

Spring 5-19-2018

The Influence of Chronic Absenteeism on Graduation Rate and Post Secondary Participation in New Jersey High Schools

Michael Jay Tash

Seton Hall University, michaeljaytash@gmail.com

Follow this and additional works at: <http://scholarship.shu.edu/dissertations>



Part of the [Curriculum and Social Inquiry Commons](#), and the [Elementary Education Commons](#)

Recommended Citation

Tash, Michael Jay, "The Influence of Chronic Absenteeism on Graduation Rate and Post Secondary Participation in New Jersey High Schools" (2018). *Seton Hall University Dissertations and Theses (ETDs)*. 2498.
<http://scholarship.shu.edu/dissertations/2498>

The Influence of Chronic Absenteeism on Graduation Rate and Post Secondary Participation in
New Jersey High Schools

Michael Jay Tash

Dissertation Committee

Christopher Tienken, Ed.D., Mentor
Luke Stedrak, Ed.D.
Danielle Rosalba Sammarone Ed.D.
Kimberly Clark Ed.D.

Submitted in partial fulfillment of the requirements of the degree
Doctor of Education
Department of Educational Leadership, Management, and Policy


Seton Hall University
February 2018


SETON HALL UNIVERSITY
COLLEGE OF EDUCATION AND HUMAN SERVICES
OFFICE OF GRADUATE STUDIES

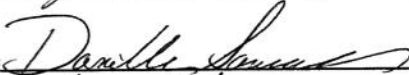
APPROVAL FOR SUCCESSFUL DEFENSE


Michael Tash, has successfully defended and made the required modifications to the text of the doctoral dissertation for the **Ed.D.** during this **Spring Semester 2018**.

DISSERTATION COMMITTEE
(please sign and date beside your name)

Mentor:
Dr. Christopher Tienken  2/24/18

Committee Member:
Dr. Luke Stedrak  2/24/18

Committee Member:
Dr. Danielle Sammarone  2/24/18

Committee Member:
Dr. Kimberly Clark  02/24/18

The mentor and any other committee members who wish to review revisions will sign and date this document only when revisions have been completed. Please return this form to the Office of Graduate Studies, where it will be placed in the candidate's file and submit a copy with your final dissertation to be bound as page number two.

© 2018 Michael J. Tash
All Rights Reserved

Abstract

The Influence of Chronic Absenteeism on Graduation Rate and Post Secondary Participation in New Jersey High Schools

Chronic absenteeism affects the majority of schools in the United States. An assessment of centers of learning illustrates that a majority of students miss a month of learning in an academic year through excused or unexcused absences. The majority of schools exhibit 95% average daily attendance rates, as the learners tend to not miss school, on the same day. Results from previous studies have focused on factors that influence chronic absenteeism within the kindergarten level and elementary school, and these evaluations contribute to the development of interventions that cut across the K-12 system.

This study explains the influence of chronic absenteeism on school dropout rates, four-year graduation rates, and post-secondary acceptance rates, while controlling specific student and school characteristics. Literature from New Jersey offers a more limited view of chronic absenteeism compared to other regions, with response to chronic absenteeism focusing on the state of attendance and policy recommendations. This study focuses on both excused and unexcused absences forming a conceptual understanding of the problem. The results illustrated that chronic absenteeism and limited English proficiency were the only statistically significant contribution to the outcome of the prediction. Therefore, they were the only variables in this study with substantial correlation to success in high school. The study recommended the deployment of a multifaceted approach to the control of chronic absenteeism.

Dedication

Dedicated to my loving wife Shannon. Thank you for all your love, support, and understanding.

“Oh, and when the kids are old enough
We’re going to teach them to fly.
You and me together, we can do anything”

Acknowledgements

To my professor, mentor, and friend Dr. Christopher Tienken, thank you for your support. Thank you for pushing me to think outside the box, examine the world with a “so what, now what” lens and for your dedication to ensure I would succeed.

To the entire faculty and staff of Seton Hall University, thank you for welcoming me and offering your guidance and expertise in my education and research. From assistance with understanding statistics to sitting on my dissertation committee, everyone in the Department of Educational Leadership, Management, and Policy deserves a moment of recognition.

Dr. Kimberly Clark, thank you, thank you, thank you. Your willingness to assist me with every aspect of this journey has been instrumental in my success. From topic ideas, to reading hundreds of pages of poorly written rough drafts you have been there. Thank you again for all you have done for me, you continue to be impossible to keep up with and a great example of what I hope to become one day.

To my parents Marsha and Robert Tash you have done well, be proud of yourselves. As I have become a parent myself, I have come to realize all parents worry if they are doing right by their children. You have done amazing by both your children. You found a way to provide and support us. You have created an atmosphere where two kids from Brooklyn, of modest means have achieved terminal degrees, professional success, and beautiful families. Thank you for all your hard work. I love you.

To my sister Dr. Erica Osmond, thank you for being my life long rival. Your success, achievements, and just your general confidence in life have always pushed me to be just as good.

And last but not least, to my wonderful children Joseph, Nicholas, and Robert Tash, you are why I work so hard. Everything is for you. Thank you for being such loving and

appreciative sons. As you grow into young men, I hope you will learn from the examples of the amazing people mentioned here. There is a limited resource of good people in the world; be one of them. Thank you for making my life so fulfilling, I love you all.

Table of Content

Abstract.....	iv
Dedication.....	v
Acknowledgements.....	vi
List of Tables	x
List of Figures.....	xi
Chapter One: Introduction	1
Problem Statement	6
Purpose.....	7
Research Questions	8
Hypotheses	8
Independent Variable	9
Dependent Variables	9
Design and Methodology	9
Significance of the Study	10
Limitations	10
Delimitations.....	11
Assumptions.....	11
Definition of Terms.....	12
Organization of the Study	12
Chapter Two: Literature Review	14
Introduction.....	14
Criteria for Inclusion and Exclusion of Literature	14
Search Procedures	15
Existing Literature	16
Focus Current Literature Review based on the New Jersey Legal Framework.....	17
Variables Influencing Dropout Rates.....	19
Class size.....	20
Grade retention.....	22
Variables Influencing 4-Year Graduation Rates	23
Family income levels	23
Psychosocial factors	25
The relevance of the ninth grade.....	26
Variables Influencing Post-Secondary Acceptance Rates	28
Changes in family structure and income.....	29
Academic performance	30
Social influence.....	31
Significance of Existing Literature	32
Methodological Issues in Studies on Chronic Absenteeism	33

Limitations of the Literature Review	33
Conceptualization of Chronic Absenteeism.....	34
Variables Explaining Chronic Absenteeism	37
Interventions in Addressing Chronic Absenteeism.....	39
Suggested Solutions for New Jersey.....	46
Theoretical Framework: Production Function Theory.....	50
Conclusion	53
 Chapter Three: Methodology	 56
Research Design.....	56
Research Questions	58
Sample Population/Data Source	58
Data Collection	59
Data Analysis	61
Pearson correlation.....	61
Simultaneous multiple regression	62
 Chapter Four: Findings	 64
Introduction.....	64
Dependent and Independent Variables	64
Findings.....	65
Chronic absenteeism	65
School dropout rates.....	67
Post-secondary acceptance rate.....	68
High school graduation rate	68
Free lunch.....	69
Disability.....	70
Limited English proficiency.....	70
Research Question 1.....	71
Research Question 2.....	71
Research Question 3.....	71
Regression Analysis.....	73
Primary research question	73
 Chapter Five: Conclusions and Recommendations	 78
Conclusions.....	79
Recommendations for Practice	84
Recommendations for Policy	90
Recommendations for Future Research	93
 References.....	 97

List of Tables

Table	Page
Table 1. Variable.....	64
Table 2. Case Processing Summary.....	65
Table 3. Chronic Absenteeism Descriptive Statistics	67
Table 4. School Dropout Rate Descriptive Statistics.....	67
Table 5. Post-Secondary Acceptance Rate Descriptive Statistics	68
Table 6. High School Graduation Rate Descriptive Statistics	69
Table 7. Free Lunch Descriptive Statistics	69
Table 8. Disability Descriptive Statistics.....	70
Table 9. Limited English Proficiency	71
Table 10. Correlations.....	72
Table 11. Model Summary	74
Table 12. Anova.....	74
Table 13. Coefficients.....	75

List of Figures

Figure	Page
Figure 1. Boxplot of Chronic Absenteeism.	66
Figure 2. Boxplot of Winsorized Chronic Absenteeism.	66
Figure 3. Relationship between input and achievement.	80

Chapter One: Introduction

Chronic absenteeism is an academic achievement risk indicator exhibited by about 10% of the public school population (Talbert-Johnson & Russo, 2013). A report by the Chronic Absenteeism Working Group (2015) indicated that annually an estimated 5 million to 7.5 million students, in grades K-12, in the United States are chronically absent from school annually. Chronic absenteeism is most commonly defined in the literature as missing school for 10% or more of the mandated days for any reason, whether excused or unexcused (Balfanz et al., 2014). However, Stevens and Kim-Gervey (2016) noted the country lacks a single and consistent definition of chronic absenteeism across school districts and states, despite the standard of 10% representing an increasingly accepted mark.

The concept of chronic absenteeism differs from truancy, which refers to unexcused absence from school (Dembo & Gullledge, 2009). Talbert-Johnson and Russo (2013) expanded the definition for truancy by stating that the concept typically refers to a “specified number or frequency of absences – regardless of excusal status – that can lead to legal consequences for families, such as being charged with truancy or neglect” (p. 38). The difference in chronic absenteeism and truancy mainly stem from the specificity of the former in establishing a 10% indicator for missing school. Substituting chronic absences with truancy allows schools and district administrations to underestimate the total potential school time lost on absenteeism because the average common data on attendance overshadows chronic absenteeism (Chronic Absenteeism Working Group, 2015). Investigating school absenteeism as a specific variable focuses on the minority students with excessive absences rather than those missing only a few days of school.

Although schools keep track of student attendance, the averaging practice used as an attendance indicator may not be accurate. Despite the fact that the school average may show 90% of daily participation, it does not take into account that some of the students in this percentage may have missed more than 10% of the school year. Noted in schools' administration, the average attendance is the primary indicator of good attendance (Balfanz et al., 2014, p. 54; Talbert-Johnson & Russo, 2013, p. 37). For instance, Bruner, Discher, and Chang (2011) show if a school has 200 students with a 95% average daily attendance, 30% of the learners might be missing about a month of required school attendance in an academic year based on both missing a few days and excessive absences. The reason for the disparity is that not all students are absent on the same day, and thus the representation data may be skewed, which increases the likelihood for failing to recognize chronic absenteeism tendencies among students.

Balfanz et al. (2014) found that the national public school student population is on track to achieve a 90% high school graduation rate by 2020, but there is still work to be done to reduce chronic absenteeism because "before a student can thrive in school, he or she must regularly attend school" (p. 37). The entire education field must address absenteeism from the onset to reduce the detrimental effects it has on students. For instance, Balfanz et al. (2014) noted that chronic absenteeism beginning in kindergarten leads to lower academic performance in first grade, which may extend to fifth grade. Jacob and Lovett (2017) indicated that chronic absenteeism in kindergarten results in poor performance in math and reading. By the time a student reaches the sixth grade, if chronic absenteeism remains without intervention, it becomes a predictor that the affected student will not complete high school (Baltimore Education Research Consortium, 2011). When a child reaches ninth grade and misses 10% of the school,

chronic absenteeism becomes an indicator that he or she will most likely dropout (Balfanz et al., 2014, p. 54).

