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Fragile Families: The impact household and financial instability have on the development of
young students and their academic attainment.

by

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TABLE OF CONTENTS

SECTION 1	#
ABSTRACT	3
FRAGILE FAMILIES.....	4
<i>Introduction</i>	4
<i>Literature Review</i>	5
<i>Behavioral Economics</i>	9
SCHOOL, PEER & ENVIRONMENTAL IMPACTS.....	12
HOME & COMMUNITY IMPACTS	14
DATA & RESEARCH DESIGN.....	17
SECTION 2	22
LITERATURE REVIEW	23
RESEARCH MODEL & DESIGN.....	26
<i>Data</i>	27
<i>Research Questions & Hypotheses</i>	27
<i>Procedure</i>	28
RESULTS OF LONGITUDINAL STUDY.....	28
RESULTS OF META-ANALYTIC STUDY	32
CONCLUSION	33
REFERENCES	35

Abstract:

Despite being one of the most developed countries in the world, the United States has one of the highest rates, globally, of childhood poverty. Poverty is a major contributor to household instability and the failing educational performance and development of students. Factors such as low-socioeconomic status decrease the ability for families to provide basic educational needs to their children such as tutors, school supplies, transportation, and more. Paired with poor support at home, a family's financial status often restricts a child from receiving the best education possible and ultimately decreases their educational opportunities. I'll investigate this question by analyzing the harmful effects household and financial instability have on the development of young students as well as the challenges it presents to their education and future.

Section I: Fragile Families

1 Introduction

Fragile families are families with low-socioeconomic status living in unstable homes under a poor family structure. These families share similar characteristics to those living in poverty and are unable to provide sufficient resources to their child's educational needs.

Although a positive relationship between socioeconomic status and a child's development is well established, how it affects a child's academic success or opportunities is not.

Undoubtedly, the role a parent plays in the life of their child is monumental in determining their childhood experience, growth, and development. With proper love, care, support, discipline, and direction a child can prosper under the wisdom of his or her parents. If basic resources are lacking, however, the child may suffer the most, and persistent socioeconomic disadvantages can negatively impact the life outcomes of these children. Surprising research from the Ontario Child Health Study in the mid- 1980s reported noteworthy associations between children in low-income families and psychiatric disorders, social and academic functioning, and chronic physical health problems (Ferguson, Bovaird, Mueller, 2007). Most importantly, however, children living in fragile families were greatly affected in terms of their readiness for school. This considers certain factors such as health, home life, schooling, and neighborhood (Ferguson, Bovaird, Mueller, 2007). Likewise, studies originating from the National Longitudinal Survey of Children and Youth have repeatedly shown that socioeconomic factors have a large, "pervasive and persistent influence over school achievement" (Phipps & Lethbridge, 2015). Interestingly, higher-income families were consistently associated with better outcomes for children cognitively, behaviorally, socially, and emotionally.

On the other hand, longitudinal studies carried out in the United States have been crucial in determining key factors that contribute to poor academic attainment in students. Comparisons showed that much of the achievement gap between low and high SES students was related to their “out-of-school environment: families and communities” (Sirin, 2005). Although student characteristics (racial/ethnic background, grade level, learning ability, and school location) must be taken into account, this relationship makes it clear that, while schools do play a crucial role in a student’s success, the continued support *outside* of school amongst their families and within their communities is just as important. With this being said, according to the Fragile Families and Child Wellbeing Study (FFCWS), disadvantaged students have a much harder time finding that support outside of school and, therefore, tend to not only struggle more but lack the interest and the motivation to even learn.

In addition to providing an overview of findings and studies that examine the links between fragile families and poorer child well-being, I will report my evaluation of how being raised in a fragile family affects a child’s educational opportunities and attainment on an *individual, environmental* and *direct* level. This paper will analyze multiple contributing factors, as well as conclude with what we can do as advocates to work toward reducing the negative impact of economic disadvantage on the educational attainment of children and light the way towards a brighter academic future.

2 Literature Review

While we often assume learning is up to the individual and those who “put the work in” will, therefore, learn more, reality says otherwise. More often than not, learners are usually handicapped before they even begin schooling. With other added factors, students tend to fall behind classmates or even quit school due to frustration and lack of motivation.

This idea is closely examined in a meta-analytic review on socioeconomic status and academic achievement by Seluck R. Sirin (2005). In 1972, it was concluded that socioeconomic status has four main indicators: parental income, parental education, parental occupation, and home resources (Duncan, 1972). With that being said, we can then measure socioeconomic status and determine if it has any effect on a student's academic achievement using characteristics such as grade level, minority status, and school location.

Likewise, a 2008 study on socioeconomic status by Aikens and colleagues examined to which extent socioeconomic status paired with family, school, and neighborhood factors accounted for the impact on children's early learning abilities, specifically Math and English. The study concluded that, although "family characteristics made the largest contribution to the prediction of initial kindergarten reading disparities," home environment, parental involvement in school, and parental role contributed in major ways as well (Aikens & Barbarin, 2008). If a child is brought up in a fragile family, right off the bat they're at a disadvantage. Despite how fragile the family is, if they're low-income they're most likely unable to put their children into better schools growing up and thus "lack the ability to learn from specific learning programs" other students have access to (Johnston, 2019).

Because the basis to improve education occurs at a national level, standards are set based on the population as a whole. Despite being poorly funded, minority districts must meet the same criteria as all the other neighboring schools. Not only is this troublesome, but it's also nearly impossible due to the lack of resources, to begin with, which, in turn, diminishes the opportunity for students. This makes it especially hard for students who are already struggling at home to find help learning in school when the school itself has minimal resources to aid in student

success. In turn, this creates a poor learning environment, and not only do students have trouble keeping up in class, they lack the motivation to be there in the first place.

A 2008 cross-regional study done in Turkey that correlated the relationship between students' academic achievement and their socioeconomic level found that “[multiple families] variables affect students' academic achievement” (Tomul & Celik, 2009). As the regional developmental level decreases, the effects of variables such as income, structure, support, and parental education on academic achievement also decrease (Tomul & Celik, 2009).

With that being said, there seems to be a relationship between raising a child in a fragile family and their academic achievement, especially in their early childhood educational years (up to 7 years old). As students enter adolescence, however, they can understand the effect their socioeconomic status may have on their academic or career opportunities. According to Caro (2009), adolescents “become aware that society rewards individuals of varying SES differently,” and therefore “realize they are likely to be excluded from desirable jobs” based on their backgrounds. Caro describes this as a process of *disillusionment*. During this process, students become less motivated academically and more mindful of “reality.” They begin to place less effort on their academic activities questioning if the stress of their endeavors will even payout and/or be worth it (Caro, 2009). Whether this is true or not, and they are neglected, it raises concerns on how society operates.

