high mobility rates present the lowest trajectories for future academic success. For example, it is argued that “although all children living in poverty are at risk for poor academic achievement, the risk is even greater among children who experience homelessness and high residential mobility” (Herbers et al., 2012, p. 366). The researchers state that children living in families with lower socioeconomic status are more likely to begin and continue their schooling with poor readiness skills and low achievement

throughout their academic careers because it becomes far too difficult for these students to “catch up” to their more advantaged peers.

What sometimes is termed the “United States’ poverty epidemic” is creating a crisis for schools because it is hindering teachers’ ability to teach content to students in an effective manner. As cited in *Mediocre Test Scores: Education Crisis or Poverty Crisis*, “Rebell and Wolff at Columbia University’s Teachers College argue that middling test scores reflect a ‘poverty crisis’ in the United States, not an ‘education crisis’” (Petrilli & Wright, 2016, p. 1). Petrilli and Wright pose the question, “Why do kids from low-income families tend to score so much lower on average than their more-affluent peers?” (p. 1). They claim it is likely because of the financial stress that can lead to toxic home conditions, making it hard for parents to afford things like “tutoring, educational games, summer camps, afterschool activities, and other educational experiences that middle-class and upper-middle-class students take for granted and that almost surely boost their achievement” (p. 1). Simply stated, students living in poverty are not provided the same opportunities that other more economically advantaged students are receiving.

In addition, these students are experiencing high levels of stress and may be receiving little-to-no academic support at home because the family is facing pressures to survive that distract from the importance of building a solid educational foundation for their children. Students living in poverty often are at a disadvantage due to limited time and supervision afforded in single-parent homes, or from issues related to alcoholism or mental illness in the home, which can create barriers to educational success.

A study at the University of Denver’s Department of Psychology was conducted in which researchers used a parent survey to determine socioeconomic status, income, and occupations.

They also interviewed parents about their children’s academic performance. Researchers used several other criteria to conduct interviews and surveys to gather as much data as possible about the families’ socioeconomic status, the child’s performance in school, and feelings towards academics, as well as any external circumstances that could have influenced results. The researchers found significant connections between socioeconomic status, parent occupations, poverty-related stress, and a lack of academic achievement (Wadsworth et al., 2008).

Blazer of Miami-Dade County Public Schools argues that “schools alone can’t eliminate the negative factors associated with poverty that lead to a large achievement gap between low income students and their more affluent peers” (2009, p. 1). However, schools can implement supports and interventions to give students suffering from poverty-related-stress the opportunity to succeed despite the constraints of their circumstances.

### **Evidence-Based Interventions**

Many supports and interventions which have proven to be successful for students living in poverty have been implemented by school systems and schools. As stated above, among these supports are the federal regulations put into place to assist these students such as the FARMS program provided by the USDA. This program was implemented to guarantee a free or reduced cost meal to children in need based on the family’s socioeconomic status (USDA, 2016). The National School Lunch Act requires by law that the meals provided to students are balanced and nutritious, allowing students to have the nutrients they need to focus more effectively in the classroom.

Other supports and interventions can be implemented by teachers and school personnel to help students overcome the constraints of living in poverty. In a study involving student achievement from many schools on the Pennsylvania System of School Assessment, (PSSA),

Butz of Widener University found that school leaders “who were ambitious first for the school and who had a fierce resolve for the school to succeed” were most successful with high achievement (2012, p. 1). This finding emphasizes the importance of teacher and administrative motivation to improve the environment for students living in poverty. Students will not succeed in environments in which they do not feel supported by teachers and administrators. Butz used the “Good to Great” framework for change designed by author Jim Collins in his book *Good to Great* to review and analyze features of the schools within the study and found that many of the high achieving schools met the criteria for successful change in Collins’ framework. Collins argues that teachers need to be the impetus for change for students living in poverty and must make tremendous efforts to offer supports to the students who face economic hardships. The challenge for educators is to identify the supports that are most effective for students who are living in poverty.