Results from empirical studies suggest that chronic absenteeism has long-term and short-term effects on the life of students. In the short-term, it affects students' academic progress and could lead to failure to graduate, whereas in the long-term it has an impact on an entire population, ensuring that the segment remains less educated, underemployed, less financially stable, and less healthy (Coelho, Fischer, McKnight, Mattenson, & Schwartz, 2015; Pharris-Ciurej, Hirschman, & Willhoft, 2012). Moreover, chronically absent students fall behind in skills such as reading fluency and comprehension at grade level and are more likely to dropout of high school (Chronic Absenteeism Working Group, 2015). Notably, when students are chronically absent, they lack the necessary foundation and struggle to develop basic skills needed for reading, comprehension, and arithmetic. These skills are related to adult economic success, and thus student dropouts have a higher probability of living a financially challenged future (Gottfried, 2014).

New Jersey has thousands of students labeled as chronically absent each year. For example, approximately 125,000 students were chronically absent between 2013 and 2014 school year from kindergarten through grade 12 (Rice, 2015). New Jersey uses the 10% standard to classify chronically absent students, meaning that students missing 18 or more days in a school year qualify as chronically absent based on 180 days in a school year (Rice, 2015). The qualification extends to students missing at least two days every month. The highest rate of absenteeism in New Jersey is mainly among kindergarten pupils and high school students. A snapshot given by Advocacy for Children of New Jersey (2015) showed that 18% of 11th and 12th graders fall under chronic absenteeism for Mercer County Vocational, 31% for Princeton

Public Schools, and 54% for Trenton Public Schools in a sample of three districts in New Jersey. Rice (2015, p. 2) offers a breakdown noting that 177 school districts with chronic absenteeism served more than 470,000 students out of 1.3 million K-12 learners in the state, which translates to 30% of school districts educating 61% of the chronically absent students. The chronic absenteeism average in the districts was 16%, meaning that about 76,000 students fit the 10% absenteeism rate for the school year.

The risk factors that explain the disparity in absenteeism across the districts include poverty, homelessness, and chronic illness (Advocacy for Children of New Jersey, 2015). These factors contribute to a student's level of risk. This lack of resources makes it difficult to facilitate make-up opportunities for classroom days missed or lost. If a child misses school due to homelessness, he or she might not be able to catch up because of lack of academic and personal resources to offer the needed assistance. A study in Washington State on truancy behavior identified school-based characteristics, having noted that research was primarily on student-specific variables. These variables included "conflict between home culture and school culture, ineffective school discipline systems, lack of adequate academic counseling, negative school climate, lack of relevant school curriculum, use of passive instructional strategies, inappropriate use of technology, disregard of diverse student learning styles, grade retentions and suspensions and expulsions, low expectations of students, and lack of language instruction" (Cumbo, Burden, & Burke, 2012, p. 10 & 16). Including such variables when considering the issue of chronic absenteeism is essential in illustrating that the problem does not come only from students but involves the entire education system.

The main concern for the state of New Jersey is that chronic absenteeism affects all students, regardless of age (Rice, 2015, p. 4). The author uses data from the New Jersey

Department of Education (NJDOE) to illustrate that the fourth-grade students who missed three or more school days in a month prior to the national reading and math exams scored lower compared to students that attended fully. The data show statistically significant differences between the two tested groups, with one group showing higher scores in reading and math test at 11 and 13 points respectively (Rice, 2015, p. 4). Other studies corroborate the relationship between student test achievement in math and reading with class attendance. Gemellaro (2012, p. 134) found that higher absenteeism resulted in lower scores for grade 5 students in standardized tests, and eventually led to dropping out of high school if the pattern of absenteeism persisted.

A graphic representation of chronic absenteeism in New Jersey would take a cup and handle form, in terms of prevalence; it is higher at the beginning of formal education, and then moderates in intermediate, but spikes in high school with the highest percentages registered in 12th grade (Rice, 2015). Within the curve, students from low-income families and African minority students show greater representation. For instance, New Jersey statistics show that African American students represent about 24% of the chronically absent despite being only 16% of the state student population. Additionally, Hispanic students account for 30% of absences despite representing 25% of the New Jersey student population. Students of low socioeconomic status account for 38% of school enrollment and have about a 55% rate of chronic absenteeism. A study by McLaughlin and Peace (2006) echoed the hindrance associated with socioeconomic status, noting that problems associated with the housing, transportation, finance, drug/alcohol, and domestic violence caused a disadvantage in educational achievement. Furthermore, the study indicated that school communities serving students from poverty had a higher percentage of absenteeism.

Noted in literature is that as students enter high school, their grades and school attendance declines as well as their engagement, and these become predictors for potential dropout and poor performance (Rice, 2015; Ginsburg, Drake, Tein, Teetsel, & Riddle, 2015; Parrish, 2015; Jacob & Lovett, 2017). For instance, students who miss school days in high school have risks related to graduation, attending college, creating a career, and obtaining employment as an adult (Dunlap, 2016, p. 13 & p. 38). In New Jersey, during the 2013-2014 school year, about 20% of seniors missed too much school, which was evident specifically in 164 districts with 19% of the entire fraternity being chronically absent including 27% of seniors (Rice, 2015).

Problem Statement

Chronic absenteeism has a negative influence on student academic achievement as measured by state-mandated standardized tests (Balfanz et al., 2014). Officials at the New Jersey Department of Education recognize chronic absenteeism as a problem, encouraging them to set some expectations and penalties related to consistent attendance. However, officials failed to establish proactive and positive interventions that involve educators and parents (Rice, 2015). Moreover, the discussion on chronic absenteeism in New Jersey and other states focuses on the statistical representation of non-attendance, ways to address the student specific characteristics such as improving achievement and increasing graduation rates, reducing dropout rates, and promoting post-secondary acceptance (Dunlap, 2016). Various authors have written about interventions to address chronic absenteeism using approaches such as giving after-school sessions on the same day and Saturday sessions (Reimer & Dimock, 2005), use of behavior reinforcement, whether positive or negative (Reeves, 2008), and involvement of the community and parental support (Chang & Leong, 2013). These interventions promote prevention of chronic absenteeism as well as dealing with it in areas of higher prevalence.

However, much empirical research focuses on interventions (Dunlap, 2016; Reeves, 2008; Reimer & Dimock, 2005) rather than the relationship between the aforementioned interventions and measures with chronic absenteeism. This study ruminates education in the State of New Jersey through the prism of Every Student Succeeds Act (ESSA; S.1177, 2016). Among the variables to consider are the influence of chronic absenteeism on student success based on high school dropout percentages, four-year graduation rates, and post-secondary acceptance when controlling for other school and student factors that influence chronic absenteeism, limited English proficient, percent free lunch, and percent special education.

Noted in literature is that New Jersey education officials have made an effort to use attendance data to assess the scope of chronic absenteeism (Rice, 2015); nonetheless, empirical literature focusing on reshaping prevalent absenteeism in New Jersey high schools remain scarce. However, school district leaders need to begin comprehending the tools of attendance data in policymaking, budgeting, program decisions, and the value they hold in addressing chronic absenteeism.

Purpose

The purpose for this correlational, explanatory, and cross-sectional study was to explain the influence of chronic absenteeism on school dropout rates, four-year graduation rates, and post-secondary acceptance while controlling for specific student and school characteristics. Chronic absenteeism, limited English proficient, percent free lunch, and percent special education are the independent variables, and dropout rates, four-year graduation rates, and post-secondary acceptance are the dependent variables. The study explores the influence of chronic absenteeism on these variables, and thus forms an appreciation of how greater comprehension of

chronic absenteeism based on attendance data can facilitate a reshaping of attendance in New Jersey.

Research Questions

The overarching research question was: What is the influence of chronic absenteeism on indicators of success at the high school level when controlling for student and school characteristics?

The supporting research questions are:

Research Question 1: What is the strength and direction of the relationship between chronic absenteeism and school district high school dropout rates?

Research Question 2: What is the strength and direction of the relationship between chronic absenteeism and school level aggregate four-year high school graduation rates?

Research Question 3: What is the strength and direction of the relationship between chronic absenteeism and school level aggregate post-secondary acceptance rates?

Hypotheses

Hypotheses are not necessary for this study given the following reasons:

1. The study is correlational in nature. It does not involve experimental or quasi-experimental designs or methods.
2. The study does not test any theory or theories.
3. It is well established in the literature that chronic absenteeism has a negative influence on a host of academic indicators at the high school level.
4. This study aimed at observing the magnitude of the predictive influence of chronic absenteeism on various high school academic indicators when controlling for student and school variables that can also influence those indicators.

Independent Variable

The independent variable chronic absenteeism was drawn from the New Jersey 2015-2016 School Performance Report that shows different indicators of yearly school outcomes. The independent variables for this study were: (a) chronic absenteeism, (b) limited English proficient, (c) percent free lunch, and (d) percent special education.

Dependent Variables

The dependent variables for this study were (a) high school dropout percentages, (b) four-year high school graduation percentages, and (c) post-secondary acceptance.

Design and Methodology

The study used a correlational, explanatory, cross-sectional design with quantitative methods. Data gathering involved the publicly available New Jersey Department of Education data warehouse published on the department's website. The education department distributes data collected through the New Jersey Standards Measurement and Resource for Teaching System.

The quantitative approach is appropriate for the current study because of the need to test the stated hypothesis and show what degree of significance exists. The sample for quantitative data will be limited to the high schools found on the School Performance Report, which provides a complete list of the schools included and their grade. The classification in the report is PK-12, which comprises the 2,473 schools, from which the researcher narrowed down to cases for only grades 9-12, but some of the cases were inclusive of lower grades. The cases in which schools comprised grades other than 9-12 were removed, reducing the sample size to 371 schools specific to grades 9-12 within the PK-12 schooling system. The researcher then removed selective student admission schools such as vocational, charter, and magnet schools, reducing the

total sample to 299 schools. The 299 schools in the sample provided the data that underwent regression analysis and correlation analysis to determine the influence of chronic absenteeism on school dropout rates, graduation rate, and post-secondary acceptance when controlling for student and school characteristics.

Significance of the Study

The existing research shows a gap in the literature that specifically focuses on the influence of chronic absenteeism on school dropout rates, four-year graduation rates, and post-secondary acceptance. An underlying agreement noted in literature is that chronic absenteeism has implications on student outcome, but the direct effect on school dropout rates, graduation from high school and continuation in post-secondary remains under-researched. Furthermore, substantial research is on chronic absenteeism at the elementary school level and entry into high school rather than the four years of high school education. The research focus has been on factors that influence chronic absenteeism within the kindergarten level and elementary school, and these form the lessons for the development of interventions that cut across the K-12 system. The current research bridges the gap through the comprehensive identification of chronic absenteeism as the main variable.

Limitations

The design of this study is correlational; thus, cannot determine the impact or cause and effect. Another limitation relates to the type of data collected specifically the Performance Report, which is not comprised of variables such as student perception and provides only a statistical outlook that may not offer explanations for the outcomes. The data analysis nonetheless considers a wide range of variables to ensure completeness of the statistical outlook.

This study evaluates chronic absenteeism in grade 9-12 while disregarding truancy. As a result, the findings do not assess the schools in New Jersey comprehensively. Besides, the research utilized a sample of 299 schools, meaning findings cannot be generalized to the education system in the entire state.

Delimitations

The study only examines grades 9-12 in New Jersey public schools. No other grade levels were inclusive; thus, the results should not be generalized to other grade levels. The variances in the definition of chronic absenteeism limit the generalization of results across states. The results are valid in New Jersey, and any other state with a similar definition of the chronic absenteeism.