According to multiple studies, “students from impoverished households tend to have lower levels of verbal and reasoning skills than their peers because their parents are less likely to read to them” (Johnston, 2019). With longer working hours, lower levels of education, and fewer academic resources, poor parents are unable to give their kids suitable levels of attention and, therefore, their children learn a much more limited vocabulary. Moreover, poor children have

often not been asked to find solutions to problems or received advice on how to handle difficult situations before entering school. Interestingly, a study done in 1995 found that children in struggling, low-income families had heard 32 million fewer words than other students in better financial standing (Cavanagh & Fomby, 2012).

Taking all of this into consideration, it's hard to deny that family structure has a profound effect on a child's academic success. Because fragile households tend to be extremely vulnerable to stress, this can dampen brain development at a young age and "result in [a greater] inability to pay attention, regulate emotions, or develop proper memory function" (Schoon, Jones, Cheng, & Maughan, 2011). Although it's obvious how paying attention and poor memory function can contribute to academic distress, the inability to regulate emotions can lead to feelings of helplessness, believing they're unequipped or unable to learn the material at all (Johnston, 2009). With lack of support at home, more often than not, young students begin to feel uncared for and the odds are unfairly stacked against them. Students who're entering their adolescent years tend to disregard the importance of education and look for other paths to take. Because many poor students aren't taught about varying career options, they don't necessarily know what steps to take next. Opportunities seem limited and the children's ability and willingness to take advantage of opportunities outside of their community greatly decreases.

Furthermore, cognitive impairment directly influences a student's decisions. Whether it be motivation or lack thereof, this all begins with the child's upbringing. If they grow up in a fragile household, unsupported and not taught the importance of education, how can one expect the student to be motivated by academics, especially if it something they struggle with and are frustrated by? If their parents, or their school, are unable to provide support and academic resources, their success will suffer and therefore so will their academic opportunity. Without

support and guidance, it's even hard for adults to succeed. Children who feel neglected feel they must do it "all on their own," says Barbarin (2008), and in doing so adds to stress, uncertainty, and an eventual "giving up" outlook academically at a young age.

The Fragile Families and Child Wellbeing Study (FFCWS), a major study run by Princeton, Columbia, and the University of Michigan sought to answer questions such as: how do children in these family's fare? And how do policies and environmental conditions affect families and children (Waldfogel, Craigie, Brooks-Gu, 2010)? After analyzing the study, Waldfogel and colleagues investigated five key pathways through which family structure might influence child well-being: "parental resources, parental mental health, parental relationship quality, parenting quality, and father involvement" (Waldfogel, Craigie, Brooks-Gu, 2010). After dissecting these five key factors, it's clear that children raised in fragile families are more likely to experience "cognitive, behavioral, and health outcomes [that do not] bode well for these children's long-run prospects" (Waldfogel, Craigie, Brooks-Gu, 2010). Concerning education, they concluded that "children in fragile families are likely at risk of poorer school achievement" as well as "poorer social and emotional development starting in early childhood" (Waldfogel, Craigie, Brooks-Gu, 2010).

Behavioral Economics

According to Koch et al. (2015), the quantity and quality of resources invested in learning determine the quality of achievement in a designated school system. In the United States, children enroll in elementary school at the age of five or six. Thus, education plays an integral part in shaping the student's childhood life and, eventually, their adulthood. According to Akerlof and Kranton (2002), due to economic difficulties, teenage students often sacrifice effort and time spent towards bettering their academic success by trying to "improve their current

economic situation” for their families. On the other hand, an upright and well-managed education system that offers learning services to everyone despite their cultural or economic background “provides everyone with an equal opportunity to thrive” (Akerlof and Kranton, 2002). Major education stakeholders must ensure that they provide a conducive educational environment for every learner. Akerlof and Kranton (2002) state that the resources available determine the quality of the school. With this being said, a lesser financed school can mean potentially lesser supported students. While behavioral economics applies psychological insights into human behavior, it plays a major role in determining the relationship between a student’s social behaviors in school with relation to their economic decision making.

Jabbar (2015) highlights that in the past years, researchers have applied educational economics to examine the link between education and economic growth. In summary, their theory evaluates tutor labor markets and the impact of financial resources on the education system (Jabbar, 2015). However, the involvement of economists in the field of education triggers conflicts with several educational researchers. This has been due to concern for excessive policy implementation and the reason that there is a broad separation existing between the two sectors. A significant number of economic models assume unbound rationality in evaluating their tastes and preferences. However, according to Jabbar (2015) and Almlund et al. (2011), behavioral economists suggest that persons' preferences rely on their intuitive thinking instead of constant or clearly defined factors.

Almlund et al. (2011) investigate the correlation between personality traits to predicting future economic outcomes and real financial success after employment. A significant number of research materials exist on cognitive capabilities in projecting social-economic achievement. However, there prevails a need for future intensive research to emphasize the effect of cognitive

abilities on education and future economic success (Almlund et al., 2011, p. 6). Personality traits describe a person by taking into account universal characteristics and personal differences.

Cognitive abilities enhance a student's (in this case) ability to comprehend multiplex ideas and successfully contribute to a particular environment (Almlund et al., 2011, p. 57). Students with practical cognitive skills can successfully evaluate their current academic struggle and evaluate their future economic freedom. Interestingly, achievement tests can measure how individuals can comprehend the knowledge and apply skills to everyday life and these findings can contribute to breakthroughs in behavioral economics (Almlund et al. 2011).

According to Koch et al. (2015), individuals who attain higher education enable themselves to improve their cognitive ability, which ultimately results in an “increase in earning capabilities (6).” With this being said, increased earnings can be due to one or more of the following: 1) the school systems' immediate impact on the student, 2) the notion of enhanced cognitive skills in students, 3) or merely the skills and training that are acquired through the completion of higher levels of education (Koch et al., 2015, p. 6). Moreover, over the last two decades, researchers have intensified their hunt on the correlation between soft skills (or interpersonal skills such as communication, leadership, teamwork, problem-solving, and time management) and academic attainment. For example, Koch et al. (2015) reported the negative correlation between a lack of self-control (soft skill) and a student's desire to drop out of high school which ultimately leads to lessened academic opportunities (6). Also, recent research highlighted by Koch et al. (2015) indicates that adults depend highly on self-discipline (soft skill) as a predictor compared to IQ levels (hard skill) in educational attainment and performance. More importantly, however, there is a strong positive correlation between soft

Chris Abatecola

skills (such as patience and self-discipline) and high IQ levels (Almlund et al., 2015, p. 60; Koch et al., 2011, p. 6).