Dell’Angelo identifies some key strategies that teachers and school staff must implement to support students who are living in poverty. Schools can offer a variety of programs to help students feel more involved and supported at school. For example, Dell’Angelo claims that psychological and emotional support provided by the schools’ resources may stimulate students’ sense of belonging to the school and that a teacher’s perception of students and their potential to achieve can make all the difference, stating that “even in schools with high poverty, student achievement is higher when teachers perceive fewer obstacles” (2016, p. 254). This type of support from staff and teachers affords students the opportunity to meet psychological needs outlined in Maslow’s Hierarchy of Needs by forming friendships, trusted relationships with staff, and establishing a feeling of safety and security within the school. These support systems are especially critical in schools in which many students of low socioeconomic status are enrolled

because those students require additional supports. Providing counseling and pupil personnel services to students who are suffering from poverty-related stress may reduce the negative consequences that stress will impose on the students' academic achievements.

Extracurricular activities are a critical component of student success and are associated with academic achievement for students at all socioeconomic levels. Extracurricular activities encourage students to become more involved and more committed to school itself, especially in situations where participation is linked with academic performance. Goodman and Young analyzed the effect of extracurricular opportunities on student achievement. Their research claims that while teachers and administrators provide an important component of student support within schools, these individuals have the responsibility to support all students within their schools both academically and behaviorally. What is less consistent within schools is the presence of extracurricular activities and teams designed to give students opportunities to become more involved (2006). The types of extracurricular support discussed in this study include, but are not limited to, sports teams, clubs, school counselors, school psychologists, and other pupil personnel. These supports can enable students to feel more included and involved in the school community and improve their experiences at school.

Another successful intervention for helping students living in poverty to succeed academically is implementation of actions designed to change their perception of school and of their socioeconomic status. Poverty and hunger can create negative perceptions about school for students. Based upon the results of their research related to the attitudes toward school of students living in poverty, Haynie, Iannotti, Li, and Summersett-Ringgold, state that "Students who experienced hunger liked school less and students with moderate SES liked school less than students with a high SES" (2015, p. 7). In order to foster a positive school perception among

students who live in poverty, schools, teachers, and administrators must continue to use interventions to overcome negative perceptions and to help students to cope with poverty-related stress.

### **Conclusion**

Students' ability to perform academically can be affected by several factors outside of school and within the home. Poverty, homelessness, high mobility rates, and single parent households are examples of the issues that can affect a student's academic performance and overall school experience in negative ways. Schools are responsible for identifying the needs of these students and providing whatever supports they can offer to ensure that students have the opportunity to succeed in school. Extracurricular programs, counseling, and student services are among the supports that schools can offer to improve students' school experience. Teachers, especially those who teach in low income schools, need to be prepared to provide supports to students living in these conditions. Additionally, educators must determine the conditions in which their students are living and identify what supports must be put into place to ensure that these students have the opportunity to succeed.

## **CHAPTER III**

### **METHODS**

As discussed previously, research such as that reported by Blazer, Miami-Dade County Public Schools and Dell' Angelo suggests that students who live in poverty do not perform as well academically as children from more economically advantaged homes because of the stress within their home lives, lack of parental support and involvement in school, and nutrition deficiencies. "Poor children may not focus on academics because they are just struggling to survive" (Blazer & Miami-Dade County Public Schools, 2009, p. 4). Results from the studies cited above demonstrate that the academic performance of students living in poverty does suffer because of the economical deficit but can be improved through the use of positive interventions and supports in the classroom. This study examined the effects of living in poverty on students' academic performance.

#### **Design**

The design of this study was a pre-post measure modified case study design. The study had aspects of a quasi-experimental design since participants were not randomly assigned to a group and were selected purposefully based on household income. Because the study had only four subjects over an extended time-period, it is more of a case study. The study could not utilize a time-series design since the number of subjects was too small for the required statistical analyses requirements similar to the statistical requirements for a quasi-experimental study.

#### **Participants**

In this study, four students were categorized as living in poverty on the basis of receiving medical assistance for Individual Education Plan (IEP) services and were provided with one-on-one instructional support in the classroom. Each of these students received medical assistance

funds through Medicaid because of their families' economic status. The students were enrolled in a co-taught class for Language Arts and all received special education services through Individualized Education Plans, hereafter referred to as IEPs. Two of the participants were female and two were male. All participants were between 14 and 15 years of age. The school that the students attended is a regular middle school serving grades six through eight. Many families in the school community are low-income families or single-parent households. The school serves just over one thousand students and 92 percent of these students receive FARM in some capacity. Mobility is high at 25% because many families in the area experience high mobility rates. Data on school demographics were collected from the 2017 Maryland Report Card prior to this study at [reportcard.msde.maryland.gov](http://reportcard.msde.maryland.gov) (MSDE, 2017).