Recognizable from the focus of the study is that the data collected may not be projected across all high schools, considering the dataset leaves out schools that fall under K-12. This means the results may not reflect the dynamics of a school found on students from elementary schools. Another aspect is the data reflected are for 2015-2016, which limits the time.

Assumptions

A critical assumption in this study is the assumed accuracy of the New Jersey Performance Report. The researcher presumes the data presented shows an accurate outlook of attendance in the state and the represented school districts, and as such gives accurate figures on the independent and dependent variables. The researcher further assumes data transferred from the site onto the Excel file are both complete and accurate. Third, the researcher assumes the selection of cases was complete, and the highlighting of each case from each page of the spreadsheet was also accurate. Additionally, a presumption indicates the test for chronic absenteeism will reveal accurate variance when tested against dropout rates, graduation rates, and post-secondary acceptance.

Definition of Terms

Attendance. This refers to the number of days that a student is present at a given school in a given school year.

Chronic absenteeism. This refers to a student not being present in school for 10% of the school year for unexcused or excused absences, with specificity to the instructional days, which are 180 days in New Jersey.

Dropout rates. The term refers to the percentage of students that voluntary or involuntary leave high school permanently and do not return or transfer to another school within a year of leaving.

Graduation rates. This refers to the percentage of students in New Jersey that complete their high school education.

Organization of the Study

The first chapter provided an overview of the study by presenting the background and establishing the research questions and hypothesis. The second chapter presents a literature review on chronic absenteeism as a problem in the United States and then narrows the focus to New Jersey. The review includes an analysis of chronic absenteeism and truancy to delineate the focus of the study based on the conceptualization of the two. The literature review further includes an outlook of studies on school dropout rates, graduation from high school, and post-secondary acceptance, and then aligns them with chronic absenteeism.

Chapter Three involves methodology and research design for the presentation of the data collection process, sampling, and analysis. The methodology chapter also explains the reasons for selecting the approach that best fits this study compared to previous work on the topic. The fourth chapter is a presentation of the findings related to the research questions. The final chapter

contains conclusions from the results, existing literature, and theory, as well as recommendations for policymakers and education leaders.

Chapter Two: Literature Review

Introduction

This literature review critiques existing quantitative, qualitative, mixed methods studies and other types of studies on the influence of chronic absenteeism on school dropout rates, graduation rates, and post-secondary acceptance.

Criteria for Inclusion and Exclusion of Literature

The inclusion and exclusion criteria for the literature review have a foundation on six elements: (a) types of study, (b) credibility of sources, (c) population of interest, (d) type of data, (e) period of publication, and (f) language of publication. Regarding types of study, the literature review included consideration of different forms of studies, including qualitative, quantitative, and mixed methods. Nonetheless, some sections required the use of secondary-source literature or other types of information. For instance, the section on the legal framework for chronic absenteeism incorporated government sources that did not fall into either category of the studies, but were highly useful for the literature review. The credibility of sources was determined based on the source such as peer-reviewed journal articles, signed dissertations and thesis, and institutional publications such as from Attendance Works, and publications from the U.S. Department of Education and its affiliates. The information included needed to reflect K-12 education system, as the system used in New Jersey; therefore, the population of interest was K-12 students.

The focus was on primary source data, although secondary data were admissible such as in institutional and governmental publications. The language of publication considered was English and the period of publication was between 2011 and 2016, allowing for five years of literature. This was to ensure the information included was current and reflected present practices

in education. Nonetheless, older publication applied in cases where a historical perspective was necessary, such as in the conceptualization of chronic absenteeism.

Search Procedures

The literature reviewed was obtained through online database searches of journals and institutional publications, culminating in the current seminal literature on chronic absenteeism, and its relationship with the other variables. The databases used included ERIC, which offers the opportunity of specifying peer-reviewed articles only and limiting to publication year; and another database was Google Scholar in which sources were sorted based on date, availability, and type of publication such as journals. Other sources came from the U.S. Department of Education, which provides current data on chronic absenteeism across the nation and in the states. More information came from Attendance Works that offers publications on school absenteeism from early childhood, elementary, and high school with data on attendance and reports on chronic absence. The Seton Hall database was also useful in providing a guide to other sources such as ProQuest dissertations and theses, from which the researcher obtained useful academic sources.

The search terms used for identification of sources in various websites included chronic absenteeism in schools, chronic absenteeism in high schools, the definition of chronic absenteeism, the difference between chronic absenteeism and truancy, effects of chronic absenteeism, legal framework on chronic absenteeism in New Jersey, and interventions toward chronic absenteeism. Other search phrases included the influence of chronic absenteeism on student graduation, dropout rates, work placement, and post-secondary acceptance as well as student variables influencing chronic absenteeism, and community/environmental variables influencing chronic absenteeism.

Existing Literature

In this study, the researcher sought to explain the influence of chronic absenteeism on school dropout rates, four-year graduation rates, and post-secondary acceptance, while controlling for specific student and school characteristics. Therefore, it was important to find literature that addressed chronic absenteeism as well as the other variables to determine the extent of analysis on the topic. Although chronic absenteeism has been widely researched in different states as well as outside the United States, the focus has been on identifying policy interventions and making recommendations for such, identifying patterns of absenteeism and a focus on environmental variables associated with absenteeism. Further, the literature focuses on the relationship between student attendance and student achievement as a way of explaining the impact of chronic absenteeism. The motivation shows a replacement of chronic absenteeism with attendance as the basis of forming explanations. Again, the interventions noted, are mainly on recommendations rather than a test of their effectiveness.

Literature-based in New Jersey offers a more limited view of chronic absenteeism compared to other regions, with response to chronic absenteeism focusing on the state of attendance and policy recommendations as identified in the Showing Up Matters reports in 2015 and 2016. In the two years, similar publications by Advocates for Children of New Jersey on the calculation of absenteeism including the numbers of absent students and the factors that contribute to the issue, including student variables, parents, community, the school, and policy recommendations on possible interventions illustrate inadequacies. Another gap noted in the literature is the focus on high school chronic absenteeism as most of previous research has been focusing on K-8. The implication suggests that much of absenteeism and challenges in attendance is in the lower grades, which fails to appreciate the continuation of the challenge in

high school. Additionally, high school represents a time when students begin to make independent decisions, and parents start to offer their children opportunities for decision making. Focusing on Grade 9-12 provides a chance to delve deeper into how students make decisions on attendance, failure to attend, and implications of chronic absenteeism on graduation, dropout, and success in post-secondary.

Focus Current Literature Review based on the New Jersey Legal Framework

The current literature review focuses on chronic absenteeism and identifying the various issues brought out in research, such as factors contributing to the problem, data on attendance, and the interventions. The review includes the legal framework that explains the importance of school attendance, which underlies the reasons education leaders at all levels, parents, and students need to address absenteeism.

The New Jersey public education system operates under the compulsory education law that requires all children between six and 16 years to attend school under New Jersey Statutes Annotated (NJSA) 18A:38-28 through 31. Additionally, it has attendance regulations that require each public school district board of education to have policies and procedures on student attendance including a definition for an unexcused absence. The statute further demands the provision of mandated services for students falling between one and nine cumulative unexcused absences under the New Jersey Administrative Code (NJAC) 6A: 16-7.6. The NJAC requirements include the provision of a mandated court referral for truant students, with ten or more cumulative unexcused absences. The NJSA 18A and NJAC 6A legal frameworks focus on truancy (unexcused absences) without addressing the challenge of excused absences in schools.

This study focuses on both excused and unexcused absences forming a conceptual understanding of the combined problem. Regular school attendance is critical to student social

and cognitive development and offers enriching opportunities and experiences useful in encouraging positive relationships with peers and adults (State of New Jersey Department of Education, 2016). Therefore, excessive excused and unexcused absenteeism denies a student the consistent benefits of regular school attendance and may have both short-term and long-term effects, such as disruption of the child's educational path and lack of success at grade level (Attendance Works, 2013). The law on compulsory education sets the stage for a proactive education system in which school leaders engage students, parents, and the community toward facilitating regular school attendance and thus minimize on the disadvantages of absenteeism.

The law is a critical tool for encouraging 100% school attendance for all students. In this regard, teachers need to report unexcused absences to counselors who are in turn required to investigate, determine the cause of absenteeism, and issue recommendations. The parents and guardians also have a responsibility to notify the school in case a child will be absent and document the reason for the absence. Students may complete additional assignments to cover the day they were absent, and thus redeem missed days; thus, reducing the adverse effects of the absence.

The policy stipulates the actions that attendance counselors, teachers, or other staff members as assigned may undertake in cases of truancy. Such interventions include informing the parents or guardians, mandatory court referrals, and developing a course of action. However, students with excused absences may have instances of supervised coursework or assignments anywhere within the district or under the parents if allowed. The provision for supervised assignment assumes student capability to perform the assigned duties.

Although New Jersey has a well-established legal framework on student attendance, and on excused and unexcused absences, the focus is on the elementary level of education and early

childhood. Notably, high school education does not have much emphasis prompting regular attendance as witnessed in the elementary section. Nonetheless, chronic absenteeism does continue into the high school education. High school is a critical period for students because it represents an important milestone, whereby the student determines the kind of future they will have in terms of moving out of poverty or attaining employment and entering into college. However, Chen and Rice (2016) indicated that in New Jersey, chronic absenteeism curve tended to rise at the end of high school. Compounding the problem is that many of the students facing chronic absenteeism come from disadvantaged backgrounds including low-income families and thus have fewer resources to recapture the moments lost in school. Therefore, the students find it extremely difficult to catch up if they lose some days.

Variables Influencing Dropout Rates

America's Promise Alliance (2016) indicates that a child's success in school and life is dependent on internal competencies, expectations, beliefs, and attitudes. The intrinsic motivation emanates from the ecosystem that entails the school, family, and afterschool program. Therefore, understanding the influences of the facets of children's environment and evaluate their roles in the dropout rates.

Maslow (1970) developed a five-layered system of needs in the order of physiological, safety, belonging and love, esteem needs, and self-actualization needs at the helm. Maslow's theory has significant relationships with the school environment and its culture. A child in school develops a decisive perspective towards school if it meets the needs. Conversely, if a school has a negative culture, it fails in providing one or more of the students' needs. According to Pearson (2015), the student school meals program determines the motivation of students arriving without meals. Additionally, students who fear peers and adults have a feeling of insecurity that leads to

the development of an attitude of separation and not belonging to the institution. Meanwhile, Maslow's theory articulates that schools with positive culture promote self-esteem amongst the students, enabling them to develop a sense of self-actualization (Maslow, 1970). Maslow's Hierarchy of Needs effectively proposes school dropouts fail to develop self-actualization due to the prevalent negative culture in the learning environment.

Maslow's Hierarchy of Needs theory correlates with the ecological systems theory with regard to influencing a child's intrinsic motivation. Pearson (2015) indicated that a school that meets the needs of a child contributes to a positive microsystem that is critical in the cognitive development. The positive reinforcement stimulates anticipatory capacity while a negative institutionalized environment within the microsystem convinces the student to become a dropout; it contributes a feeling of effectiveness and persistence in negativity. The ecological system theory complements the Maslow's Hierarchy of Needs whereby a student responds to adversity in a school with negativity to illustrate their dissatisfaction. The two concepts provide significant insights on how learning relates to the environment. In this regard, a student responds to the environmental adversity or abundance whereby it constitutes significantly on the ability to learn, persist, complete, or dropout of an academic program. According to Pearson (2015), the quality of interaction between the student and the school generates a substantial contribution to the student's failure or success where failure refers to dropping out. Although the concept of the school environment and culture fits well with Maslow's Hierarchy of Needs, the attainment of persistence against dropout effectively appends to the ecological system theory.