School, Peer & Environmental Impacts

Moreover, a significant volume of research has been done on the influence peers have on educational outcomes for students. According to Patacchini et al. (2017), specific elements exist that address the specific impact academic peers have on long-term student attainment. Patacchini et al. (2017) provide data that proves there is a correlation between school environment and adulthood outcomes (191). According to Joensen and Nielsen (2018), social interactivity plays an integral role in the development of skills as well. The activities of a particular group may influence the decision of an individual on educational matters based on identity and social norms for that individual – for example, the "theory of sibling spillovers on education choices" (Joensen and Nielson, 2018, p. 156). This paper examines the long-term effect of peer influence and factors affiliated, such as school funding, resources, test scores, values, counseling, teachers, and opportunities availed to help the students grow socially.

According to Koch et al. (2015), negative social pressures such as attending “late-night raves,” experimenting with drugs and alcohol, and attending outside events may influence teenagers to drop out of school (5). At this point, whether consciously or unconsciously, students forego future educational opportunities due to their teenage pressures and sadly, “fail to see the bigger picture” at such a young age. Mainly, these events are determined by the student’s soft skills (personality traits) and the goal of a particular peer group, or individual himself (Koch et al., 2015, p. 5). Furthermore, previous research supports that disruptive peers form a “detrimental influence” on student behaviors and educational outcomes (Koch et al., 2015). Arguably, success in a school system is more often than not translated into better employment opportunities and

increased earnings. Therefore, a particular school's environment along with its values and culture is a tremendous determinant of the behavioral outcomes of students in that school. For example, disciplined schools stress important practical skills (organization, punctuality, etc.) and mold students around a strict, but positive, behavioral culture that motivates students to succeed in school and be able to apply those skills outside of it. Students who surround themselves with more socially and emotionally developed students tend to accumulate a greater wealth of knowledge and motivate one another to get better because they understand that you must "compete for high-end careers with the top-earning ability" (Koch et al., 2015, p. 5).

Furthermore, Patacchini et al. (2017) conclude that significant peer involvement in a student's life could either promote or deter a student towards academic success. Likewise, this paper looks into internal school structures such as availability of resources, funding, test scores, values, and teachers to understand how a healthy environment influences success in education. According to Koch et al. (2015), the schools' resources from the elementary level to the high education level play an integral aspect of the school's production (5). Although there is minimal research on the teacher-student relationship in comparison to other school resources concerning student achievement, the availability of different sized classrooms is one of the most studied factors by researchers due to the varying uniqueness of students' learning styles (Koch et al., 2015, p. 5). Likewise, reduced class sizes represent the availability of support from school administration and allow for "minimum child congestion" (Koch et al., 2015). Such schools can provide essential learning materials that get appropriately distributed to classes equally. Reduced class sizes also enhance the teacher-student relationship making it easier to notice a student dropping in academic performance and provide them with direct assistance. Sadly, however, the availability

of school resources depends on the intensity of school funding which varies from district to district and makes some schools much more attractive than others *to those that can afford it*.

Moreover, schools that receive increased funding get to employ a variety of teachers who teach different skill sets and can interact with students differently. For example, some teachers excel in developing cognitive skills, like reasoning or problem solving, while others improve the student's non-cognitive skills like motivation and interpersonal action (Koch et al., 2015, p. 5). Furthermore, a school environment with a variety of teachers avails equal and improved opportunities for students to grow and develop all different types of skills despite their learning ability. Undoubtedly, quality teachers that work with disciplined (or developing) students, help set a standard that impacts the students' input into their education. With this being said, generations that follow will be influenced by healthy behaviors that ultimately lead to improved economic and educational outcomes (Koch et al., 2015, p. 6). Although teenagers who develop high social and emotional skill sets tend to also develop top-level survival tactics that correlate directly to income-earning activities, students should not feel the need to survive in a school setting. Rather, they should be eager to learn, try new things, and not be afraid to fail. A successful school environment is essential in its ability to promote all of the above and effectively help students develop. However, motivation and attitude towards school depend highly on the effectiveness of the environment set at home by elements in the family.

Home and Community Impacts

According to Israel et al. (2001), families and communities play an integral role in aiding in the development and application of skills (43). Certain capabilities allow adolescents to prosper and compete in the modern job market comprised of improved technology which requires individuals to innovate. On the other hand, research indicates that developing skilled

labor, among other factors, influences the overall nation's well-being (Israel et al., 2001, p. 43). The development of skilled labor depends on the level of education attained as well as influences the family has on the student's participation and excellence in the school setting. Waldfogel et al. (2010) examine the data collected by the Fragile Families and Child Wellbeing Study (FFCWS) (87) focused on several aspects such as quality of the parental relationship, parental mental well-being, quality parenting, parental income ability, and involvement of both parents in child development (Waldfogel et al., 2010, p. 87). Schoon et al. (2011) indicate that kids between infancy and five years old, depending on parenting quality, develop important cognitive skills that greatly influence their school life and, eventually, income ability (4). The environment a child dwells in generates events and experiences that foster skills which even though learned during early development, remain crucial in shaping his or her future decisions (Schoon et al., 2011, p. 4).

Furthermore, proper child development depends largely on the parents' education level. According to Sirin (2005), parental education leads to a positive shift in societal well-being. Sirin explains that a family with one or more of the parents having secondary or higher education can provide a better, healthier, and more positive living for the family, such as improved education and more attention to the children (Sirin, 2005, p. 418). Likewise, higher socio-economic status correlates highly with high educational achievement. Parental income has a direct relationship to the resources that are available and could be provided. A high rate of parental income means that the parent also experienced academic excellence, as observed in United States culture (Sirin, 2005, p. 418). With a wealth of experience and knowledge, educated parents tend to provide better education for their kids and allow them to learn in positive, higher caliber schools (taking into consideration funding, school rank, etc.)

Likewise, a family's structure plays a significant role in determining the availability of resources that get channeled towards a child's education. With this being said, family instability greatly influences the cognitive development of children (Waldfogel et al., 2010, p. 87).

According to Waldfogel, children who grow in a single mother family, whether stable or unstable, tend to develop poor behavioral development – that may fail to guide the child to complete school and attain economic success. Fragile families, referring to a low socioeconomic household with a poor family structure, expose children to risks such as poor education and support compared to kids born into nuclear households (Waldfogel et al., 2010, p. 88).

Traditional families with two parents tend to provide the best family environment for their kids; thus, influencing cognitive skills that increase the chances of positively affecting the child's school life.