#### Medical Assistance

Students can qualify to receive Medicaid benefits because they are living in households with low income to resident ratios. In Maryland, families qualify for Medicaid when the household income is below a specific threshold, as stated on the Maryland Health Connection Government website (2018). Students with disabilities can receive special education services that are financed through Medicaid. Students who are receiving Medicaid support for special education services are categorized as “living in poverty” based on the Medicaid qualifications. Students were selected for this study based on this definition of “living in poverty.”

#### **Instrument**

In the fall semester of the 2017-2018 school year, students in the purposeful sample were given reading comprehension quizzes during a three-week study of *The Giver*, a novel in the Grade Eight Language Arts curriculum. The assessments were each teacher-created and contained multiple choice, true-false, and short response questions. Students in the purposeful

sample group demonstrated significant deficits in their performance on these reading comprehension quizzes. The participants were not receiving positive interventions or one-on-one support at the time of the novel study.

### **Procedure**

After identifying students in the sample group and collecting baseline data, students were provided with 15 minutes of one-on-one support twice a week for five weeks. The researcher met with the participants individually twice a week for 15 minutes to review the assigned readings for that day, discuss comprehension questions, and provide support to help them study for their quarterly reading quizzes. Students' quiz scores during the study were compared to their quiz scores from prior quarters in which they demonstrated significant deficits in comprehension and understanding. Each student received these one-on-one sessions to improve their reading comprehension and understanding of the texts read in class. Sessions were student-centered and focused on the needs of each student. Some common areas of need for students in the sample group were basic comprehension, character analysis, and vocabulary. The researcher used graphic organizers, reading strategies, and chapter summaries to strengthen each participant's comprehension of the text.

Participants were asked to summarize the text verbally and make basic notes on what occurred in the reading selection for each day. Students in the entire class worked with the novel, *Harriet Tubman: Conductor on the Underground Railroad*. After participants summarized the daily reading, the researcher asked basic comprehension questions to determine each participant's level of understanding and clarify content that the student did not understand.

Participants also received one-on-one support in the form of a quiz review, which gave the researcher the opportunity to "study" with the participants prior to taking the reading quiz.

This was an important component of the study because students who live in poverty generally do not have support at home with regard to studying and quiz preparation as do students living in more economically secure households. Research cited above suggests that students living in poverty often are using time at home in the evenings to care for younger siblings, help run the household, or even work to provide additional income. These responsibilities require students' time that cannot be used for study and academic review purposes. Time for study and review is essential for effective comprehension and achievement in all areas of study.

## CHAPTER IV

### RESULTS

#### Analysis of the Data

This study examined the impact of school-based individualized support for students who live in poverty and the academic performance of those students in comparison to the academic performance of their peers. The researcher collected data from a series of five teacher created reading comprehension quizzes over a period of five months. The data summarizing students' quiz scores is displayed in Table 1, and Table 2 offers a graphic display of student performance data on the on the quizzes cited above.