Class size. In research to evaluate the effects of the class size on student performance, Borland, Howsen, and Trawick (2005) found a non-monotonic and non-linear correlation. The reduction of the size of the class produced an improvement in the performance of the student in

mathematics (Ogbuagu, 2011; Jepsen & Rivkin, 2009). Although Ogbuagu (2011) did not evaluate the relationship between the student performance and school engagement, Achilles (2003) indicated there is a close relationship between students' academic achievement and interactions in grades K-3 with classes of 13-17 students who proceed through K-3 in cohorts. The improved student performance correlates to the enhanced positive behavior and discipline outside class and the school environment. The diminishing size of the class improves productive development, engagement in school and beyond, citizenship and participation, humanity and responsibility in the society (Ogbuagu, 2011). The positive development of the students stimulates the teachers to improve their lesson quality in the enhancement of classroom interaction.

The study of small classes in the early grade by Finn and Gerber (2005) found the class did influence academic achievement and the plausibility of the student completing high school. The student, who attended learning for more than three years in a small class, enhanced the chances of completing high school by more than 50% (Finn & Gerber, 2005). However, the subjection of Finn and Gerber's study to Bloom's (1964) analysis indicated the relevance of the class size aggregates the satisfaction of the Maslow's Hierarchy of Needs. Thus, a small-sized class in a school that provides free lunch, particularly in the lower grades, discourages the students from dropping out of high school. In this regard, Brewer, Ehrenberg, Gamoran, and Willms (2001) recommend a class size of 15-18 students as the ideal capacity that will stimulate the benefits to the participants and the teacher. Small class size associates with enhanced student performance in mathematics and reading in the lower grade (Achilles, 2003).

In contrast, Brewer et al. (2001) stated the number of students in a class is significant in the content learned, but not the performance despite failing to reduce class size to the

recommended 13-17. Large classes stimulate a noisy setting that reduces the teachers' interaction in social issues of the students but not the academic goal. Although Brewer et al. (2001) concurred there are situations when small-sized classes enhance academic achievement, they indicated the attainment of improved school performance is a multifaceted concept with influence from students' background, self-motivation, the coding of the class instruction to meet the needs of the participants, and the environmental status of the classroom.

Grade retention. Lyttle-Burns (2011) describes repetition of grades as a common phenomenon before a student joins high school. The National Association of School Psychologists report indicates that male students are the majority victims of the practice, particularly the individuals from African American and Hispanic families that are poverty-stricken. When evaluating retention, Lyttle-Burns (2011) found in 2008, about 10% of K-8 students had retentions whereby the students from low-income families accounted for 23% as opposed to 11% from middle-income families, and five percent of learners from non-poor households.

The practice of grade retention streams from several beliefs held by some teachers, parents, and school administrators. According to Lyttle-Burns (2011), the most prevalent reasons are poor attendance, failure to meet the expected classroom performance, and emotional and developmental immaturity. Although the participating teachers in the study from the upper grades argue that retention is an effective tool for enhancing the academic performance of the students, their counterpart respondents in the lower grade regard the practice as a humdrum with no practical proof in sustaining grade level values (Witmer, Hoffman, & Nottis, 2004). Furthermore, the teachers in the study by Witmer et al. (2004) suggested the use of other criteria to determine the candidates for retention. In this regard, the students who directed their efforts to

academics are prone to the practice, in addition to those with limited ability and delayed social maturity.

Although there is a knowledge gap between the studies on the effects of retention and teachers' understanding, most teachers cite retention as their primary source of knowledge as opposed to discussion with colleagues. In this regard, the teachers change their belief patterns and experience levels due to interaction with the retained students (Lyttle-Burns, 2011).

However, McCoy and Reynolds (1999) argued that the practice of grade retention has more repulsive effects than positive influences on the student, school, and community. It enhances student failure, diminishing child's self-esteem, and poor class conduct leading to eventual dropout (Owings & Magliaro, 1998). In fact, the retained children have more than five times probability of becoming a high school dropout as opposed to those who never experienced the retention (Lyttle-Burns, 2011). Shepard and Smith (1990) cited grade repetition as one of the most stressful events in the life of a child while Byrnes and Yamamoto (2001) considered it as cost ineffective due to the need of hiring individualized instructors.

Variables Influencing 4-Year Graduation Rates

Family income levels. The Ritter (2015) report to Washington Student Achievement Council indicates that a household income influences the graduation time of a student. According to the National Center for Educational Statistics (2013), the reduced price for meals does not prevent the low-income students from scoring lower than their counterparts from non-low-income families. In this regard, the children in low-income families ostensibly miss school for three or more days in a month due to inability to afford meals. The Child Trends (2014) argued that 40% of poor children are three times more adjacent to repeating a class before they reach the eighth grade. Thus, according to Ritter (2015), the students from families in the bottom quintile

of wealth distribution are 400% likely to have dropped out of school in the last one year of high school, as opposed to the individuals from households in the top quintile. Reardon (2011) suggested the current gap between the poor and wealthier students in school resilience is wider than the prevalent black-white achievement margin in the United States.

Chapman, Laird, Ifill, and KewalRamani (2011) using a scale comprising five elements noted the high school dropout among the students from low-income families enhances child poverty and aggravates poverty rates among the Black and Hispanic families by 30%. According to Rumberger (2011), the reliance on public assistance, the prevalence of crimes, homelessness, high mobility, and absentia parents through incarceration subject students from low-income families to bleak social and economic prospects that lead to school dropout before materialization of graduation. Moreover, the exposure to hunger and food insecurity, drug abuse, adverse health outcomes, housing security, and domestic violence attenuates the graduation rates (Rumberger, 2011). Shonkoff et al. (2012) indicated the exposure of students from low-income households to copious problems acts as toxic stressors since their severity does not have a buffer of supportive relationships that stimulate endurance, resilience, and emotional sustainability. The child develops poor behaviors and attitudes, chronic absenteeism, low achievement, and consequently dropout of school (Farrington et al., 2012).

Therefore, the attitudes of students towards the school and the subjects determine their ability to graduate within four years. Papanastasiou (2002) indicated the success of a student in various courses is subject to reinforcements from the surroundings that comprise the family educational background, where low-income households are the conspicuous deterrents. Everson (2004) stated the proportion of children in terms of poverty, ethnic, and racial composition in a school setup, act as significant predictors of students' graduation rates. Additionally, Ogbuagu

(2011) emphasized the role of socioeconomic status on average performance in high schools. In this regard, the author highlighted parent education, unemployment, and income as the main factors that hinder high graduation rates besides being beyond the control of the schools. However, Okoye (2009) did not find a correlation between graduation and combined impact of socioeconomic status and gender.

Psychosocial factors. Burrus and Roberts (2012) considered psychosocial factors as predictors of high school dropout. The factors encompass personality and motivation that the students obtain from the teachers and parents. Active parent engagement in the educational process predicts the probability of the student to graduate whenever food, shelter, parental care, and health care are under control. In this regard, engagement is a multifaceted concept that requires the endorsement of Maslow's Hierarchy of Needs and the stimulation of constructive student's ecological system. Engagement helps the learners to identify themselves with the school for the development of positive relationships with teachers and peers. The Bridgeland, Dilulio, and Balfanz (2006) study found 47% of students who dropped out of high school did not find it exciting or encouraging. Additionally, the dropouts indicated the approach of the teachers was a significant contributor to their decisions as they were not interested in teaching a class, but completing their workday.

According to Burrus and Roberts (2012), lack of adult engagement motivates 69% of high school dropout. The commentary from the adults indicating that students are nonperformers in education induces declining self-esteem due to the perceived low expectations. The Bridgeland et al. (2009) follow-up study comprising of focus groups and colloquium confirmed the students' feelings as accurate predictors of school performance since most of the interviewed high school teachers agreed to bestow students with high academic standards without providing

additional support to struggling students (p. 22). Thus, Kaufman, Bradbury, and Owings' (1992) study illustrated the teachers' expectations on grades motivate the students to dropout of school. The study examined school characteristics, teachers' perceptions of students, student behavior, student academic history, family background, parental involvement, and student demographic background on 22,676 participants in 8th to 10th grade. In this regard, Burrus and Roberts (2012) stated the students experience environments that are not motivating and sufficiently challenging to keep them in the school. In fact, 80% of the high school dropouts studied were fully engaged in class for less than an hour while 26% never completed homework. Bridgeland et al. (2006) indicated if there were higher expectations and assistance, 66% of the dropouts would have worked harder and completed high school

Although Bridgeland et al. (2009) found 76% of the blame is attributable teachers who are not ready to provide additional assistance, only 13% of high school dropouts directly blame the teachers for their decision. Meanwhile, the parental involvement is critical to the success of students in school, but some parents are involved or become concerned when it is too late to initiate a difference. Burrus and Roberts (2012) estimated that 21% of parents are not aware while 51% are cognizant of their children's attendance and grades, but only 50% of them knew about their child's intention to dropout of school. According to Davis et al. (2002), the graduation rates in high school emerge from parental and teachers' consideration of students' attitudes, subjective norms, and perceived controls.

The relevance of the ninth grade. Ritter (2015) highlights academic grades as a significant motivational element in enhancing the students' likelihood to graduate from high school successfully. It is evident that students who earn a 2.0 Grade Point Average (GPA) or less in the freshman year, have lower chances of graduating as opposed to counterparts with more

than 2.5 GPA aggregate (Chen & Soldner, 2013). Heppen, O’Cummings, and Therriault (2009) suggested that students with a GPA of 2.0 and below should be considered at enhanced risk of dropout while those that fail in a course or accumulation of required credits have lost the graduation track. In this regard, Moore et al. (2014) suggested more than a third of the country’s high school dropouts never obtained a ninth-grade promotion. Legters and Balfanz (2010) indicated the graduation rate is dependent on the ability of the policymakers and educators to identify troubled students in ninth grade and the factors instigating difficulty.

Neild (2009) suggested four factors that pose challenges for students in the ninth grade. She indicates the grade coincides with the period when the child physically separates with the parent facilitating increased peer influence and reduced parental control. The child changes grade levels resulting in a breakdown of established bonds with peers and teachers. Although some students are inadequately prepared for high school, some schools have unfriendly organizations due to class movements, class length, lectures per day, and duration of the class-time. The challenges attenuate performance of the students that induces the student to quit high school. Additionally, some students are unable to adapt to the new environment as stress level is enhanced. In this regard, the student will dropout, leading a declining graduation rate.

The high school environment exposes students to higher expectations from society, self, and the school, whereby the learner is seeking to extrapolate success beyond high school. The U.S. Department of Education (2015) expected schools to have extended learning opportunities and intervention programs for weak students, but educational institutions focus on the completion of the work-ready curriculum. According to Ritter (2015), the ability of students to enroll in academic demanding college-prep courses illustrate appropriate behaviors in executing

the challenging instructions that determine the resilience of the students at the ninth grade. Besides, the rigor of the curriculum is the indicator of the graduation rates in high school.