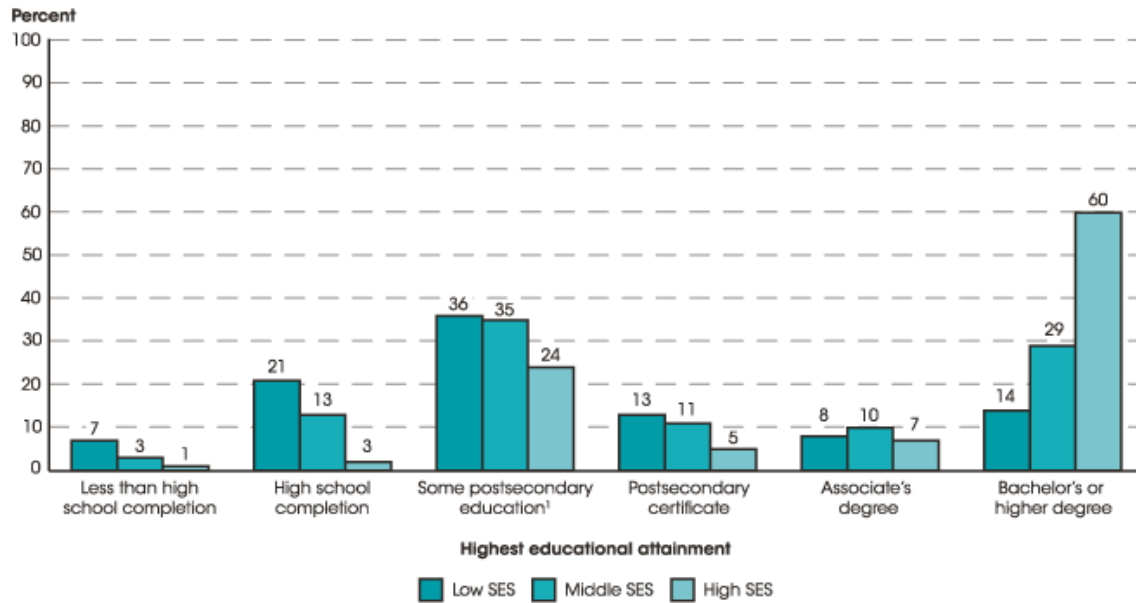
Furthermore, fragile families tend to provide inadequate resources for a child's education. On the other hand, traditional families can provide ample resources that ultimately influence an increase in educational expenditure. Thus, a family's socioeconomic status directly affects the education a child receives while family structure influences a child's ability to learn, grow, develop and create positive experiences that ultimately impact future decisions (Israel et al., 2001, p. 44).

Despite socio-economic status, however, families can come together, especially in struggling communities, to help their disadvantaged youth. They can do so by pooling together their knowledge and recourses to help children succeed in schools such as creating after school help for one another as well as sharing books, school supplies, transportation, and more. On an individual level, communities can advocate to lessen the number of kids born into fragile and address risks that negatively affect the child's academic excellence. They can do so by

discouraging unwed births, as well as encourage the implementation of policies that increase income ability to single mothers and allow for business loans at lower rates. Improving the community will ultimately create more positive influences for the children despite what goes on in their homes. On the other hand, providing more resources to fragile families as well as underprivileged communities will create a more productive and compelling learning environment. Paving pathways that at-risk children can take will broaden their perspectives and boost their interest in the opportunities a good education can provide. However, solving these issues begins with the individual. Thankfully, the implementation of charities and educational organizations is on the rise, working to provide resources for disadvantaged children. Innovative approaches are being taken to allow poorer students to not only better their educational experience, but realize their potential, set goals and achieve them.

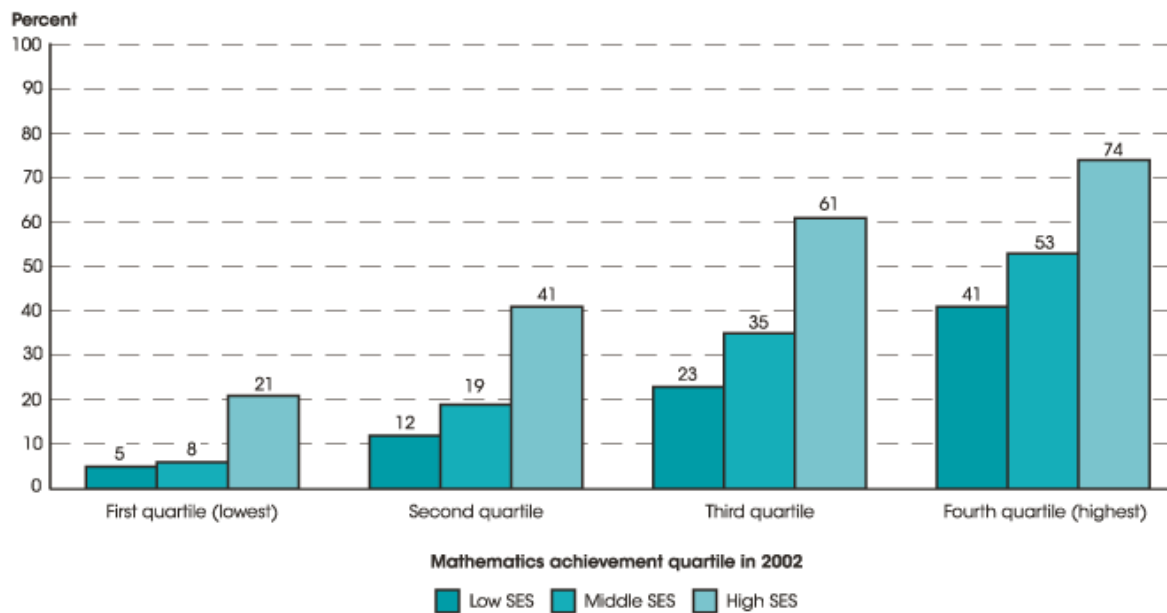
3 Data and Research Design

I will use data comparing the distribution of educational attainment (highest level of education) and family income quartiles from the National Center for Education Statistics. Figures 1 & 2 depict a longitudinal study where students were first surveyed in 2002 when they were sophomores in high school then their highest level of education was assessed ten years later in 2012. Figure 1 shows the percentage distribution of highest level of educational attainment by socioeconomic status (SES) while Figure 2 displays the percentage of those who earned a bachelor's degree or higher by 2012 (by socioeconomic status (SES) and mathematics achievement quartile in 2002). Figure 3 illustrates the share of high school graduates enrolled in college in the United States from 2000 to 2017, by family income quartile. Lastly, Table 1 shows the percentage of the population's (ages 25 to 64) highest level of education based on income and country.



