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**RELATIONSHIP BETWEEN SOCIOECONOMIC STATUS AND HIGH  
SCHOOL DROPOUT RETENTION PLANS**

by  
Nicholas Sciancalepore

A Thesis

Submitted to the  
Department of Psychology  
College of Science and Mathematics  
In partial fulfillment of the requirement  
For the degree of  
Master of Arts in School Psychology  
at  
Rowan University  
April 7th, 2017

Thesis Chair: Roberta Dihoff, Ph.D.

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## **Dedications**

I would like to thank my family because without their encouragement and support I would never have been able to complete this thesis. I would like to thank Dr. Valerie LaMastro and Dr. Lisa Abrams for their time and dedication encouraging me through this whole process. Lastly, I would like to thank my friend Eva-Marie Rocks for sitting with me for hours on end as I wrote this paper.

## Acknowledgements

A large thank you to Dr. Roberta Dihoff and Alicia Clendaniel as without their patience and guidance this project would not have been possible.

## **Abstract**

Nicholas Sciancalepore

### **RELATIONSHIP BETWEEN SOCIOECONOMIC STATUS AND HIGH SCHOOL DROPOUT RETENTION**

2016-2017

Roberta Dihoff, Ph.D.

Master of Arts in School Psychology

Different areas in the United States have varying levels of economic hardships. The United States Department of Education states that 4.7% of ninth graders in low socioeconomic areas drop out of school. This means that they may not receive an education strong enough to get a job that can sustain them. We aimed to find out which schools have lower dropout rates as compared to the average we can focus on what these schools are doing correctly as compared to ones where the dropout rate is higher. This study looks at data compiled from 57 schools that teach at least grades 9-11 of varying socioeconomic statuses. We obtained this information through the New Jersey Department of Education. We used a Pearson's correlation in SPSS to compare the dropout rates to the percentage of economically disadvantaged students in a school

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## Chapter 1

### Introduction

#### Need for Study

A controversial topic today is how to provide equal chances of success to people living in low socioeconomic status areas. One way we can make sure people in lower socioeconomic areas have a chance at success is by finishing high school. The issue with that is according to the US Department of Education the average number of ninth graders who drop out of school in the lowest quintile of socioeconomic status had an average of 4.7% of ninth graders dropping out of school (Ingels, S. J., & Dalton, B. 2013). This is telling us that for some reason either the child or the child's parents did not think it was worth sending them to school before they had a chance to see if it was right for them. This is only the beginning of the issue because if 4.7% of only ninth graders are dropping out then it can only get exponentially worse once the students in those households get to be of working age how high the dropout rate could become (Ingels, S. J., & Dalton, B. 2013).

As you may expect schools in higher socioeconomic areas have a much lower dropout rate. According to the same study done by the US Department of Education the third quintile drops to a staggering 2.5% dropout rate of ninth graders. Some may say this is just the way things work in lower socioeconomic areas, however I don't believe that. I want to compare what different schools are doing to help their students keep up with their work and go through all high school.

## **Purpose**

We would like to further the research that shows that socioeconomic status affects the dropout rates in schools. Programs are changing in public schools and I want to see if in the state of New Jersey if there is any correlation between the low socioeconomic areas and their dropout rate. When this study is completed we could potentially see where the new weaknesses in dropouts and where our focus should be going. It could no longer be a situation of income but it could also be the demographic of students or something else.

## **Hypothesis**

It is hypothesized that schools of lower socioeconomic status will have higher percentages of students dropping out of high school. It is also hypothesized that there can be no correlation or a negative correlation where the higher socioeconomic areas have higher dropout rates in public schools.

## **Operational Definitions**

**Socioeconomic status.** Socioeconomic status (SES) is often measured as a combination of education, income, and occupation. It is commonly conceptualized as the social standing or class of an individual or group. (American Psychological Association, n.d)

**Dropout.** dropouts are defined as individuals, ages 16 to 24, who are not currently enrolled in school and have not completed high school or obtained a GED. (Childtrends, 2015)

## **Assumptions**

It is assumed by the researchers that all public schools in the state of New Jersey submitted all the data requested of them by the state and that the information was as accurate as possible. It is also assumed by the researchers that the state is keeping their records up to date with what the schools are sending them. Lastly, it is assumed that the state of New Jersey is posting all information for all schools that they can legally post.

## **Limitations**

The study consisted of many schools spread throughout the state of New Jersey varying in distance and socioeconomic status. A limitation of this was the lack of schools that we took data from. It is a random sample consisting of only 60 schools. The last limitation is that the schools are confined to the state of New Jersey for this study.

## Chapter 2

### Literature Review

#### Socioeconomic Status Effect on Education

The United States Department of Education preformed a study on approximately 20,000 ninth grade students to see how they would progress over the span of four years. The study was done between 944 different schools and obtained data pertaining to socioeconomic factors, race, gender, and parental success. (Ingels, S.J., and Dalton, B., 2013).

The sample for the United States Department of Education's study was a random selection of students from 944 schools that offered 9<sup>th</sup> and 11<sup>th</sup> grades (Ingels, S.J., and Dalton, B., 2013). This was done to assure students could get a full high school education without having to transfer schools. It also made it easier for the researchers to check back in with the students. Students who had transferred schools were kept in the study but may have been given altered surveys.