The U.S. Department of Education outlined that the rigor of the high school curriculum is the most critical element in gauging the ability of a student to obtain a postsecondary credential. The emphasis of curriculum surpasses the role of race, ethnicity, family income, and parent education level. Unfortunately, Neild (2009) indicated the stressed importance of a rigorous curriculum makes a high school education impersonal and less attractive if educators do not customize the curriculum at the local level. The U.S. Department of Education (2015) reports that most of the recent graduates consider high school as the most challenging level of the academic process. According to Ritter (2015), education institutions assume the working-class minority students do not emerge from environments with ample intellectual and social resources. Therefore, schools should emphasize on providing the students with language and knowledge as opposed to using their skills as a foundation for learning (U.S. Department of Education, 2015, p. 9). Ritter (2015) stated that children experience lowered academic expectations due to inaccurate self and family portrayals stimulating a declining prospect of graduating.

Variables Influencing Post-Secondary Acceptance Rates

The job market has become increasingly unstable while the economy is frequently fluctuating making high school education inadequate. Townsend, Flisher, and King (2007) indicated that increasing the number of businesses in the economy requires individuals with high school diploma and rather than dropouts. The Bureau of Labor Statistics (2008) reports that only 55% of high school dropouts were employed as compared to 71% of individuals with high school diploma. Frenette (2014) posited that the post-secondary education is not only relevant to securing a job but also attracting higher compensation. He further suggests that post-secondary

graduates have a level of healthy lifestyle sustainability, life satisfaction, and social interaction. Although the post-secondary education is important in the contemporary job market, students are exposed to numerous challenges that hamper its pursuit, make it inaccessible, or stimulate the individuals to disregard it. The common rationale for declining post-secondary acceptance rates entails personal reasons, job demands, and incongruence with campus values (Kuh, Kinzie, Schuh, Whitt, & Associates, 2005). In this regard, Mangold, Bean, Adams, Scwab, and Lynch (2002) explained that increasing challenges exposes tertiary institutions to low graduation rates, reputational damage, and weakened ability to meet the academic goal.

Changes in family structure and income. According to Pong and Ju (2000), the family structure has a significant role in influencing the chances of transitioning to post-high secondary studies. The family structure entails single-parent and two-parent with stepparents being prevalent where divorce, separation, and death have forced disintegration of the two-parent family. Virtually all the studies concur that children from single parents, particularly female-headed households, are more prone to drop out of school or face voluntary or forced discontinuation (Pong & Ju, 2000). Additionally, children living with stepparents have reduced chances to pursue education to the fullest. In the case of separation and divorce, the income structure of the family can be adversely affected, exposing the child to a family of poverty. The individuals living in poverty are highly likely to dropout of school as they concern themselves with means of survival (Lichter, Cornwall, & Eggebeen, 1993). The lack of necessities motivates students to concentrate on their satisfaction through looking for jobs to earn money. In other circumstances, the student may not be able to facilitate mobility to tertiary institutions.

According to Lund (2009), the relationship between the parent and the child influence enrollment patterns in post-secondary institutions. The absentia of the parent due to divorce,

death, separation, or economic reasons limit the ability of the students to access the parental advisory during their study. Consequently, limited interactions do not facilitate monitoring of school performance and instilling of critical educational values, which are necessary for successful completion of high school and transitioning to post-secondary studies (Lichter et al., 1993). Therefore, a child needs a parental figure to ensure that they do not spend time with a person of perverted and less nurturing characteristics. Meanwhile, the child is likely to engage in substance abuse that diminishes the chances of transitioning to tertiary level. Townshend et al. (2007) indicated that the use of marijuana, alcohol, and other illicit drugs stimulate the child to develop deviant behaviors as the entertainment stereotype portrays substance users as fashionable individuals with the right to do whatever they want. As a result, the child may decline to join post-secondary education to be with the perceived friends.

Academic performance. According to Jensen (2011), academic performance in high school is a critical predictor of students' retention in colleges. The longitudinal study conducted in Honolulu with students in 50 of the most selective universities in the United States indicated that GPA is the most significant predictor of enrollment to college (Makaukane-Drechsel & Hagedorn, 2000). Hagedorn, Lester, Moon, and Tibbetts (2006) argued that GPA was the main deterrent for most students in pursuit of a bachelor's degree. However, Kiser and Price (2008) suggest the factor of credit hours is the most visible predictor of students' retention in colleges. According to Benham (2006), while studying the causes of low college matriculation among the Native Hawaiians, indicated that low test scores in high school final exams contributed considerably to the low post-secondary enrollment. Additionally, Allen, Robbins, Casillas, and Oh (2008) suggested that academic performance includes the academic self-discipline, pre-college educational development, and pre-college academic performance that influence the

student mobility and ability to transfer across academic institutions. Although self-discipline may fail to influence post-secondary acceptance rates, it will act as a strong predictor of college retention, particularly during the first year, which determines excellent academic performance (Allen et al., 2008).

Social influence. According to Frenette (2009), clearly defined occupational aspirations that motivate a student to persist and actively engage in studies. King, Warren, King, Brook, and Kocher (2009) highlighted career uncertainty as for the principal rationale that deters students from applying for post-secondary education. Besides, the students' thought about the jobs that interest them, and want to pursue, determines the level of education to which they aspire. In some instances, it hinders the utilization of maximum learning potential (Grayson & Grayson, 2003; Berger et al., 2007). Thus, the availability of information regarding careers determines the perception of students towards post-secondary education whereby its deficiency undermines post-secondary application rates (Cassidy, 2015). However, Finnie, Childs, and Wismer (2011) also indicated the sources of information regarding career also influence the students' choice to pursue a college education. For instance, one influential factor that defines the perception of students towards post-secondary education is parental education (Cassidy, 2015). Parents with a higher level of education offer a prediction that their children will pursue tertiary education whereas a family with no reputable education background can hinder the child from pursuing any education after high school (Norrie & Zhao, 2011). Consequently, Finnie (2012) suggested the external environment of students, particularly parents and other career informants, determines how they understand, think, and talk about post-secondary education.

According to Cemalcilar (2010), positive social relations enhance the students' persistence and success in school. The Osterman (2000) study stated that an interactive social

environment illustrates a sense of belongingness that motivates them to focus on classroom activities, experience higher self-esteem, exhibit higher expectations of meeting their goals and enhance dedication to the school. Cassidy (2015) indicated that alienated students are at the risk of sadness, frustration, and anxiety that affect their academic performance while stimulating a feeling of disconnection. Additionally, a failure to experience belonging, along with cultural and pedagogical barriers, make the students feel different in the school environment inducing them to either dropout or fail to pursue further education after high school (Furrer & Skinner, 2003). From this perspective, Orsuwan and Cole (2007) indicated enhanced social connectedness with a sense of belonging motivates an association with educational satisfaction. In contrast, they argue that academic integration is not sufficient to entice ethnic minority students to post-secondary education (Orsuwan & Cole, 2007). Although institutions have a substantial amount of opportunity to exhibit optimism, self-esteem, and aspirations, the lack of interaction enhances differences in satisfaction (Orsuwan & Cole, 2007, p. 67). The students from low-parental-education backgrounds and low-income are disinterested with education experience (Orsuwan & Cole, 2007, p. 81).

Significance of Existing Literature

The existing literature is critical for the current study to show the research conducted in the area demonstrates a gap, to which this study responds. Some studies have focused specifically on chronic absenteeism (Belfanz et al., 2014; Rice, 2015); but, by doing a literature review, it leads to the identification of possible data comprehensiveness. Achieving possible data comprehensiveness is paramount for showing exhaustively that the existing research in chronic absenteeism does not fully respond to arising questions regarding the topic.

Methodological Issues in Studies on Chronic Absenteeism

Studies on the influence of chronic absenteeism have mainly focused on non-experimental quantitative studies, using data collected at a statewide scale. In other instances, the studies utilized non-experimental qualitative studies such as semi-structured interviews. Many of the studies utilized a longitudinal dataset, assessing chronic absenteeism and its effect on student outcomes over a certain period. As many of the sources used were between 2011 and 2016, the data presented ranged from 2008 to 2015, with the most current coming from the Department of Education and Attendance Works, the former appearing in peer-reviewed publications.

Results from previous studies have shown there are various predictor variables for explaining student absenteeism across grades. However, the focus has been on the risk factors of chronic absenteeism being a consequence of student backgrounds such as the community environment, ability to get to school, or chronic illness. Study outcomes have also been toward policy development on how to accurately address predictors of chronic absenteeism. The results have thus left out the impact of chronic absenteeism as a predictor of graduation from high school, student achievement, and post-secondary placement. Moreover, data from the United States Department of Education provided a national outlook on chronic absenteeism with the majority of sources focusing on a state-based sampling profile.

Limitations of the Literature Review

The limitations noted in the literature concern studies at the high school level and also studies assessing the effect and influence of chronic absenteeism on school dropout rates, post-secondary acceptance, and four-year graduation rates. Much focus has been on early childhood and elementary school, and then how chronic absenteeism in these levels subsequently affect high school outcomes. There is literature on chronic absenteeism at high school level but not

much compared to the lower levels. Further, the focus has been on the causes of chronic absenteeism especially environmental and familial, and on interventions that respond to these causes. Empirical research on chronic absenteeism's effect on other variables remains limited.

Conceptualization of Chronic Absenteeism

When searching for literature that explores the context of chronic absenteeism, two trends emerged. The first was analyses of chronic absenteeism vis-à-vis truancy (Cumbo et al., 2012; Williams, 2002), and secondly the consideration of chronic absenteeism as a unique phenomenon (Coelho et al., 2015; Zorc et al., 2013). Additionally, the focus of research was on the 10% standard as the measure of chronic absenteeism, except Rice (2015) who provided a specific algorithm on how to perform a calculation on New Jersey in terms of considering 180 school days versus how many days the student missed. The data on chronic absenteeism show more than 7.5 million students in the United States are chronically absent in a school year, and by 2012 fewer than ten states were tracking the issue (Balfanz et al., 2014). Within these data is the agreement that chronic absenteeism is a challenge with a considerable magnitude within the country and thus the need to address it within the appropriate forums.

The beginning point in addressing chronic absenteeism is its conceptualization. Available in the existing literature is the description of chronic absenteeism and truancy. The reason for the differences in the conceptualization of chronic absenteeism is the lack of a standard definition, with a perception of the concept as the number of days a student misses school including both excused and unexcused absences (Balfanz & Brynes, 2012).

Truancy focuses on the number of unexplained or unexcused absences, which might serve to underestimate total absenteeism (Dembo & Gullledge, 2009). As Balfanz and Brynes (2012) explained that these descriptions imply the percentage of days missed now defines

chronic absenteeism, usually, 10% meaning 18 days per school year, but this calculation may differ among states and ranges anywhere from 15 to 20 days. Truancy does not reflect specification in the frequency of absences, and comprehensive data is lacking (Talbert-Johnson & Russo, 2013). Thus, it becomes difficult to compare statistics across the nation. However, an article by Attendance Works (2016) noted that state officials might define truancy using some form of statistical reference that does not have a federally recognized rating. For instance, officials from the California Department of Education measure truancy as missing three school days without a valid reason or attending class 30 minutes late thrice, while Maryland defines it as missing 20% of school year meaning 38 days in 180 days' calendar.

A publication by Attendance Works (2016) on truancy versus chronic absence noted that the concepts are not interchangeable. As a result, educators, policymakers, and authors need to differentiate them to formulate workable solutions. For instance, truancy focuses on unexcused absences and thus reflects compliance with attendance rules, in which students are missing school violates mandatory attendance requirements (Coelho et al., 2015). In this case, addressing absenteeism becomes a case of ensuring compliance, which school personnel can handle at their level, in which they adopt punitive actions such as suspension. The challenge with using punitive actions is that it may essentially push the students away or toward dropping out rather than addressing the problem.