**Figure 1. Percentage distribution of highest level of educational attainment of spring 2002 high school sophomores in 2012, by socioeconomic status (SES)*

Analyzing meta-analytic research reviews has allowed entry for major findings and results as well. For example, because there is a direct correlation between socioeconomic status and living conditions, children living in a fragile family are at risk for decreased academic attainment due to a lack of resources and academic support needed to succeed. To get a better understanding of this, however, I would first examine what constitutes a fragile family. After understanding that a fragile family is a low-income family with low-socioeconomic status living in unstable homes under a poor family structure (cohabiting families, single or no parent involvement), the next step was to determine if a child's development is impacted growing up in these less-than-ideal conditions.



*Figure 2. Percentage of spring 2002 high school sophomores who earned a bachelor's degree or higher by 2012, by socioeconomic status (SES) and mathematics achievement quartile in 2002

After in-depth research, there is clear evidence that a child's development is altered due to the environment they grow up in, mainly their cognitive and emotional functions. This in turn has a direct effect on their motivation and success in school. Paired with poor support and lack of resources at home, it makes it that much harder for a disadvantaged student to understand the importance of school, thus minimizing their interest in continuing towards higher levels of education and, ultimately, minimizing their academic attainment and future success.

As depicted in Figure 1, students with high SES went on to achieve more academically by receiving a bachelor's degree or higher. This supports the claim that progression towards higher levels of education is associated with socioeconomic status. The statistics are very similar in Table 1 which shows that those with a higher median income tend to continue their academic careers and reach higher levels of attainment. Likewise, as Figure 3 shows, in 2017 only 63% of high school graduates from families in the lowest income quartile in the United States enrolled in college, while 87% were enrolled in college who were from the highest income quartile.

Country	Lower secondary education or below ¹		Upper secondary education ²		Academic higher education ³	
	At or below half of the median income	More than two times the median income	At or below half of the median income	More than two times the median income	At or below half of the median income	More than two times the median income
Australia ⁴	24	3	15	6	10	18
Brazil	23	13	6	32	2	74
Canada ⁵	36	6	27	10	18	29
France ⁴	33	4	19	5	10	24
Germany	32	3	25	5	13	28
Italy ⁴	26	4	16	9	13	25
Republic of Korea	32	1	15	6	4	26
United Kingdom	37	1	21	5	9	26
United States	47	3	26	8	13	30

¹ Includes ISCED97 levels 0 (preprimary education), 1 (primary education), and 2 (lower secondary education).

² Includes ISCED97 levels 3 (upper secondary education) and 4 (postsecondary nontertiary programs).

³ Includes ISCED97 levels 5A (academic higher education below the doctoral level) and 6 (doctoral level of academic higher education).

⁴ Reference year is 2009 rather than 2011.

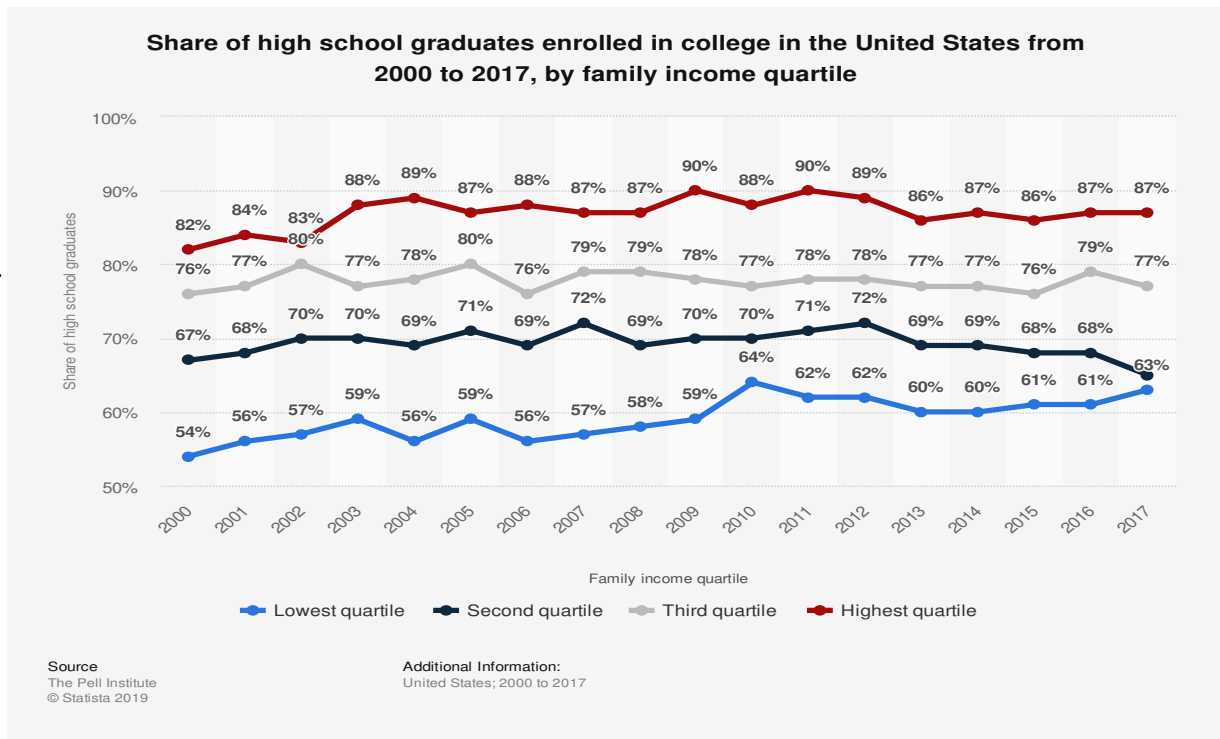
⁵ Reference year is 2010 rather than 2011.

NOTE: The Republic of Korea reports earnings net of income tax. See the source listed below for the additional income categories that make up the full percentage distribution: more than half the median but at or below the median, more than the median but at or below 1.5 times the median, and more than 1.5 times the median but at or below 2.0 times the median. Education levels are defined according to the 1997 International Standard Classification of Education (ISCED97). For more information on the ISCED97 levels, see appendix A in this report.

SOURCE: Organization for Economic Cooperation and Development (OECD). (2013a). *Education at a Glance: 2013 OECD Indicators*, web table A6.4a. Paris: Author.

**Table 1. Percentage of the population ages 25 to 64, by the highest level of education, income, and country.*

Given these concerns, I plan to broaden my research and extend it outside of the United States and then complete a comparative study on the data I find. My research will focus extensively on similar factors based on how socioeconomic status and living in a fragile family affects a child's educational attainment. On the other hand, balancing the consistent evidence about the negative impact of fragile families with the hopeful, positive outcomes of intervention studies, there are things we can do as a society and in our communities to alleviate the effects that low SES has on academic success. I intend to not only look into these steps but also indicate the importance of parental support and networks *outside* of school that provides academic, social, and community encouragement to help raise the success of disadvantaged children and maximize school readiness. I plan to make others aware of the short-, medium- and long- term costs of allowing these youth to fail or leave school, as well as advocate for system changes within schools to maximize educational attainment despite one's socioeconomic status.