Information pertaining to the Ingels, and Dalton's (2013) study was collected through surveys. Students were given survey to collect information such as age, gender, race, and other basic information. Parents were given surveys to gain information such as socioeconomic status, educational history, and other information about the family's history. This information was used to determine other categories the students would be placed in as well as getting information about their history with education. (Ingels, S.J., and Dalton, B., 2013)

Students were given a math assessment to determine how far they have developed in terms of their educational abilities from the time of the first assessment to following assessments. The assessment was used to gauge the student's understanding of algebra content, and algebraic domains. Along with these assessments teachers and school counselors were given surveys, however these were not used in the data analysis. (Ingels, S.J., and Dalton, B., 2013)

The school set limitations for what students could participate in the studies. Eligible students had to be able to fill out the survey and could not have any severe disabilities. This was to help rule out outliers and focus on the main representation of students. (Ingels, S.J., and Dalton, B., 2013)

The subjects received many surveys and tests that addressed different variables. The first set of variables dealt with them as people. Factors such as sex, age, and race. The next set of variables dealt with their parents (Ingels, S.J., and Dalton, B., 2013). Those were the socioeconomic status of the household and the parent's education level. The last set of surveys were given to the school and that was to obtain information on variables such as base school year of the student and information on student's math classes during their time in school. (Ingels, S.J., and Dalton, B., 2013)

The math tests were distributed by computers and contained two parts. One part was a basic math test, the other was a math test that observed how many questions the students got correct on the first test and used it to tailor the test to the student. The test then categorized the students into different proficiency levels. This was to see how well the student progressed between testing sessions. (Ingels, S.J., and Dalton, B., 2013)

Ingels and Dalton's (2013) study found a lot of information about a student through their time in high school. One portion of the study observed how many students did college preparation during college and what kind of preparation they did. 79% of students at least looked at college websites during their time in high school however as tasks became more time consuming the number of students who completed these tasks dropped (Ingels, S.J., and Dalton, B., 2013). An example would be only 40.3% of students took a class to prepare for college tests such as the SAT or ACT. Many students are considering an educational track after high school however fewer students seem to be acting or taking an initiative on those ideas. (Ingels, S.J., and Dalton, B., 2013)

The subjects saw a large change in the student's specific algebra knowledge scores over the three and a half years they went without being tested. During the first test only 85% of students tested got proficiency level 1 (the lowest level of proficiency that could be earned on that specific test. None of the students earned the two highest levels of proficiency which on this test was level 6 or 7 (Ingels, S.J., and Dalton, B., 2013). These scores mean that approximately 15% of students tested did not have basic specific algebra knowledge proficiency going into the ninth grade. This is without any of the students having any severe learning disabilities. There was also a trend that was found with student's parents with lower levels of education. It seemed that higher level of degree that their parents had the more likely they were to do well on this test. (Ingels, S.J., and Dalton, B., 2013)

After the three- and -a half year gap students became more proficient in specific algebra knowledge. This time as compared to the previous 85% of students who received the first proficiency level now 92% of students were at least basically proficient in

specific algebra knowledge (Ingels, S.J., and Dalton, B., 2013). This still left approximately 8% of tested subjects without any proficiency in specific algebra knowledge, however it is interesting to see that at least 7% of students went from being not proficient at all to being basically proficient (Ingels, S.J., and Dalton, B., 2013). There were also students who reached 6<sup>th</sup> and 7<sup>th</sup> levels of proficiency, they were 5 and 2% respectively (Ingels, S.J., and Dalton, B., 2013). Although it may not seem like a lot it shows that over the course of three and a half years at least a few students showed above average levels of specific algebra knowledge proficiency. However, as we see the students improve we also see a trend of the students who may have access to a better school doing better in specific algebra knowledge.

The tests also looked at how socioeconomic status effected specific algebra knowledge in students. The percentages show that as the socioeconomic status improves scores on the test seemed to improve. In the lowest fifth of socioeconomic areas in 2009 only 75% of students were scoring in the 1<sup>st</sup> proficiency range and only rising to 86% when retested in 2012 (Ingels, S.J., and Dalton, B., 2013). Students who lived in the upper fifth socioeconomic area saw many more students performing in the first proficiency. In 2009 95% of students scored at least the first proficiency and in 2012 97% of students got at least first proficiency level (Ingels, S.J., and Dalton, B., 2013). This means that even after three and a half years of practice students in the lowest socioeconomic area do not meet the percentage of students in the highest socioeconomic status. This shows that there may not be equal education being given to students in the lowest socioeconomic area as compared to the highest.



Ingels and Dalton's (2013) study looked at where students found themselves in the future may that be just graduating high school or going as far as getting a post graduate degree. This was part of the surveys given to students in 2009 and in 2012. This gives us an idea of what students are thinking about their future and what they might be expected or want to do with their futures. The largest category in 2009 was graduate with a professional degree at 39%, this was also the highest category in 2012 with 33% (Ingels, S.J., and Dalton, B., 2013). Although it is lower it shows students have high aspirations for their futures which is positive. The lowest percentage of students (excluding not knowing which in 2009 was 21% and in 2012 was 10%) was getting only some college education. This was 7% in 2009 and 11% in 2012 (Ingels, S.J., and Dalton, B., 2013). Unfortunately, there were more students in the category of not pursuing anything after high school or did not even see themselves graduating college.

Ingels and Dalton's study looked at where students saw themselves after high school according to their socioeconomic status. In the lowest socioeconomic and highest socioeconomic status in 2009 the highest percentage of students wanted to get a professional or graduate degree with 29% and 52% respectively. While this is positive for students in the lower socioeconomic area those numbers shift when we get to the 2012. The highest percentage shifts to students who feel they will only get a high school education 26% (rising from 24% in 2009) and getting a professional or graduate degree drops from 29% to 24% (Ingels, S.J., and Dalton, B., 2013). While it is positive to see at least a quarter of students in low socioeconomic areas with high aspirations there is also a large population with low aspirations as well as not doing as well in math as was previously seen.