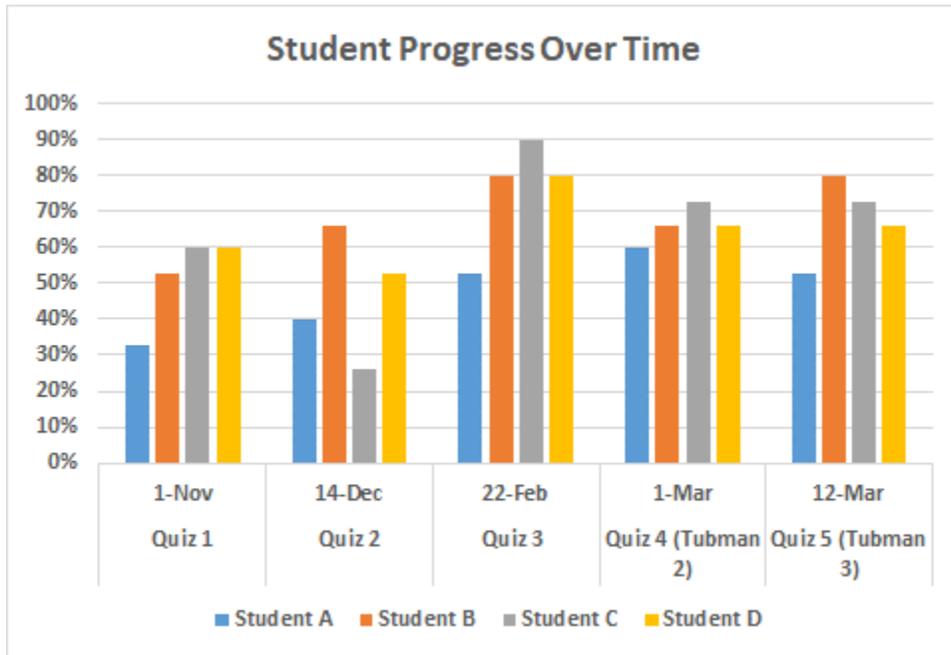
Table 1

*Participants' Quiz Data Performance from November 2017 through March 2018*

Quiz Titles	Date	Student A	Student B	Student C	Student D
Quiz 1	1-Nov	33%	53%	60%	60%
Quiz 2	14-Dec	40%	66%	26%	53%
Quiz 3	22-Feb	53%	80%	90%	80%
Quiz 4	1-Mar	60%	66%	73%	66%
Quiz 5	12-Mar	53%	80%	73%	66%

Table 2

*Graph of Participants' Quiz Data Performance from November 2017 through March 2018*



Although no statistical analysis of the data from students' performance on the reading comprehension quizzes administered during the study was conducted, it appears from the fluctuations of the data over the five months of the study that there was no observable difference between the achievement of the students while receiving one-on-one assistance compared to their achievement when they did not receive this assistance.

## **CHAPTER V**

### **DISCUSSION**

This study examined the impact of school-based individualized support for students who live in poverty and the academic performance of those students while receiving support in comparison to their performance while not receiving such support. The data analysis reported in Chapter IV suggests acceptance of the null hypothesis. Due to the small sample size included in the study and its case study design, no statistical hypothesis was posited. However, student achievement results on the measures used indicated that there was no observable difference in performance between students living in poverty who received one-on-one instruction and their performance when they did not receive this type of support.

It should be noted that due to the few numbers of participants in the study, a more formal statistical analysis was not feasible and conclusions regarding the effect of the intervention were based on observation of the scores themselves. Thus, this observation may reflect subjective error.

#### **Threats to Validity**

All research studies contain threats to validity. These threats are divided into two categories: threats to external validity and threats to internal validity. One potential threat to external validity is the possibility of selection bias, and this threat exists for the current study. The researcher selected students for this study from one class of students at one school. The selection of these students primarily was based on students' qualification for "poverty" according to this study, but a bias may exist since the researcher chose the subjects. The assessments used to track student progress also may be subject to selection bias since the quizzes were teacher-created.

A possible threat to internal validity is the use of “interventions” to offer academic support for students living in poverty. Interventions encompass a wide scope of supports that can be offered to struggling students. In this case, the interventions provided were selected by the researcher but could pose a threat to external validity because other researchers may define intervention differently.

One other threat to internal validity that may occur is history. Although students were given intervention support over the course of the study, other factors that occurred from the first measure to the last may have affected students’ assessment results. These factors may have included students’ attendance, instructional content, and students’ home lives. Given these factors, interventions provided to students during the study may not have had a direct effect on students’ responses on assessments administered during and at the end of the study.

### **Connections to Previous Studies and Existing Literature**

The literature cited in this study supports previous research findings revealing that students who live in poverty likely struggle to a greater extent academically than students from more economically advantaged families. As stated in Chapter II, the National Center for Education Statistics claims that “research finds that risk factors, such as having a parent who did not complete high school, living in a single-parent household, and living in poverty, are associated with poor educational outcomes, including low achievement scores, having to repeat a grade, and dropping out of high school” (NCES, 2017, para. 1). Initial scores from the quizzes used during this study support previous findings in the literature that the participants who were identified as living in poverty at the time of the study perform poorly academically and have low achievement scores.