**Figure 3. Share of high school graduates enrolled in college in the United States, from 2000 to 2017, by family income quartile*

Section II: Economically Disadvantaged Students & Academic Attainment

1 Introduction

As discussed in section 1, in the vast majority of school districts, economically disadvantaged students face a magnitude of challenges. This specifically, has an impact on the performance of students and their academic success. This section of the paper attempts to signify how profound that impact truly is. Based on trends in longitudinal research from Westchester County, NY, the number of economically disadvantaged students varies from school to school. Likewise, as discussed in the analysis, “*8 ways principals can build positive school culture now,*” researchers review and cross-examine studies that investigate the relationship between how schools, and faculty within the schools, affect a student’s academic success. Meta-analyses like these allow us to better understand the primary cause of poor performance of students and the mechanisms that various stakeholders have in solving the problem(s). From the research models used, the outcomes showed that students in public schools around Westchester County, NY struggle more with certain skills like concentration and focus in comparison to students in private schools. We can infer that this is because those in public schools are known to come from more economically unstable environments in comparison to those who attend private schools. Although there are exceptions, when looking at the data entirely, there is a clear correlation between those who attend public schools and those who are economically disadvantaged. Because of this concern, various strategies should be implemented to curb the problems economically disadvantaged students face and ensure that these students are afforded the necessities to obtain individuals success.

In a bid to curb the growing concern of poor education performance by economically disadvantaged and underrepresented students, leaders and various stakeholders voiced out their

willingness to create and support such students in an attempt to bridge the gap between private and public schools. In conjunction with rolled out programs such as NSF/CSEMS (National Science Foundation/Computer Science, Engineering & Mathematics Scholarships) and STEM (curriculums based in Science, Technology, Engineering & Mathematics), public schools are beginning to implement educational structures that promote increased retention rates. With this structural adoption, testing can serve as a criterion for determining disadvantaged and underrepresented students and become the model used to support underprivileged students.

2 Literature Review

While various studies have been conducted over the past few decades to assess the impact of poverty on students, the results seem to have a converged conclusion. What's to come is a discussion of how poverty affects students as well as possible mitigation strategies as per previous studies. Following empirical research, Gordon et al. investigated the challenges of the student's tenacity in grades K-12 and the criticism that has been put on "distinct venues" or different types of schools (Gordon et al. 431). Yet another study by Sayo et al. shows that academic outcomes are based on self-efficacy as well as pre-college preparations and mentor programs which help mandate and promote the success of students. Self-efficacy includes activities such as timekeeping, management skills, and study. It includes the confidence one has in his or her ability to properly "exert control over one's motivation, behavior, and social environment" (Bandura 1977, 1986, 1999). With this being said, minority students face far more challenges in persevering during the pre-college level and lack the preparation for proper advancement throughout grades K-12. Subsequently, the dichotomy, regardless of the disparities, leads to challenges for underprivileged undergraduate students and thus operationalize them as outliers (Locks et al.). Therefore, the primary destructive force that contributes to the fall "off of"

of minority students in school is not only their inability to cope with certain life factors but also, and more importantly, their economic background.

In a study by Sayo et al, it is further clarified that the race disparity and exemption of minority students also affects persistence levels for pre-college level students “studying in public schools” (Sayo et al. 13). Sayo et al. claim that minority students face far more challenges in persevering while in grades K-12 based on a variety of factors that all stem from economic disadvantages. As such, it plays a part in the lack of motivation, interest, and preparation for higher education. Interestingly, the last concern of Sayo et al. was centered on the dichotomy which exists in many public schools; where disadvantaged students feel excluded from needing to perform as well as other students in grades K-12 due to feelings of disassociation.

While Sayo et al and Gordon et al., seem to have related concerns on factors affecting students’ performance, Gerry & Theo, (p. 43) have an extremely divergent opinion by centering claims on poor parenting styles. As observed by Gerry & Theo, the social-economical background that “carelessly guides the student to enrollment” throughout the public K-12 grades of schooling, has contributed to poor academic performance (Gerry & Theo, 43). Recognition of many factors, as discussed in section 1, contributes to a student's perseverance in school but specific educational programs and models can be designed and integrated into schools, specifically public, that would facilitate perseverance despite an inadequacy of finances.

The advancement to be used is simple, effective, and can be quickly implemented by any institution or school which can greatly benefit struggling, underprivileged students. The widespread synopsis of the advances which should aid in student success are summarized as follows: the enhancement of professional support as well as the academic integration of support;

academic activities which would enhance aspects of personal mentorship, outreach activities, career placement, industrial training, and the education (Smart, John).

Furthermore, research conducted by Zakiya et al. found a significant gap between the success of upper-middle-class students and lower-class groups of students. Therefore, if the concern of underrepresentation on basis of socio-economic and cultural disparity is not addressed, making advances concerning academic courses and schemes will remain intractable. The attainment gap ensures that the under-representation of minority students who come from an economically disadvantaged base is also constrained by countless independent aspects. By understanding the roots, as well as the solution to relieving these related apprehensions, we can develop a broader understanding of students and how their attainment is directly impacted by a school's ability to develop the said student. As the meta-analysis winds up, the perspective given by Angela et al. explains that the success of undergraduate students also plays an essential role in any successful economy, and for the benefit of all, there should be a well-diversified plan that supports all students, especially those who are economically disadvantaged. With that being said, equal opportunity for all allows no student to be looked over and, despite economic hardship, can still progress academically and have a substantial impact on the world.

Taking all of this into consideration, the main emphasis upon the NSF/CSEMS and K-12 curriculums are to construct useful academic support tools that enable disadvantaged students to be financially assisted and better able to cope with financial burdens. Therefore, this next section of the paper aims to explain how disadvantaged students and schools of Westchester County, New York can prosper. To begin in their pursuits, the following actions should be taken:

- i. Touch base with the students from time to time concerning the incorporation of academic assistance and development of their skills.

- ii. Make adjustments based on student development by monitoring various areas and factors that may contribute to the success, or lack thereof, of the students.
- iii. Provide the students with various possibilities for research opportunities for honing their skills in specific areas of their academics.
- iv. Enhance the experience of education of students' workshop through the community by offering outreach programs, after school programs, and social events in and outside of school (hosted by the school).
- v. Promote acceptance and intercultural participation between the minority students as well as the non-minority students to embody a feeling of acceptance and inclusion.