An article titled “U.S. Elementary and Secondary Schools: Equalizing Opportunity or Replicating the Status Quo” discusses many topics regarding how lower and higher socioeconomic status effects a student’s educational outcome. It further discusses how improving the quality of a family’s life can increase the student’s expectations of doing well in school or simply receiving a better education. They further discuss how increasing a school’s resources can increase educational outcomes (Rouse, C. E., & Barrow, L. 2006).

Rouse and Barrow’s article states that students in higher socioeconomic area have higher test scores than students in lower socioeconomic areas. The researchers in this study discuss implications that students in lower socioeconomic areas do not do as well on tests because of their genetics not due to their economic state (Rouse, C. E., & Barrow, L. 2006). A study done by Bruce Sacerdote examines how much education attainment is effected by the mother’s educational attainment (Bruce Sacerdote, 2004). He does this by looking at U.S families that have randomly adopted a child from South Korea. In the study, he found that genetics plays a very strong role in a child’s education. The authors of this article claim that this is a much larger percentage (the study done by Sacerdote claimed that 77% of educational attainment came from genetics and only 23% came from the environment that child was raised in) (Bruce Sacerdote, 2004). Cecilia Elena Rouse and Lisa Barrow argue that by saying that the study conducted by Sacerdote was not representative of the general populations and many other studies estimate that genetics only play 30-40% of a role in how well a child does in school (Rouse, C. E., & Barrow, L. 2006).

In a study summarized in an article by Cecilia Elena Rouse and Lisa Barrow Morris, Duncan research how raising a family's income can affect their educational outcome. In the study, they find out that "a \$1,000 incensement during the course of 3-5 years in household income can increase achievement by 6%". However, the study also finds that the earlier this monetary gain is introduced into the child's life the more it will affect the children's education (Rouse, C. E., & Barrow, L. 2006).

In the next section of Rouse and Barrow's (2006) article the writers attempt to identify the value of education in an economic stand point. Based on the Current Population Survey it can be seen that for each year of additional education a person's earnings can expect to increase by 11%, however it is not quite that simple. There are other factors to how much money a person makes at their job. An example of this given in the article is how hard a person works at their job (Rouse, C. E., & Barrow, L. 2006). According to Nobel Laureate Gary Becker people also make more money the more productive a person is. This means that there is no clear cut way to say exactly how much money a person will make at their job. Someone could have more education but doesn't work as hard or vice versa (Gary Becker, 1964).

Another researcher, Nobel Laureate Michael Spence, says that more education does not equate to more money. What he is stating isn't that there is no relation between the two, however that the relationship is not causal. The relationship may be that people who can complete more education also have the ability to work harder. Per the article the best way to test this would be to have randomly selected students drop out of high school and stay in high school then compare their earnings. This is unethical though as it could significantly harm the people if the outcomes mean they do not end up making enough

money to survive because they dropped out of high school and were not able to afford college or other necessities (Michael Spence, 1973).

There have also been two other ideas for studies that could be done to assess how much education affects a person's income. The first one would be to create a policy that would increase the amount of schooling a student would need to complete high school. This can only be done as long as it does not directly affect the group's earnings. If the students who complete more schooling and come out with the same degree do not make more money it proves the point that more education does not always mean a higher income. The other study would be a twin study. This is relevant as twins share the same genetic makeup and therefore may share similar abilities. If one twin drops out of school and the other stays and completes more school then it can be seen over time how much more or less the twin that drops out makes as compared to the other twin (Rouse, C. E., & Barrow, L. 2006). The twin study can happen through natural occurrences and therefore do not need any researcher intervention. In the 1990's Nobel Laureate James Heckman stated that the economic return of schooling exceeds 10%. This means that schooling is incredibly important, along with skill to be successful in today's world (Pedro Carneiro and James J. Heckman, 2003).

### **Quality of Education's Effect on Education Attainment**

The next section of the literature review asks the question if the quality of education relate to a difference in educational attainment. The question they are trying to answer here is whether the value that is placed on learning in higher income families has an impact on whether or not more schooling is completed. Studies on this topic have been done and have found that schooling has little variation in return based on race or

ethnicity, however the family's position socioeconomically shows that there were return on education however there is not much information as to why that is (Rouse, C. E., & Barrow, L. 2006).

### **Cost of Education Relation to Family Background**

This literature review is an attempt to answer is whether the costs of education differed based on family background. Research says that the monetary costs of education in the K-12 public sector is too small. An average of some \$34 is spent on a year per students by the family. However, there are different psychological costs that may affect students with different family backgrounds differently (Rouse, C. E., & Barrow, L. 2006).

The psychological costs may come differently depending on the different families these children come from. One such psychological cost is that of what is expected of different students in different socioeconomic settings. In higher socioeconomic status family's parents expect their children to go on and complete more schooling. This is taxing on them psychologically because if they don't get into a good enough school then there may be psychological pressure from the family put onto that child whether they can get into a school their parents deem appropriate (Rouse, C. E., & Barrow, L. 2006).

Children in lower socioeconomic areas go through a different type of pressure, some would say the opposite. In these areas parents, do not believe that their children are capable of succeeding. This may cause larger psychological issues for the child as they may not be given support when they require it most. This support may be given to

students whose parents expect them to do better for them to do better (Rouse, C. E., & Barrow, L. 2006).

Teachers also have a large impact on how much a student thinks they can succeed. The same correlation with students feeling they are capable of less or more depending on their socioeconomic status is how teachers feel about their students. This increases the psychological issues with students in lower socioeconomic statuses thinking they are predisposition to do worse in education even if they have the same or more ability to do better than a student that is more well off (Rouse, C. E., & Barrow, L. 2006).