The participants selected for this study lived in low-income homes and received medical assistance for their special education services because of the economic status of their families. These students often appeared to be tired and withdrawn in class, had poor attendance, and frequently responded inappropriately to stressful situations. These external factors appear to be related to the students' experience of living in poverty. Poverty affects students' ability to function normally in an academic environment. This finding aligns directly with the claim of Blazer, administrator from Miami Dade County Public Schools, that "There is a strong relationship between students' socioeconomic status and their levels of academic achievement" (2009, p. 6).

The literature supports the concept that poverty has a substantial impact on a child's ability to perform daily functions and live a normal life. Students who live in poverty are faced with hunger, decreased nutritional supplements, higher levels of stress, and little to no parental involvement in their academic endeavors. As stated above, a study conducted by the Department of Psychology at the University of Denver suggests that children also experience poverty-related stress, which can affect the child's ability to function at home and in school. Results from this study support these researchers' conclusion that "poor teens are more likely to engage in problematic behavior having serious physical and social consequences such as substance abuse, criminality, and early pregnancy" (Wadsworth et al., 2008, p. 156). Poverty creates a substantial gap between teens who live in households affected by poverty and their middle-class peers. Homelessness and mobility also are discussed in the research as two poverty-related factors that make it increasingly more difficult for students to be academically successful.

Several evidence-based interventions are discussed in the literature as options to combat the academic challenges created by poverty. As stated above, "Other supports and interventions

can be implemented by teachers and school personnel to help students overcome the constraints of living in poverty” (Butz, 2012, p. 1). In a study involving student achievement from many schools on the Pennsylvania System of School Assessment, (PSSA), Butz found that school leaders “who were ambitious first for the school and who had a fierce resolve for the school to succeed” were most successful with high achievement (2012, p. 1). Teachers and school leaders are the first line of defense against poverty for students who are facing economic hardship. It is important for teachers to intervene and provide the support that students living in poverty are not receiving at home.

Butz quotes Jim Collins, author of *Good to Great*, who insists that “teachers need to be the impetus for change for students living in poverty and must make tremendous efforts to offer supports to the students who face economic hardships” (Butz, 2012, p. 1). The challenge for educators is to identify the supports that are most effective for students who are living in poverty. The researcher concluded that students in this study needed instructional support in the areas of reading comprehension and retention while reading full-process texts. A few of the interventions that were selected were providing verbal summaries of the chapters that were read in class, reviewing key information with students, asking students to develop questions about the text, and previewing the complex questions before writing responses. Working one on one with these students also provided the opportunity for individualized instruction, something these students likely were not receiving at home when they worked on homework tasks and studied for tests or quizzes.

Another key strategy used to support students living in poverty was described by researcher Dell’Angelo as relationship building. One on one instruction offered by the identified teacher provided an opportunity to build a relationship with students, creating a level of trust that

may not have existed otherwise (2016). Relationships are critical for students living in poverty and can support the psychological needs of the child while also supporting the child's academic needs.

### **Summary, Conclusions, and Recommendations for Future Research**

The results of this study suggest that a long-standing intervention may work most efficiently in providing individualized intervention to students who are living in poverty and students who have been affected by the negative effects of poverty in the surrounding community. Some of the students in this study improved their quiz scores during and after the intervention supports were implemented, but there was variation in student achievement throughout the study, rather than consistent progress. After the second quiz administered during the study, two students improved and two declined. All subjects improved on the third quiz, but only one improved on the fourth; the other three subjects' scores declined. The final assessment revealed a decline in the performance of one student and improvement in another, while the remaining two students achieved the same score as they did on the fourth quiz, which was a decline from the third. The variation could have been a result of external factors such as attendance issues and behavior concerns, as well as a change in the content that was assessed on the third and fourth quiz. It is recommended that future research isolate any external factors related to the study to determine whether or not a true correlation exists between academic success and individualized intervention for students living in poverty.

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