3 Research Model & Design

The current study seeks to examine longitudinal methods and meta-analyses, where trends are assessed while also taking into consideration previously conducted research related to the thesis. As for the longitudinal design, the study examines national data per county where economic status and student performance are correlated. For the data to be analyzed, the sample data includes students from economically disadvantaged backgrounds who are well talented in the field of education and who are well versed in terms of broader school concepts and exercises. The data obtained will assist in analyzing the trends portrayed by both students in private schools versus those in public schools focused in Westchester County, NY. In this study, students capable of affording the fee solicited by private schools are assumed to be of better economic status, if not average. While on the other hand, students in low-funded public schools are believed to be from economically unstable backgrounds.

By adopting a meta-analysis approach to this current study, reviews and investigations of research conducted related to economically disadvantaged student and their academic success is

Chris Abatecola

made possible. Furthermore, along with mitigation strategies the government and other non-government organizations have laid down to assist the situation, we can help underprivileged students progress academically and be better able to overcome the challenges they face. Upon this review, the experimental phase where the data from public schools and private schools of Westchester County is analyzed seeks to confirm whether there is any correlation between disadvantaged students and their academic success or failure.

Data

This section of the study uses the 2017-2018 survey results by the NCES (National Center for Education Statistics). The sample population was comprised of 83 randomly selected private schools and 254 public schools across Westchester County, New York. The survey collected data on the school's various attributes, including demographic information, general financial background of the students, academic performance, as well as enrollment (or the number of students in each grade level). The current research investigated the relationship between academic performance and the financial background of the students. Analyses of variance were used to test the significance of the difference in the percentage of university enrollment based on three classes of financial background "low income," "moderate-income," and "high income."

4 Research Questions & Hypotheses

RQ₁ Is there a significant difference in public and private school enrollment percentage based on the level of income?

H₀: There is no significant difference between public and private school enrollment percentage based on the level of income.

H_a: There is a statistically significant difference between public and private school enrollment percentage based on the level of income.

RQ 2 Is there a significant difference between learning in public and private schools that create a higher possibility of enrolling in a university?

H₀: There is no significant difference between learning in public and private schools with the possibility of enrolling in a university.

H_a: There is a statistically significant difference between learning in public and private schools with the possibility of enrolling in a university.

Procedure

The ANOVA test was used to assess the difference in public and private school enrollment percentage based on the level of income and the difference between learning in public and private schools with the possibility of enrolling into a college university.

Thematic analysis was then used to assess previously conducted research regarding disadvantaged students and their academic success or failure while taking into consideration the effects low-socioeconomic status has on education.

5 Results of the Longitudinal Study

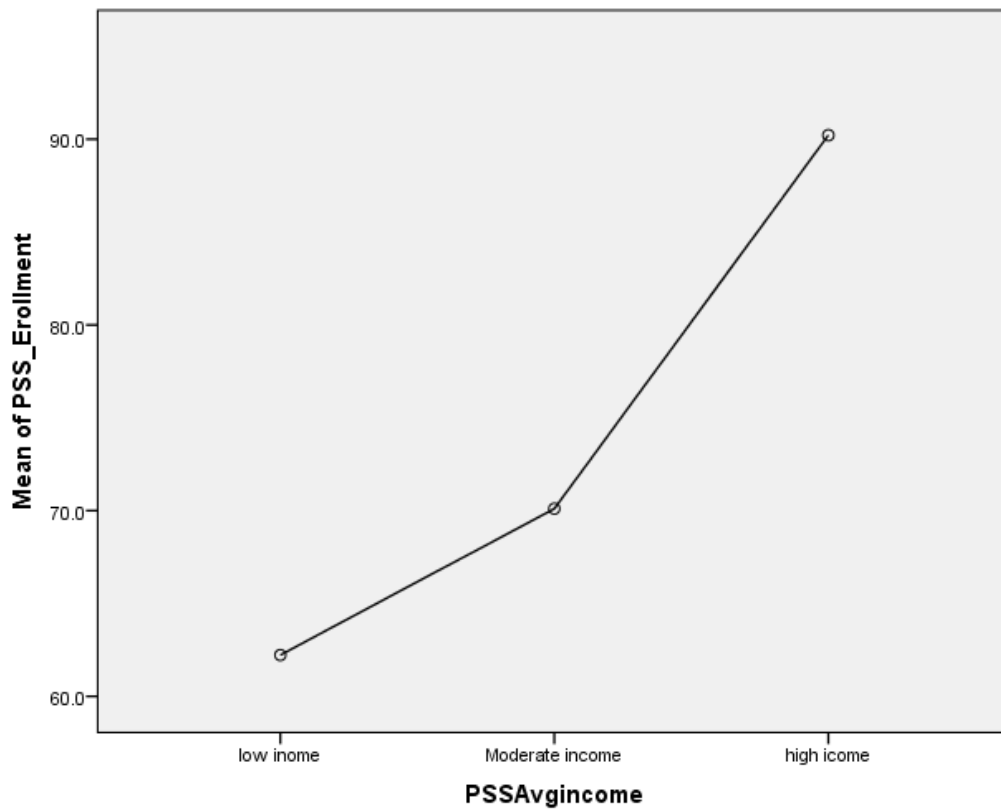
The research investigated the relationship between academic performance and the financial background of the students. Analyses of variance were used to test the significance of the difference in the percentage of enrollment based on three classes of financial background "low income," "moderate-income," and "high income."

Descriptive

PSS Enrollment

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					low income	29		
Moderate income	19	70.105	9.8764	2.2658	65.345	74.866	52.0	77.0
high income	23	90.217	19.7310	4.1142	81.685	98.750	59.5	119.0
Total	71	73.401	18.9841	2.2530	68.908	77.895	45.5	119.0

**Table 3*



As depicted in Table 3, private schools with students from high-income financial background had the highest enrollment percentage to university degree education with an

enrolment rate of 90.21%, followed by schools comprised of students with moderate-income with 70.1 and those with low income had the least enrollment of 62.22%.