Students who complete more schooling may have more information regarding just how much getting a good education can do for them. This can have the same effect as having a parent infer that they will not succeed. These arguments may not be as significant as we'd like to believe. Students in lower socioeconomic areas may understand just how important making enough money to survive is as they live in poverty and would want a better life for themselves. If this is so then there are other factors contributing as to why so many students are dropping out of school (Rouse, C. E., & Barrow, L. 2006).

Many families in lower socioeconomic areas depend on children of working age's paychecks to make end meet. Per the article students in higher socioeconomic areas have the benefit of being able to focus on school while their parents lend them money (Rouse, C. E., & Barrow, L. 2006). In addition, obtaining additional schooling will cost more money. This economic gap will make it much more difficult for a student working to make ends meet for their family to be able to pick up, leave and pay for their own schooling. This means that the student who may have had the skills to go to college or a

trade school cannot afford it and will never get the extra years of experience to get a job that will help support themselves and their family. With this information, it can be inferred that due to the cost of going to a different school may affect how much of an education these children can get (Rouse, C. E., & Barrow, L. 2006).

Many researchers argue whether a school with more resources give students a better education. In 1996 Eric Hanushek wrote an article in which he found that school resources do not create variations in student outcomes. Other studies, such as one by Jonathan Guryan found that an increase of \$1000 per student in Massachusetts increases the average tests scores of fourth an eighth graders. One idea is that money matters most by how much does not necessarily spend it is spent. (Hanushek, 1996)

### **School Accountability**

Another question in how to improve a student's education is should schools be held more accountable for how students are performing. Per the article accountability comes in two forms, one is institutional accountability with programs such as "No Child Left Behind" (2001). These programs attempt to make schools more transparent however they do not address any issues with the schools. These programs give teachers incentives to cheat on their student's performance records to raise average test scores and focus more on high stakes testing (Rouse, C. E., & Barrow, L. 2006).

Another form of accountability is through the marketing. Some schools deal with having to market themselves to parents either because there is a private option or a charter school option. Schools need to make sure that they win the vote of the parents by showing that the students would be best off going to that school. The fact that these

options exist create school competition which means schools will be competing to improve to win over students and their parents. There is little to no evidence that charter or voucher schools increase students test scores. Any evidence that exists shows mixed results. Some results show reading increases and math decreases, others show vice versa. It is a highly-debated issue as many studies do not refer to large scale programs. They mainly focus on smaller ones which cannot give any conclusive answers (Rouse, C. E., & Barrow, L. 2006).

Rouse and Barrow's (2006) article ends by summarizing what it has learned can help students in low socioeconomic areas. Problems are that are halting progress are large class sizes, and maintaining teacher quality. Other programs such as summer school and smaller schools over all may help disadvantaged students get more individualized attention they need to be understood and cared for. On the other hand, charter and voucher schools are holding students back by promising more than can be delivered and not proving that the competition does anything significant for helping the overall quality of learning. (Rouse, C. E., & Barrow, L. 2006).

Michelle M. Englund et. al. in 2008 did a study that looked at how adults made a difference in a student's likelihood to drop out of high school. They followed the low income participants from birth to age 23 to see how different levels of involvement in the child's life would affect whether or not they would drop out (Englund, M. M., Egeland, B., & Collins, W. A., 2008).

The Englund, Egeland and Collins study began by finding women in their third trimester of pregnancy. The child would only be able to be included in the study if the parent stayed in a similar low socioeconomic status. The sample ended up including 96



men and 83 women after all criteria were factored with the original 267 mothers to be. In the study 60% of mothers were single while 37% were married and 3% were divorced or widowed. 46% of women in the study were teen mothers, and of the total number of mothers 37% had not completed high school at the time of the baby's birth (Englund, M. M., Egeland, B., & Collins, W. A., 2008).

The Englund, Egeland and Collins' study considered students that had obtained their GEDs within one year of their expected graduation to be placed in the graduated group. If they did not obtain their GEDs within one year of their expected graduation date they were not considered to have graduated high school as per the terms of the study. This gave the researchers a clear definition of how they classified a high school graduate (Englund, M. M., Egeland, B., & Collins, W. A., 2008).

Englund, Egeland and Collins' study examined the subjects at two different points in their lives in terms of academic achievement and behavioral problems. They were examined at ages 12 and 16 to see how they have changed during vital points in their academic careers. In order to measure academic achievement, the subjects were administered standardized tests in order to measure general achievement. At age 12 they were administered the Peabody Individual Achievement Test and at 16 they were administered the Woodcock Johnson Psycho-Educational Battery-Revised. In terms of behavior problems at both ages they were administered the Child Behavior Checklist-Teacher Report Form (Englund, M. M., Egeland, B., & Collins, W. A., 2008).

As the children aged the researchers would measure at different points during the child's life how well they related to their parents and how involved their parents were. In early childhood, the researchers observed how well parents and children could solve

different tasks together. It was observed how well a child and parent cooperated and how angry the parent got when the child would not perform the task correctly. When the children were in the middle of their childhood the teachers were interviewed. The purpose of the interview was to understand just how involved the parents were with their student's education. In early adolescence, the parent and child teams would again see how well they could solve specific situations (Englund, M. M., Egeland, B., & Collins, W. A., 2008).

Other tests were done to see how students interacted with adults and teachers. One test used to see how positive a student was toward their teachers was the Devereux Elementary School Behavior Rating Scale II. The other test that was used was to see how competently social the subject could be with an adult. This test was run when the subjects were at ages 9 years, 12 years, and 16 years old (Englund, M. M., Egeland, B., & Collins, W. A., 2008).

Two different groups were examined within the results. One group was the predicted dropouts versus those that did drop out. The other group was the predicted graduates versus the actual dropouts. The researchers looked to see what the trends were within the study that showed why students that were predicted to do one thing did another. With dropouts, there was very little pattern of change between potential and actual dropouts. The only change that was seen was parental involvement decreased during the ages of 8 and 9 with the students who were not expected to graduate (Englund, M. M., Egeland, B., & Collins, W. A., 2008).