The enhanced viewpoint in chronic absenteeism considers all absences and their effects on student academic outcomes based on missed instructional time (Ginsburg et al., 2014). The response to chronic absenteeism focuses on preventing students missing too much of school. Further, chronic absenteeism recognizes that some factors leading to missing school may not require punitive reaction such as homelessness and chronic illness, but instead states, school

districts, educators, and families need to work together to provide students with equal opportunities of learning and recovering lost time (Parrish, 2015). Therefore, instead of using administrative solutions, it becomes possible to use comprehensive strategies in which the community has a role.

The disparities in the conceptualization of school absenteeism reflect the complexity of the issue. As highlighted by Solakoglu and Orak (2016), school absenteeism is very complex and therefore to appreciate its full magnitude researchers should examine both the excusable and inexcusable absences. This means considering the unproblematic absenteeism reflected when students indicate they will be missing school as well as the absences without a reason that indicates a behavioral problem. Considering both sides offer an opportunity to formulate interventions that counter the effect of absenteeism and manage the predictors.

When looking at chronic absenteeism as a standalone concept (without truancy), it becomes evident in the literature that the public education system requires students to attend school regularly with exemptions on illness, family emergencies and the occasional special event or crisis (Coelho et al., 2015). Balfanz and Brynes (2012) noted the complicated issue of attendance is that schools are usually mandated to take average daily attendance but do not need to highlight individual patterns of attendance. However, understanding chronic absenteeism patterns are part of the equation as a way to reflect the probable rates of children missing school and the days they miss. Uncontrollable elements such as the weather or unforeseen circumstances may influence attendance, but chronic absenteeism goes beyond such considerations.

Emerging from this conceptualization is a working definition of chronic absenteeism, in which the term refers to the measure of how much school a student misses for any reason

(Attendance Works, 2011). Authors have included a 10% absences as the standard days missed to translate to chronic absenteeism (Balfanz & Brynes, 2012; Balfanz et al., 2014). The concept of using 10% of total possible school days missed is gaining acceptance as the defining characteristic for chronic absenteeism at national and state levels, including in New Jersey.

Variables Explaining Chronic Absenteeism

An area in the existing research that shows agreement among researchers concerns the variables that can explain chronic absenteeism or how community characteristics influence chronic absenteeism (Balfanz & Brynes, 2012; Balfanz et al., 2014; Coelho et al., 2015; Cook, 2010; Stevens & Kim-Gervey, 2016; Zorc et al., 2013). Rice (2015) gave five student categories that influence the state of chronic absenteeism in New Jersey including economic disadvantages, limited English proficiency, homelessness, migration, and special education. Henderson, Hill, and Norton (2014) classified the reasons for chronic absenteeism into the community, home, school, and individual levels. These classifications are echoed by Cook (2010) who found that causal factors for absenteeism include student variables as well as school, family, and community variables. Examples of student variables include illnesses and the conscious decision not to attend school. The community variables include inaccessibility to resources such as transportation and violence, while parental variables include lack of financial resources (Balfanz & Brynes, 2012). School variables include student-teacher relationships. These are some examples of factors that influence chronic absenteeism and truancy in New Jersey.

In their research, Stevens and Kim-Gervey (2016) found systemic barriers that explain chronic absenteeism. These included health-related barriers, lack of workplace diversity, large class size, lack of a balanced system of assessment, unaffordable childcare, inadequate wages, lack of support for newcomer families, and lack of transportation and timing of the school day.

The researchers also raised the issue of students with disabilities and race. Another issue raised was the way teachers treated the students especially those from poorer backgrounds and students of color.

Students with disabilities face additional challenges with regard to school attendance. For instance, Stevens and Kim-Gervey (2016) found the learners lacked access to medical care. This barrier compounded diagnosis of various challenges such as the absence of a robust support network and a scarcity of more inclusive and less restrictive placements. Chronic illnesses especially increase student risk for not attending school and contribute to diminished academic achievement particularly in cases where the student and the family may not have the means to manage the conditions or in cases where the illness increases the difficulties facing the student. For instance, a student facing poor resources and lack of transportation without having a disability will have greater problems if special education becomes an additional factor. Students with learning disabilities and mental or behavioral difficulties may have more cases of unexcused absences (Cortis, Zahra, & Farrugia, 2014). The challenges for students also increase if school personnel does not have the resources needed to cater to the learner irrespective of their mental or physical health. Therefore, physical challenges from medical conditions aggravate chronic absenteeism through shifting the student focus to recovery.

A policy document by Cortis et al. (2014) divided the range of problems contributing to chronic absenteeism into student-related, family-based, school-bound, and community-based variables. Meanwhile, a study conducted in Jamaica involving data collected from parents, teachers, and students from 71 schools identified other variables that specifically showed how the environment and community undermine the need to learn thus increasing the possibility of chronic absenteeism (Cook, 2010). For instance, the findings showed that families experienced

financial constraints that made it difficult to afford lunch money and transportation, as a consequence of high unemployment rates.

The variables associated with chronic absenteeism reflect a myriad of issues including economic, environmental, individual, parental, school, and community. Usually, these factors do not occur in isolation making absenteeism to emerge as the interplay of the different factors. For instance, economic capabilities will affect chronic health based on the ability of the family to intervene as required. Additionally, race variables tie in with student economic background, access to resources, and transportation, in which students of color have disproportionate representation. Therefore, intervening in chronic absenteeism will require addressing these variables singularly as well as together. Research shows that different efforts are available to deal with these variables.

Interventions in Addressing Chronic Absenteeism

Results from empirical studies show a range of interventions at the state level in dealing with chronic absenteeism and truancy. The literature includes studies that examine the different interventions undertaken by various agencies to address chronic absenteeism, and specific publications on actions undertaken by states (Attendance Works, 2013). In this section, the researcher presented literature about interventions and their efficacy in addressing absenteeism, outline actions undertaken by states, and finally look at interventions specific to New Jersey and how they compare to other states.

An institutional report entitled *The Attendance Imperative* by Attendance Works (2013) highlights the importance of policymakers and advocates at the state-level in taking steps toward supporting interventions against chronic absenteeism. The report mentions the need for public awareness, a standard definition of chronic absence, attendance tracking, chronic absence

reports, and reports to families. Other factors that aim at enhancing school attendance include requirements for school improvement, building capacity, and interagency resource allocation and coordination.

Essentially, the variable of public awareness affirms the need to develop public awareness about chronic absence and ensuring the public understands the reason it matters in sustaining student achievement, graduation from high school, and workplace success (Attendance Works, 2013). Chang and Leon (2013) gave an illustration of Baltimore where public awareness was conducted through a citywide campaign and in combination with expanded monitoring led to a reduction by almost half in chronic absenteeism in a middle school. Part of public awareness also includes engaging the community through community-based coalitions, building on volunteering, and community outreach. Balfanz and Byrnes (2012) used an illustration of the New York City Ad Council campaign that asked parents whether they knew where their children were, noted that educators, students, and parents alike had limited knowledge about the dangers of chronic absenteeism, and were unaware of what constituted as dangerous levels of absenteeism. Public campaigns aim to ensure that people within the society are aware of the magnitude of chronic absenteeism and begin to create instances in which stakeholders can deal with the challenge.

Secondly, as noted when defining chronic absenteeism, a standard definition is lacking across states and in the literature (Attendance Works, 2013). Therefore, the recommendation is to adopt a standard definition that can be used across states and in each school district. The definition would clarify the factors included in chronic absenteeism including excused and unexcused absences, and further, consider the role of suspensions in missing school days or

transfer to a new school. The purpose is to develop a comprehensive outlook in making the standard definition for chronic absenteeism and facilitating adoption across schools and districts.

Elsewhere, attendance tracking refers to the establishment of a state longitudinal database that provides accurate and consistent data from preschool to high school. Such information would facilitate identification of attendance trends from early school years and build a strong foundation for attendance from the onset. School district personnel may also support the process by providing families with actionable, real-time data on a child's attendance to ensure they remain alert to students being out of school for too many days.

The interventions also reflect actionable recommendations for school personnel, such as formulating school improvement plans that have foundation on data regarding absences. Developing strategies for nurturing a culture of attendance, identifying causes of absenteeism, and fashioning effective interventions for chronically absent students are also cited as good practices (Attendance Works, 2013). Bruner et al. (2011) also noted the importance of collecting more and better data as a way to facilitate identification of how many students face chronic absenteeism and incorporate such data into school data systems at the district and state levels.

A study by Deitrick, Ye, Childs, and Zhang (2015) that involved the development of a data model showed that having a comprehensive database helped educators to classify students and then to come up with predictors of absence as well as to facilitate the building of interventions.

The school district leadership, teachers, parents, community-based organizations, and public agencies also need to ensure they create opportunities for capacity building by learning about evidence-based interventions and promising practices for addressing chronic absence (Attendance Works, 2013). Capacity building involves the development of comprehensive and

collaborative approaches that universally supports and nurtures a habit of school attendance, in which students and parents encourage everyday presence. Further, capacity development reflects offering personalized early outreach for those with at-risk attendance patterns. As identified previously, school personnel sometimes use legal and punitive interventions to address absenteeism. Capacity building reduces the need for institutions to begin developing mechanisms that are more reflective of the needs of their students and parents, with expensive punitive actions taking the least importance.

The variable of interagency resource allocation and coordination highlights the importance of cooperation among agencies in dealing with chronic absenteeism. This would include districts, public agencies, parent organizations, civic organizations, businesses, nonprofits, and policymakers, which come together to allocate resources, collect data, and improve school attendance (Attendance Works, 2013). Further, these agencies have the role of developing relevant local and state policies, and programs such as health services, transportation, early care and education, afterschool programs and mentoring to mitigate variables influencing absenteeism (Attendance Works, 2013).

A policy brief by Talbert-Johnson and Russo (2013) echoed the interventions identified in the Attendance Works (2013) but specified them to legal strategies that education leaders may want to adopt. These interventions include assembling broad-based teams that include administrators, teachers, counselors, parents, staff, students, and community members that can develop broad-based support and update attendance policies. As noted by Balfanz and Byrnes (2012) students can participate through peer mentoring initiatives, which can be more effective compared to educator mentoring. Further, the leaders may want to build strong relationships and develop partnerships with families and students by sending information to parents and educating

them on the importance of attendance. A longitudinal study involving 39 schools showed that family and community partnerships created a holistic approach to addressing school and classroom factors outside the school (Sheldon & Epstein, 2004). Parental involvement included sending parents letters about student progress, discussing attendance policies and practices, providing a contact number for inquiries, and providing parents with access to student attendance records. Parents may also volunteer in school activities such as award ceremonies.

Another intervention is the establishment of effective monitoring and tracking systems capable of recognizing patterns of absence to promote early identification of students that require intervention as a way toward reducing risky behaviors that contribute to chronic absenteeism and truancy. The authors include the importance of bringing in other stakeholders including law enforcement, health officials, and education agencies to organize coordinated efforts to help students in regular attendance (Talbert-Johnson & Russo, 2013). The stakeholder cooperation needs to be at national, state, and local levels to ensure consistency in monitoring and reporting (Balfanz & Byrnes, 2012).

Another approach is to embrace a positive reinforcement system; in which perfect attendance earns a reward. Talbert-Johnson and Russo (2013) gave the example of New York City in which schools started a campaign of rewarding students through receiving wake-up calls from celebrities. Such an outcome would require school personnel to build strong relationships and develop partnerships with various stakeholders including families and students by sending information to parents and educating them on the importance of attendance. Stevens and Kim-Gervey (2016) echoed the need for partnerships by identifying the need for increased number of meaning partnerships between school/districts with community-based organizations; as such organizations can provide services that support students, families, and institutions of learning.