ANOVA

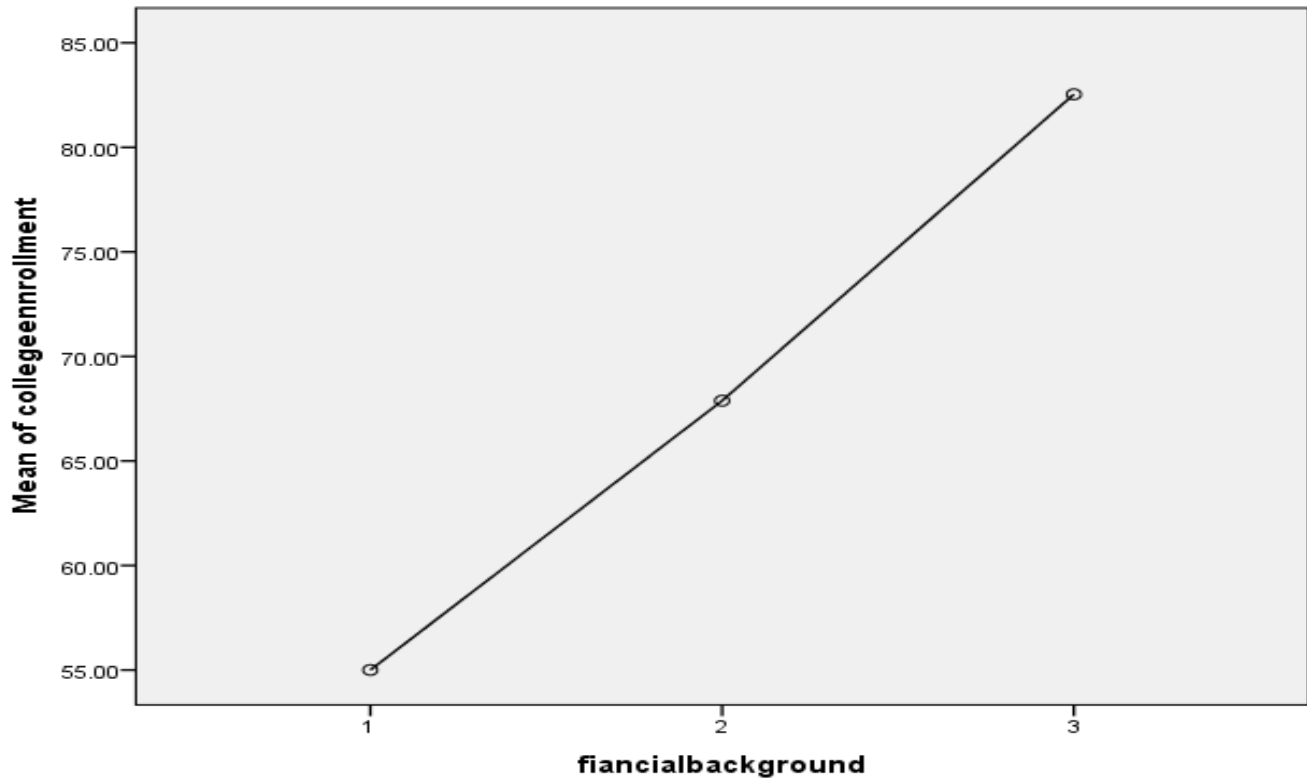
PSS Enrollment					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10333.314	2	5166.657	23.588	.000
Within Groups	14894.496	68	219.037		
Total	25227.810	70			

The ANOVA results show a significant difference in private school university enrollment percentage based on the level of income with at $F= 23.59$ ($p=0.00$) that was significant at 0.05 level of significance.

Descriptive

College enrollment								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	110	55.0018	4.26946	.40708	54.1950	55.8086	49.20	61.50
2	64	67.8813	9.53277	1.19160	65.5000	70.2625	60.00	86.10
3	77	82.5351	8.28546	.94422	80.6545	84.4156	65.60	90.20
Total	251	66.7323	13.76651	.86893	65.0209	68.4436	49.20	90.20

*Table 4



As depicted in Table 4, public schools with students from high-income financial background had the highest enrollment percentage to university degree education with an enrolment rate of 82.5%, followed by schools comprised of students with moderate-income with 67.8 and those with low income had the least enrollment of 55.0%.

ANOVA

College enrollment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	34449.956	2	17224.978	330.398	.000
Within Groups	12929.232	248	52.134		
Total	47379.189	250			

The results of the ANOVA show a significant difference in public school university enrollment percentage based on the level of income with at $F= 23.59$ ($p=0.00$) that was significant at 0.05 level of significance

It is also worth noting that private schools had a higher university enrollment rate than public schools. In Westchester County, private are generally more expensive in terms of tuition and costs in comparison to public schools. Therefore, higher enrollment in private schools indicates that one's financial background is a significant determiner of superior academic opportunity (Ribeiro et al., 2019). The results of poor performance can also be attributed to the mental toll that students from fragile families endure (Okey, 2019). Furthermore, the lack of a stable learning environment, especially in the home setting for students in fragile families, impacts performance as well. For example, some students have to work extra shifts after school to earn their upkeep money (Das et al., 2018)

6 Results of the Meta-Analytic Study

Upon reviewing existing literature by Hayes, Whalen & Cannon in 2009, the effect of economic status and student's comfortability is profound but controllable. The first study recommended controlled mentorship to aid the economically disadvantaged students perform better. Students are therefore introduced to the platform of mentorship programs and counselors who support the individualized goals of the student and progress him or her towards academic success. Mentorship has been allocated to students immediately after accepting admission into new programs, so, with the help of an assigned mentor, students can receive independent guidance and learn from and alongside practitioners who understand what it takes to succeed academically (Hayes, Whalen, and Cannon, 51). Therefore, this will encourage students to take

advantage of mentorship and guidance they may not receive elsewhere which will only aid in their academic journey.

Furthermore, students will always be advised in meeting with various lecturers, teachers, trainers, etc. As Hausmann et al. suggest, anyone who will get “less than grade C on any test must pursue tutoring,” and then verification will be made so that there will be a turn every week (Hausmann, 2007). Faculty and staff can then monitor the student's advancement by making adjustments to his or her schedule to enable successful completion of said requirement. To help the student meet the requirement(s) needed to progress, it's important that students are being properly introduced to the learning material and can effectively practice time management, self-control, and metacognition.

7 Conclusion

Finally, the results obtained from the longitudinal study were used to correlate economic status with academic performance. It considers the data that was analyzed and samples from different categories which include various departments. This information allowed for analysis of students from public schools and those in private schools. It became clear that students from unstable economic backgrounds (public schools) struggle more and advance less academically than those of higher economic standing (private schools) and economic status brings to light the struggles disadvantaged students face in school.

By employing the meta-analysis model used and the data found, we can continue to investigate the theory of how academic attainment is impacted heavily by a student's economic background. From the model and practical steps that can be taken, we can implement and utilize various ways to help these students obtain the help they need and prosper academically. The variation between low-socioeconomic background students and students' success shows the

Chris Abatecola

results are positively correlated, which allows us to now focus on curbing the problem with ways such as mentorship which would alleviate hardships and ensure equal opportunity throughout school systems.

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