There was a larger amount of differences between students who were expected to graduate and those that unexpectedly dropped out. Expected graduates had significantly

higher levels of parent involvement. Students with a higher social competency with adults were expected graduates who graduated. This was the most significant difference that was found and may be an indicator as to why some students who are expected to graduate drop out (Englund, M. M., Egeland, B., & Collins, W. A., 2008).

One limitation to the study that was discussed was the size of the study. Not everyone who fits this criterion will be able to be examined and looked at and therefore they had to attempt to get a representative sample. This small of a sample size means that in order for any of this information to hold true, as with any study, needs to be replicated (Englund, M. M., Egeland, B., & Collins, W. A., 2008).

### **Social Aspects of Dropout Rates**

Per Solon in 2004 the United States is a country that ranks high in income inequality and high in social mobility (Solon, Gary. 2004). The study tries to identify if places of higher rates of social inequality lead to lower rates of high school dropouts in places with low socioeconomic statuses. The study attempts to identify if students who come from a low socioeconomic status family have a more difficult time getting through school if they can identify the divide between themselves and others in higher socioeconomic families (Solon, Gary. 2004).

Kearney and Levine's study focuses on two ideas that may explain why there are more issues with social inequalities in some places more than in others. The first one is to identify factors that have a high correlation to the social inequality. The other idea may be that people who are on the lower tail of income may be more thoughtful of wanting to move up in the income bracket than those in the middle. This may be because the people

who are closer to not being in lower socioeconomic status may not notice as much of the difference as people who are lower on the scale and may be more likely to feel they cannot make it to a higher level of socioeconomic status (Kearney, M., & Levine, P., 2014).

In a study done by Raj Chetty and others (2014) high mobility areas are strongly correlated to less residential segregation, less income inequality, better primary schools, greater social capital, and greater family stability. As these are correlations though having one or more of these aspects does not mean the town will necessarily have high social mobility. It is also impossible to pinpoint which of these qualities has the highest correlation to low social mobility as it is difficult to find an isolated case of only one of these factors.

One negative correlation that was found was between inequality and mobility, however it is difficult to know how correlated they are. With a population correlation it can be difficult to know if those two factors directly impact each other or if there are other underlying factors. As Corak (2013) reflected it may just be something about the population as a whole that was tested and not in all populations in all areas. Each area have their own cultures and it may be impossible to pinpoint one constant in all cultures in order to eliminate the issue all in one set of changes.

One question that is asked often is why can't the United States have as high social mobility with low social inequality like European countries such as Finland and Norway. One way researchers feel we could solve this issue is why we have these issues, not year by year, but why they've been happening for so long. If we could change these trends over a course of many years slowly with different generation than looking at it as a year

over year problem. It would also help looking at smaller areas and fixing specific issues slowly than trying to solve wide spread issues over the course of only a few years. Issues such as moving from low socioeconomic to middle socioeconomic status cannot happen overnight. The specific issues must be addressed in terms of giving people the skills and resources to fix the issues (Kearney, M., & Levine, P., 2014).

With the data that has been collected over the years there seems to be a problem with the ideas that were described in previous parts of the literature review that is being discussed. If the previous trends were to hold true then the measure of mobility would affect the measure of inequality however that does not seem to be the case. The literature review looks at how even though there has been no reduction in social mobility over the past few decades (Chetty et. al., 2014) (Chul-In Lee and Solon, 2009) shows a steady increase of inequality. Although this was supposed to be a negative correlation it seems that there are mixed results in the cases of some samples.

One implication of income inequality is the consequences it can have a person's educational outcomes. The study took the inequality ratio for each of the 50 states across the census years on 1980, 1990, and 2000 and compared it with those year's school dropout rates. It was seen from this comparison of data that states with higher inequalities had a strong correlation to schools that have high dropout rates. The issue with this correlation is we don't know how many other factors there are contributing to this correlation. There could be correlations to these issues as well as the characteristics of the population and the characteristics of the places these people are primarily living (Kearney, M., & Levine, P., 2014).

## **Socioeconomic Movement**

One discussion mentioned in the article is whether low socioeconomic youth have a smaller chance of making more money when they grow up. Using data gathered by Kearney and Levine (2014) it was found that students that grew up in a lower socioeconomic status house hold were less likely to make more money than students who were in higher socioeconomic families. It was also found that students that grew up in lower socioeconomic areas would not make as much money with higher education as those who grew up in higher socioeconomic areas. These factors were compared to other factors such as race and ethnicity. It shows that there is at least a 10.5% drop in wages between high and low socioeconomic statuses (Kearney, M., & Levine, P., 2014). High inequality states show at least an 8 percent drop in revenue from education. This may explain why students in low socioeconomic areas have less faith in being successful even with higher levels of education.

In 2012 Mesmin Destin et. al. performed research and found that students who saw themselves as being in a lower social status (which can include where they fall in their community's socioeconomic status) suffer from higher levels of emotional distress. This distress can influence their behaviors and how well they perform academically. This type of social stress is mainly seen in high school. A study done by Garance Genicot and Debraj Ray (2014) found that society-wide economic outcomes affect individual aspirations. If people's aspirations went too far above what they could make it would lead to more frustration.

All the sources previously mentioned, along with others described in the literature review point to high inequality to lower rates of high school completion. According to

Kearney and Levine (2016) these studies provide a good framework for making this kind of a statement. It is still difficult though to rule out other potential factors to these issues. As it was stated before no study in this type of research can find a direct correlation as there may be more issues that are not identifiable. We can only infer on what we see as correlations between the groups that may cause an issue.