Partnerships include various organizations within the community as well as governmental organizations such as social services (Henderson et al., 2014). Other agencies are faith-based organizations working in target communities. As a result, families and students will be motivated to engage in continuous schooling through the increased financial and psychosocial support.

As educators build on interventions, it is advisable to conduct reviews of existing attendance policies and review or update them based on new data on chronic absenteeism and attendance, thus ensuring that emerging policies are reflective of the collected evidence (Attendance Works, 2013; Talbert-Johnson & Russo, 2013). Continued review of policies and interventions is useful in building revolving interventions that include and exclude based on tested effectiveness. This further creates an opportunity for continued learning among the policymakers and the interested groups. Stevens and Kim-Gervey (2016) suggested that revising policies needs to include the elimination of those procedures that increase disparities specifically when serving students that show continued absenteeism and dropout because of system disparities. These include students of color and students with special needs that tend to be suspended or excluded from regular instruction.

The most effective interventions include the adoption of best practices that increase sensitivity to the needs of students. Best practices such as increasing educator diversity and making changes to the curriculum to make it more inclusive and exciting directly relate to learner needs (Stevens & Kim-Gervey, 2016). Educator diversity entails bringing in culturally and linguistically diverse teachers that can facilitate culturally competent learning that recognizes student cultural backgrounds and increase teachers' ability to relate to student experiences. States already have a requirement for ensuring every child has an equal opportunity of learning based on ESSA, and provision of culturally competent educators is part of the

accountability process. Further, educators have a responsibility toward the endowment of engaging content and courses that encourage students to reach higher standards and become critical thinkers. The purpose is to promote student engagement and ensure the content is responsive and relevant to their level of education.

Achieving a solution to school chronic absenteeism requires resolute effort in addressing challenges faced by special education learners. Students classified as needing special education services represent a group that faces greater difficulties in school attendance compared to others. The Individuals with Disabilities Acts (1975) established guarantees for education for students with disabilities by tasking the public education system to provide this group with free and appropriate education; however, these students continue to face disparities including poor identification. Belfanz et al. (2014) noted that students with disabilities including learners with dyslexia, visual and hearing impairment, health impairment, intellectual disabilities, and all others and those with autism graduate less often than other students.

Cumulatively, these students represent between nine and 19% of students in the K-12 system, and thus their lack of completion of school has implications on the national graduation rates. Therefore, development of interventions that specifically address the requirements of the students with special needs has implications for the national education system as well as for students in special education. These interventions may include inclusion in regular schooling but with support services as needed. Further, educators may adopt strategies that target specific disabilities such as the Asthma-Friendly Schools Campaign that targets students with Asthma as a chronic condition ensuring they catch up with other students (Belfanz et al., 2014)

Noted in the literature on building interventions is the implementation of measures to curb chronic absenteeism across groups and stimulation of cooperation among different

stakeholders. Additionally, the solution should arise from continued data collection and revision of existing interventions. The literature (Attendance Works, 2013; Balfanz & Byrnes, 2012; Stevens & Kim-Gerverey, 2016; Talbert-Johnson & Russo, 2013) identifies the role of building partnerships thus ensuring interventions include schools, families, and communities working together to promote successful education for all students from varying backgrounds. Some of the interventions in curbing chronic absenteeism entail the development of best practices that support students based on their needs and background, and that all students have equal learning opportunities. These abovementioned interventions show how cities such as Chicago and New York are implementing diverse action in order to identify possible positive outcomes for their students in terms of school attendance. New Jersey, as was outlined above, has also implemented various interventions to address chronic absenteeism from school.

Suggested Solutions for New Jersey

New Jersey education officials have implemented a variety of initiatives targeted at reducing chronic absenteeism. These initiatives come from the recognition that states may not avoid absenteeism and thus need policies attendance, which is responsive to unique needs of students and families and communities that can serve to improve student (Chen & Rice, 2016). These interventions follow within practices identified in the previous section including collaboration among different stakeholders and use of current and comprehensive information on school chronic absenteeism. In 2015 and 2016, the Showing Up Matters (2016) report for New Jersey provided insight to those policy initiatives leaders, and parents can undertake across the state to resolve chronic attendance challenges throughout K-12. The report reflects the development of a new culture targeted at improving attendance by involving educators, parents, students, and the community to build an environment that encourages attendance (Rice, 2015).

Among the initiatives in the report, school leaders in New Jersey are increasing communication with parents in order to clarify the importance of school attendance, which help the parents to understand the importance of promoting attendance. Such a message needs to be frequent and conveyed by all key players in the school including teachers, principals, and superintendents (Chen & Rice, 2016). As parents understand the importance of attendance, they also begin to educate their children on the same. The information to parents should also include immediate notification if a student begins to show patterns of absenteeism. Making immediate contact with the parents will be important for establishing support and ensuring that the parents are aware of the student behavior. Sometimes, the parents are unaware that the students are not attending schools (Rice, 2015) and thus immediate sharing of information is helpful in identification of student behavior and early intervention.

The second intervention in the New Jersey report, Rice (2015) suggested that school leaders would benefit from early identification of the problem, as this would translate to early intervention. For example, by identifying early in the school year that a student is missing school, then the school leader would be aware of the students that may be at risk and begin early intervention. The tracking would also facilitate early identification of the reasons students are missing school thus create an understanding of the barriers and ensure the leaders are better placed to address the challenges. For example, if the problems include inadequate transportation, schools and district leaders can then formulate interventions on how to increase the means of transport or the number of trips to cater for more students. For instance, some school in New Jersey have a walking-to-school-bus in which students and families are advised to walk to school if they can but to do so in groups for safety purposes. However, only a few schools have implemented the program to continue high dependence on the bus.

Another school-based intervention is to assign mentors to all chronically absent students. An example is the New York City model, in which connecting students to community mentors showed positive outcomes (Balfanz & Byrnes, 2012). The study found that the beneficial students stopped being absent and improved their academic performance including the high school credit accrual. Besides, effectively stipulated strategies are cost-efficient and reliable in reducing chronic absenteeism. A similar model can be adopted in New Jersey allowing for connection of students with community mentors such as businesspersons or community leaders. However, this approach would require significant resources that may be beyond the scope of most educational institutions. In this context, teachers and principals can implement a reward program that recognizes excellent and improved attendance that act as incentives for improving attendance. For example, some schools in New Jersey adopted a system of rewarding students using pizza parties and assembly recognition (Balfanz & Byrnes, 2012).

Railsback (2004) found that an intervention program in Kern County, California accomplished a 43% reduction in school absenteeism in all its elementary schools. Although Killian (2015) did not report the specific percentage of success rate obtained from teacher-based intervention program, he indicated there was a dramatic decline in absenteeism among students with attendance higher than 40%. The program focused on ensuring the teachers motivate their students by showing care and affection to students, pressing all the students to excel without assuming failing is their nature, and implementing behavior support program.

Parents also have specific interventions they can implement to promote attendance including talking to their children about the importance of going to school, setting up an environment that makes going to school more manageable such as ensuring consistency in bedtime, homework completion, and avoiding activities that may cause absence (Chen & Rice,

2016). For example, parents may avoid scheduling medical appointments during school or long trips and vacations that may compromise the school term. If a parent realizes their child is not attending school or is reluctant to go to school, he or she should find out the reason and work with the child's teacher or principal to find a response. Parents also need to be proactive in facilitating student attendance; such as finding alternative transport if needed if for unforeseeable circumstances a challenge in transport arises, as well as reach out to others that can help with resolving the challenge. Chen and Rice (2016) further suggested that working parents can obtain before and aftercare that can help balance work and family as well as provide the student with stability and unpredictable disruptions in transportation and work schedules.

The school district leadership also has a role to play as identified by Chen and Rice (2016), regarding the provision of adequate resources to schools including staff, data tools, and training. For instance, the state should provide funding so that schools are effectively staff with counselors in order to be able to discuss with the students the problems facing them. Adequate staff is also important for monitoring students. Part of the support system to schools as noted by Attendance Works (2013) and echoed by Chen and Rice (2016) is capacity building or professional development, in which staff receive opportunities for professional development on best practices models and the groundwork with families.

Noted in the suggested solutions for New Jersey and the previous section is that addressing chronic absenteeism is not a one tool fix, but an interplay of the strategic combination of different approaches that include data collection, communication, cooperation, and family support. Therefore, effectively addressing school chronic absenteeism involves various stakeholders and different actions. Furthermore, the suggestions provide an indicator that one size does not fit all, which implies the need to develop responses based on the specific problems.

Theoretical Framework: Production Function Theory

The production function theory informs the current study in education. The theory originates from an economic background, informed by the study of production as a process of producing outputs from the inputs (Besanko & Braeutigam, 2011). The production looks at the use of available resources to create a good or service that is suitable for use or exchange in a market economy. In the economic field, production is a flow concept measured as a rate of output over time evident through the goods or services produced; the form of goods or services created; and the temporal and spatial distribution of the goods or services. These three attributes represent activities used in manufacturing, storing, shipping, and packaging to balance the pattern of supply and demand for goods and services in any quantity, form, shape, size, length, and distribution required in the market (Shekhat, 2015).

The production function in economics reflects a relationship built between the physical output and results of the production process with the inputs. The production function is a mathematical function that relates to the maximum amount of output obtained from a given number of inputs (Shekhat, 2015). The combination of inputs includes labor and capital.

From its economic background, the production function theory made its way into other fields of study adopting the theory into a functional role that fits into the relationships studied within particular fields. For instance, the educational production function reflects the adoption of the theory into the education process, in which it reflects the relationship between school and student inputs, and a measure of school output (Bowles, 1970; Hanushek, 1979). The school years are a period of student cognitive skill development that provides the individuals with the opportunity to become productive members of the society and to succeed in post-secondary placement. The theory considers the relationship between scholarly achievements and student

outcomes. The usefulness of this theory in the current study lies in its recognition of both the input and output variables of an academic career, meaning the time a student spends in school and their possible outcomes. Therefore, the production function theory forms a relation with this study by establishing attendance as an input. Thereby, it indicates that the higher the student attendance, the higher the academic output.

As noted by Bowles (1970), the production function theory offers a unique opportunity for the study of productivity as related to education. The author argued if the school has a positive effect on labor productivity or earning, then this effect is traceable to the development of cognitive skills and attitudes in school. Moreover, the development of cognitive skills and attitudes correlated to school policies and the allocation of scarce resources. The production function indicates how school inputs influence the development of productive capacity among students and thus provides them with a better indication of their qualification for future productive roles. The implication is that how well a student adapts to the relationship between school input (labor and capital) and produces a certain output (high achievement in tests and completion of school) then the higher their likelihood to succeed in post-secondary school placement.

The application of the production function theory to education offers an avenue for policy formulation and change toward ensuring educational planning reflects efficient resource allocation to ensure school personnel pursues the objective of graduating productive citizens (Bowles, 1970). Hanushek (2008) supported the application of the education function theory in education by elucidating how the use of the theory enables the system to overcome historical challenges in measuring schooling and its outcome. For instance, the author notes the most frequently used model of measurement has been attainment or the years completed in school, in

which the task is to show the measure of individual skills. The underlying assumption here is that the same input (time off school) produces the same result (student achievement and skills) over time for every student, district, and country.

The production function theory thus goes beyond time, to reflect other factors that influence student outcomes and in turn school outcomes. A regression analysis study by Gyimah-Brempong and Gyapong (1991) using data from the State of Michigan examined the effects of socioeconomic characteristics of communities in the production of high school education. The results offer insight into how non-school based resources also affect student and school outcome.