The next section of Kearney and Levine's (2016) study looked at empirical approaches to how income inequality and educational outcomes could be correlated with youth from disadvantaged backgrounds. The goal was to create an equation that would be able to accurately determine based on the student's inequality and how disadvantaged their background was how likely they would be to drop out of school. The equation that was found would help determine how likely a student was to obtain educational outcome including getting a GED after graduation. The way that the inequality is measured through the formula described is only an average number. It is not used to give any details describing why or when the student will drop out (Kearney, M., & Levine, P., 2016).

There are shortcomings to having an empirical method with determining dropouts. One described by the article is state specific factors are not included in this. When the formula was developed, it was to assess only generalized factors that could lead to a student dropping out. Different states may have different ideas of what living in a low socioeconomic status are and what a poorly performing student may look like in terms of grades. In order for this to be fixed you would need to tweak the formula for each state slightly. The issue with this is it would break the continuity in results given by the formula itself (Kearney, M., & Levine, P., 2016).

There are four specific state factors that can be included in the formula to account for different factors in different states. The first factor is how income inequality is measured in each state. The next is how we determine how much money students can see returned to them if they invest in education. Third, what different factors might determine how much income inequality there is in a specific state. Fourth, is other factors that may contribute to the socioeconomic status that may not be present in every state (Kearney, M., & Levine, P., 2016).

The models that were previously stated in the article needed to be tested. To obtain data for the models the researchers collected data from multiple sources. Of the sources discussed the three that were mainly focused on were the National Center for Education Statistics- the National Educational Longitudinal Survey, High School and Beyond, and the Educational Longitudinal Survey. According to the article each of these sets of data have their own advantages and disadvantages. By incorporating different sources with different pros and cons it could help eliminate bias towards one shortcoming of a specific set of data. Each set of data that was collected had a measure of the student's socioeconomic status. This point of data is most important as it would be used to see how often students from different socioeconomic statuses dropped out of school (Kearney, M., & Levine, P., 2016).

Although having many sets of data may seem helpful as it gives the researchers many points of data to deal with in this case it provided the researchers with a few issues. One issue was that there was no standard for what data was collected and how it was being collected. Although it may seem contradictory these differences can present issues. There may be different studies that were performed in different ways and therefore the



data collected may not be as accurate as others, or the way that data was collected may cause some biases. Some studies may have looked at students at different times in their lives or started earlier or later than others. While this may help in some cases by ruling out certain biases it could cause its own biases as there was not set method for data collection (Kearney, M., & Levine, P., 2016).

Many of the studies being analyzed were done for a long period in a year over year basis. This was to get a wide scope of how the state was progressing and not just get a small snapshot of a small group of individuals. The researchers determined that for the study to be as accurate as possible we need to understand how a group of people is changing and what trends there are within this group of people to better understand why these people are choosing to drop out. This also gives the formula a better chance for success as it gives more data points to work with to rule out outliers (Kearney, M., & Levine, P., 2016).

The results of Kearney and Levine's (2016) study seemed to be predictable as per the research that was done. The study that was performed looked at the high school drop out of boys by the mother's education level and state income inequality. The results show that the more inequality, generally the more dropout rates there are. However, what proves to be the largest indicator of the boys dropping out seems to be the highest level of education their mother obtained. We can see a drop of approximately 10% of dropout rate in mothers with high inequality simply based on whether the mother had dropped out or completed high school (Kearney, M., & Levine, P., 2016). This may be an indicator that a parent's level of education and secondly how much inequality the mother is facing. This

may give researchers more of a drive to get parents to complete more education if they want to show their children how much getting a good education can help them.

There are other ways in which state-specific factors may influence why student's dropout of school. The amount of inequality in higher socioeconomic statuses was also looked at. The reason it was not highly impacting the lower socioeconomic statuses. With the formula, the researchers only wanted to focus on one or two components separately instead of adding other variables. Considering other measures would not significantly impact the population we are looking at. There can be a time where there is too much information (Kearney, M., & Levine, P., 2016).

### **Wage Inequality**

Wage inequality has different roles depending on the people and what situations they are in. An example of in Solon's (2004) study where they said that parents make an investment of their money in their children. The more money they invest in their children's wellbeing the more money they hope to gain overall. In low socioeconomic areas, the parents may not have as much money to invest in their children. There are also different levels of income within low socioeconomic areas. Some parents may not be able to spend enough for their children to make it to the level that they were at or go beyond them. However, according to research it seems that the number of students that dropout on the tail end of low socioeconomic status is not drastically higher than those in the middle or higher sectors of low socioeconomic areas therefore it does not make sense to break the groups up even more.

In the book “Whither Opportunity” by Greg Duncan and Richard Murnane (2011) discusses how income and have different effects on educational outcomes. This section deals a lot with the topic the article is discussing as different levels of wages can mean that children may receive. Among other factors this inequality may cause a kind of unintentional segregation. Students whose parents don’t make enough money will not be privy to rights such as a good education which happens in many places. A program called “Moving to Opportunity for Fair Housing” has been studied to see how moving lower income families to better residential areas may help them get better jobs and get a better education for their children. This is a form of educational poverty that is taken for granted here. It is assumed that if you do not live in a wealthy area your children will have a worse education and therefore lower levels of income in their future as they do not have the qualifications necessary for higher income positions.

### **Governmental Implications on Dropout Rates**

Another reason students may drop out of schools in low socioeconomic areas is due to the lack of funds being distributed to lower socioeconomic income areas with greater levels of income inequality. The fear is that the wealthier people may control the amount of money lower socioeconomic status area schools receive and therefore schools will not be able to spend as much on each student. According to this article (Kearney and Levine, 2016) the theory is that as the poor people start to gain more social status due to better education the wealthy could decrease funding for those schools. In other studies (Coustan and others 2013; Corcoran and Evans, 2010; Gordon 2013) it shows that as revenue for school spending rises social inequality rises. This means that schools are making more money when there is more inequality in an area. This may mean that as

schools start to do worse they receive more funding however when they start to stabilize they receive less.

There are other remaining factors as to why students may be dropping out of schools in some states more than others. Kearney and Levine say some factors are population that are minority, state's poverty rate, state's incarceration rate, and the fraction of the population that has jobs in manufacturing. These were simply lingering ideas that may have had a small reason as to why some states had higher dropout rates than others. According to the study performed though there were no correlations (Kearney and Levine, 2016).

As state, driven issues do not seem to have a strong correlation with high school dropouts the next avenue would be to research in the subject of, if having more inequality in an area leads to less certainty with where you will end up. Kearney and Levine explore the aspects of whether having more inequality in your area means that children will be paid attention to less as there is no clear path of where they will end up and when they may end up there. The aggregation of data shows that students in areas with higher levels of inequality begin to become discouraged more easily leading to lower test scores. The lower test scores mean teachers will be less likely to broaden their teaching methods leading to even lower test scores and will eventually lead to the students dropping out (Kearney and Levine, 2016).

Through the aggregated data from this article (Kearney, Levine 2016) show that students are less likely to drop out of school based on school difficulties alone. Generally, students dropout more depending on what area they reside and how many opportunities they are given to succeed. It seems that students who are in areas of high levels of

economic inequality are less likely to dropout due to poor grades. This data points to there being other factors than low grades as a reason to dropout, one being lower rewards for staying in school longer. This could mean anything from the schools not being adequate to the students believing they can make more money elsewhere, without completing high school (Kearney and Levine, 2016).

## Chapter 3

### Methods

#### Purpose

The purpose of this study was to find what methods schools can implement to best keep students from dropping out. There were several parts to this study that needed to be evaluated. We needed to find schools that match the criteria of a school in which students dropping out would be most common and most impact the students' lives as well as how the school is looked at. The other piece of information we needed to understand is the level of socioeconomic status as compared to the number of students that dropout within the 2014-2015 school year.

#### Subjects

There are many different schools in New Jersey however not all are relevant for this study. The first step was narrowing the study based on what grade the schools taught. I assumed at least teaching grade 11 would be best as students may dropout based on being able to legally work at 16 and most if not all students will be 16 by 11<sup>th</sup> grade. This does not mean grade 12 were ruled out, however, the school must teach up to at least 11<sup>th</sup> grade. Schools that do not meet this requirement were dropped. This is due to minimal amounts of dropout or dropout rational.

Schools were then categorized based on the percentage of the school was economically disadvantaged. To do this I looked at each school that had a report card through the state of New Jersey that met the first set or requirements. If the schools had between 0-32% economically disadvantaged students they were placed in the "High

Socioeconomic Status” schools, section 33-65% “Middle Class” schools, and 66%-100% for the “Low Socioeconomic Status” schools. This break up was to establish which methods of retaining students worked best in different financial situations.

Schools were then randomly selected as to which of them would have their socioeconomic status as well as their dropout percentages observed. The method I used to do this was I first counted the number of schools in each socioeconomic category. The number in which they were assigned was the order in which they were saved to my computer as they were ordered in alphabetical order. Each file was saved by the name of the school on the “Report Card”. We then put the total number of schools in a random number generator. We had the generator pull out 20 numbers with no duplicates. Those numbers were the schools that would be send the interview. Those schools were then sent to a different folder to contain them. The files were copied to retain the order and total number of schools. There was a total of 60 schools chosen to compare.

### **Instrumentation**

We utilized SPSS to observe the correlations between socioeconomic status and dropout rate percentage. SPSS is the software that will give the researchers the tools in which to not only input the information in a simple interface but also produce the charts and graphs necessary for determining the correlation between dropout rates and socioeconomic status.

## **Procedures**

First, all schools with grades 9-11 were categorized based on their percentage of economically disadvantaged students. Afterwards, a random number generator randomized 20 schools from each socioeconomic area (60 schools total will be randomly selected). The randomly selected schools had the percentage of economically disadvantaged students and percentage of dropouts put into SPSS. Lastly, SPSS created the graph and show whether or not there is a correlation between dropout rates and socioeconomic status.

## **Statistical Analysis**

We used a Pearson's Correlation to determine whether or not there is a relationship between socioeconomic status and dropout rates. We will choose this method because it gave us the clearest representation of if there is a relationship among the factors described.



## Chapter 4

### Results

The hypothesis addressed in this study was to understand the relationship between socioeconomic status and dropout rates in schools that taught at least grades 9-11. We randomly selected 60 participants, each of which were based in New Jersey, had their information accessible from the New Jersey Department of Education Website and met the requirement of teaching at least grades 9-11. We took the percentage of economically disadvantaged students and compared that to the percentage of students that dropped out. The amount of schools that were analyzed was 60. The amount of schools that had enough information to be graphed was 57. A Pearson's Correlation determined the results were significant  $r(57) = .408$   $p = .01$  (see Figure 1)

The summary of the data supported the hypothesis that as the socioeconomic status the school was located in went down the more students dropped out. The correlation was not strong however it can be used to support the need for further research. The support for the hypothesis can help researchers further understand where help is most needed for students in different socioeconomic areas.

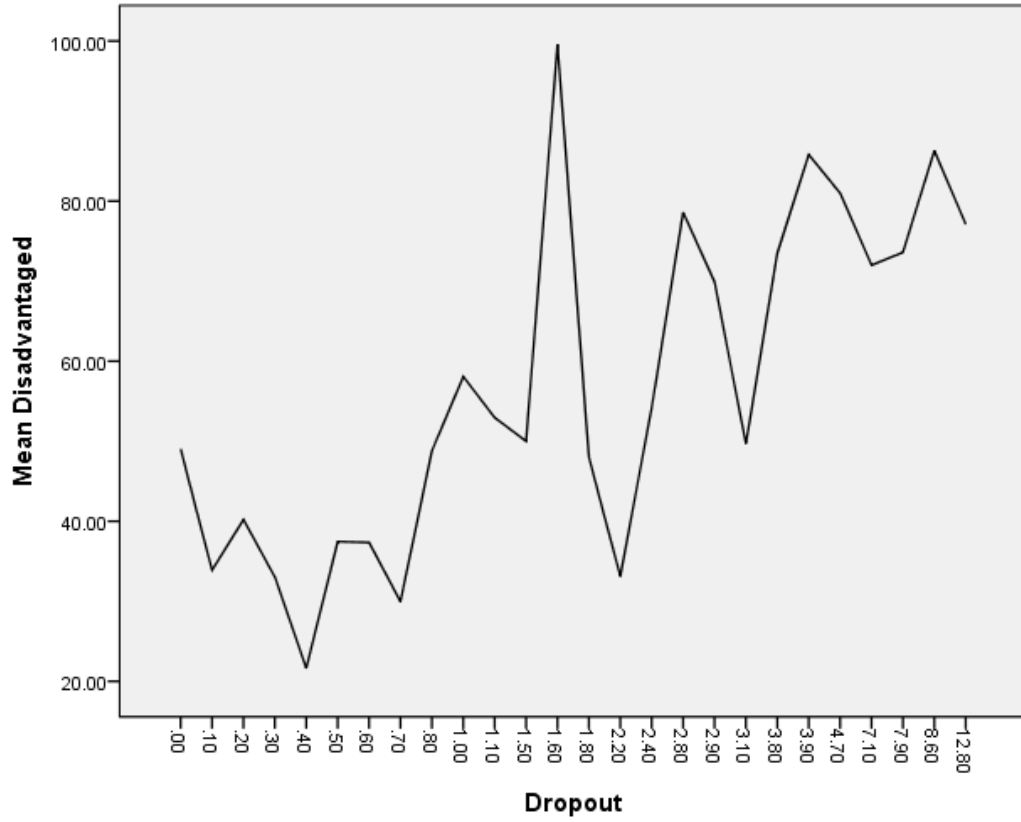


Figure 1. Comparison of the Mean of Economically Disadvantaged Students to the percentage of Dropouts

## Chapter 5

### Discussion

#### Summary

The way in which our study was designed was to understand if on a small scale there was any correlation between a school's dropout rate and the socioeconomic status in which the students in those schools are associated with. To find the socioeconomic status of the area we looked at the percentage of students within the school that were economically disadvantaged. The reason we used this metric to find the socioeconomic status was because whether or not a large number of students were economically disadvantaged may give them more or less drive to leave school and work in order to provide for themselves or their family. We then considered the age at which people can work legally. We assumed that that by grade 9 students who were held back would be turning 16 and from there on students would be more likely to be turning 16 and therefore able to legally work. Lastly, the reason we left out grade 12 was because there are some schools that only teach grade 12 and with these students only needing to complete one year of school before graduating. We were worried that these schools may skew results in lower socioeconomic areas.

Through the Pearson's correlation, we found that there is a moderate positive correlation between the percentage of students dropping out as compared to the percentage of economically disadvantaged students. Although we only compared 57 schools the moderate correlation shows that within the state of New Jersey there should

be more focus put onto the rate at which students are dropping out as compared to the socioeconomic status that there community falls under.

### **Implications**

The results of this study show that there is a reason to better understand how socioeconomic statuses affect the dropout rates in schools. If researchers find out how much a person's economic status affects how willing they are to get a full high school education then the school districts and the government may become more willing to invest in stronger retention programs, or understand what schools are keeping their students in their schools more consistently and why that is.

Previously it was discussed that approximately 4.7% of ninth graders dropped out of high school in the year 2013 (Ingels, S. J., & Dalton, B. 2013). Utilizing data from this study researchers may be able to better pinpoint where the highest rates of dropouts are in the country. If the communities that are having this issue can be identified by different factors, in this case the socioeconomic factor that may be affecting the rate of dropouts the government can better distribute funds to assist schools in their retention programs.

This study does not include information on the programs that schools in different socioeconomic areas use to reduce the dropout rates. If we had this information more readily available we would have been able to draw more conclusions as to why possible outliers existed in relation to schools in similar socioeconomic areas. This information could have further contributed to understanding why students are not seeing education as a worthwhile option and dropping out to work full time.

## **Limitations**

One limitation to this study was the range in which we looked for schools. Although New Jersey is a diverse state with different sections having different socioeconomic areas our sample was not indicative to the United States. Had we taken samples from different schools in different parts of the country we could have provided data of the entire United States as well as focused in on certain parts of the country to see how different socioeconomic statuses differ depending on what the culture and population was that lived in it.

Another limitation to the study was the publicly available data we had access to. From the information, we had we could not find what programs schools utilized to keep their students in school. Therefore, we could not find the possible correlations to why students were more likely to stay in some schools more than others. We did not have access to any data on how much funding each of the schools we looked at received from the state. This information could have told us more information as to the resources each school could afford as different schools are allocated different amounts of funding even if they are in similarly impoverished areas.

Lastly, the amount of time we had to complete the study was not enough for us to obtain more data. Should we have had more time we would have liked to have found the information that was not publicly available by the state or the school. In order to get this information, we would have required time to send out surveys to the school administrators to receive the information as well as receive their approval to use it.

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