The production function theory goes beyond the school resources, inputs, to consider those inputs (labor and capital) that influence the outcome (student achievement, skills, school continuation and graduation, and post-secondary placement). Chizmar and Zak (1983) examined the multiple outputs including cognitive achievement and attitude based on two functions:

$$Y1 = F (X1, X2, X3 \dots XP) \text{ (X is a representation of the inputs, and Y the outputs)}$$

$$Y2 = G (X1, X2, X3 \dots XP) \text{ (F and G represents the different outputs)}$$

X represents an investment by different stakeholders, including parents, teachers, and the learners who offer psychosocial support, academic assistance, and parental help on homework. List, Samek, and Suskind (2018) noted the function $F(\dots)$ maps the input for the generation of academic achievement. In the production function theory, numeral 1, 2, 3... represent the age of a learner whereby achievement is dependent on instantaneous investment. List et al. (2018) noted the previous venture on a student has an impact on current performance. For instance, the absence of adequate teacher's assistance in kindergarten will hamper success in elementary level.

The different inputs provide an opportunity to consider the quality of education received, the role of parents, student consumption of the educational resources, and the relationship of the

different factors in educational achievement. The theory facilitates analysis of the variables identified, specifically how chronic absenteeism influences school outcome for students in high school regarding dropout, graduation, and post-secondary placement as variables defined in the New Jersey report for schools. Notably, the production function theory focuses on the economic aspect of the school and student, including the expenditure per student versus the outcome (Hanushek, 1979). The output is expedient for the current study in aligning the student outcomes to school chronic absenteeism, by responding to the question of how continued explained and unexplained absenteeism influences high school student outcomes. For instance, Hanushek (1986) noted the economics of schooling related to the production function by a relationship built between school enrolment, school retention, and school completion, which are all factors reflected in chronic absenteeism. Student presence in school reflects their honoring enrollment and thus the possibility of graduation. Within chronic absenteeism, the researcher, therefore, considers the underlying factors that influence retention and completion, versus those that encourage absenteeism, and the implication of this relationship on student graduation, dropout, and post-secondary school placement.

Conclusion

This literature review offers insight into chronic absenteeism both as a dependent and independent variable in the New Jersey education system as well as other states across the nation. Chronic absenteeism as a dependent variable rises from the background of the students, such as being a consequence of poor neighborhood conditions as well as being an outcome of a student based variables such as a child being chronically ill. These different predictors of student absenteeism are outside the student's control but have a considerable impact on their possible attendance. Chronic absenteeism also arose in literature as an independent variable, which

establishes it as a predictor of student outcome. As such, chronic absenteeism influences student outcomes based on their school attendance. For instance, it affects how well as a student will perform academically, their possibility of graduating versus dropping out of school, and will influence their post-secondary placement in jobs and institutions of higher education. Further, chronic absenteeism influences performance in the workplace. The recognition that chronic absenteeism as an independent variable has an overreaching effect on student school and out-of-school outcomes creates an environment in which data are needed to determine how to minimize on the negative effects as well as minimize on absenteeism among students.

Because the majority of the literature on the topic focuses on early childhood and elementary chronic absenteeism, leaving out high school, the present study focuses on secondary school students. Further, the literature review shows various studies focus on chronic absenteeism as a dependent variable, instead of considering the issue as an independent variable.

This study thus focuses on how chronic absenteeism at the high school level affects outcomes in other areas of student life including their possibility of graduating from high school and success outside the school. The study will look at the relationship between education input, specifically attendance, and the outcome (graduation and dropout, achievement, and post-secondary placement) showing how chronic absenteeism affects student outcomes.

The study uses the production function theory, which considers inputs within the education system and their influence on school outcome. The data utilized for the study emanated from Department of Education in New Jersey. The study responds to the research question: What is the impact of chronic absenteeism on indicators of success at the high school level? The question is supported by three sub-questions namely: What is the strength and direction of the relationship between chronic absenteeism and school level aggregate dropout

rates? What is the strength and direction of the relationship between chronic absenteeism and school level aggregate four-year graduation rates? What is the strength and direction of the relationship between chronic absenteeism and school level aggregate post-secondary acceptance rates?

The data collected will be an instrument in responding to the arising hypotheses, in which the study will predict whether a significant outcome exists in the relationship between chronic absenteeism with school level aggregate dropout rates, school level aggregate four-year graduation rates, and school level aggregate post-secondary acceptance rates. The study outcome will thus be a model of how student attendance of school and its lack of a measurable number of days in a school year has an impact on the school and student.

Chapter Three: Methodology

The researcher conducted this correlational, explanatory, cross-sectional study to explain the influence of chronic absenteeism on secondary school dropout rates, four-year graduation rates, and post-secondary acceptance while controlling for specific student and school characteristics. The research adds to the available literature on chronic absenteeism showing how as the independent variable it influences dropout rates, four-year graduation rates, and post-secondary acceptance as the dependent variables.

Research Design

The correlational, explanatory, cross-sectional study is non-experimental indicating that the researcher does not manipulate the existing data, but instead the researcher evaluates the information within the context that it exists (Price, 2016). The current study fits within the approach as it looks at variables that reflect how individuals behave within their natural setting, which translates to how students learn within New Jersey. The study seeks to explain the influence of student absenteeism on school dropout rates, four-year graduation rates, and post-secondary acceptance while controlling for specific student and school characteristics. The cross-sectional nature of the study signifies that only one year of data analysis was plausible. Perhaps trends exist that were not identified by this design that could be recognized by a longitudinal design

Non-experimental researchers might focus on establishing a statistical relationship between variables without the manipulation of the independent variable or the random assignment of participants to condition, which is common in correlational research. The current study is, therefore, a correlational, non-experimental design, meaning that it explains whether any relationship exists between chronic absenteeism and school dropout rates, graduation rate,

and post-secondary acceptance. In a correlational study, the researcher measures the variables involves no attempt to control for extraneous variables and then determines whether a relationship exists between them (Price, 2016). The extraneous variable refers to attributes that one may not initially intend to include in the study but which might influence the study in a way that would invalidate the results, and thus the researcher attempts to exert control. The current study does not identify search variables nor try to establish control over them. This study explains how chronic absenteeism influences other variables within the system. The data will undergo both correlational analysis and regression analysis.

Regression analysis is a form of predictive modeling technique that involves investigating a relationship between dependent and independent variables (Price, 2016). The resultant relationship is significant in predicting the future outcomes. The study used simultaneous linear regression to explain how chronic absenteeism influences school dropout rates, graduation rate, and post-secondary acceptance when controlling for other school and student variables. The multiple regression was expedient in this study as there were several independent variables including free and reduced lunch, school size, students in special education, and English language learners.

First, the establishment of data normality involved running tests for skewness on the reports from New Jersey Department of Education. Next, a Pearson correlation matrix was developed to look at any statistically significant relationships between the independent and dependent variables due to the nature of the data collected. The analysis evaluated data on free and reduced lunch, school size, and English language learners from the high schools in New Jersey against chronic absenteeism. Each pair was assessed independently to determine the type of relationship whether it was positive, negative, or no correlation. Thus, the Pearson's

correlation coefficient described the strength and direction of the relationship between chronic absenteeism and the independent variables. In this case, a value in the negative was an illustration of negative linear relation while positivity in value presents positive collinear relation. Therefore, $-1 \leq r \leq 1$ where r represents the relationship. The closer the value to -1 or 1 , the stronger the correlation (Hall, 2015 p. 3).

Research Questions

The overarching research question was: What is the influence of chronic absenteeism on indicators of success at the high school level when controlling for student and school characteristics?

The supporting research questions are:

Research Question 1: What is the strength and direction of the relationship between chronic absenteeism and school district high school dropout rates?

Research Question 2: What is the strength and direction of the relationship between chronic absenteeism and school level aggregate four-year high school graduation rates?

Research Question 3: What is the strength and direction of the relationship between chronic absenteeism and school level aggregate post-secondary acceptance rates?

Sample Population/Data Source

The sample for this study was comprehensive, non-charter, non-vocational, high schools that housed grades 9-12, in New Jersey. As such, vocational-technical schools and charter high schools were exclusive. The sampling method was purposeful in which the researcher went through the Microsoft Excel report provided by the New Jersey Department of Education, and using county, district, and school code as specific identifiers was able to delineate those schools that were relevant to the present study (NJ Education Department, 2015). The classification in

the report was PK-12, which comprised the 2,473 schools, from which the researcher narrowed down to cases for only grades 9-12, but some of the cases were inclusive of lower grades. The cases in which schools comprised grades other than 9-12 were removed, reducing the sample size to 371 schools specific to grades 9 to 12 within the PK-12 schooling system. The researcher then removed selective student admission schools such as vocational, charter, and magnet schools, reducing the total sample to 299 schools. The 299 schools included met the following criteria: make sure you discuss excluding charter schools and vocational-technical schools.

The institutions selected for this study were public schools that:

- Contained Grades 9, 10, 11, and 12
- Have public nonselective student admission criteria
- Had reports that contained data for all demographic information within the New Jersey Department of Education.

Data Collection

The data for the study came from the NJ School Performance Report for 2015-2016 accessed as a Microsoft Excel document from the NJ Education Department website (2016). It had comprehensive detail on the state's attendance, truancy, and chronic absenteeism. The Excel workbook presented a detailed report from all New Jersey public schools, providing quantitative data.

The New Jersey Department of Education was the source of data for the case study in the collection process. A case study is an approach to data collection that involves using a specific entity to study in depth an issue base on the experiences of the sample (Yin, 1994). Choosing the New Jersey public school system provided a single entity with many cases that was extensively examined to understand how chronic absenteeism affects student outcomes. The case study was

appropriate for this study as it allowed for the specific examination of student behavior within a single natural environment, and thus the findings and conclusion were applicable to New Jersey. Agreeably, the findings may not be generalizable to other states, but they are useful in providing lessons on student behavior and outcomes that can be useful in putting in place intervention programs.

The data incorporated from the case study were quantitative, which is useful in statistical testing in both correlational analysis and simple linear regression. Quantitative data provides numerical findings of specific outcomes based on the tested variables. The study benefitted from the use of quantitative data because the magnitude of cases and variables in the study made it more manageable when using quantitative data. As identified in the literature review, school attendance can be influenced by student socio-economic background, homelessness, migration, and special education (Balfanz & Brynes, 2012; Cortis et al., 2014; Henderson et al., 2014; Rice, 2015; Stevens & Kim-Gervey, 2016). These factors contribute to access and continuation of schooling and further influence attendance. Therefore, although they were not specifically part of the variable testing, they may have served as indicators for the specific variable outcome in showing whether all students within that variable had similar outcomes irrespective of the extraneous variables. The process of collecting the quantitative data involved identification of schools based on public schools, contained grades 9, 10, 11, and 12, had nonselective student admission criteria, and had reports that contained data for all demographic information within the New Jersey Department of Education.

The selection of the school involved the School Header worksheet, the list of schools that presented all the 2,473 schools found in the report, and then provided the school code and name of the school in addition to the county and district code. The worksheet included the school grade

span such as KG-04, PK-08, 09-12, 06-08, or PK-12. The researcher highlighted the number of schools using cell search first for all cells with 12, which is the final grade. The researcher then delineated the cells with 09-12, leaving the 371 cases. From there it became possible to identify the schools based on the school code used as a recurring identifier across the workbook. Agreeably, the data required specific identification of every school code in the outcome worksheets, but it was possible to define a specific sample of 299 schools, based on the identifiable coding system. The student and school data were then used to categorize the students.

The data collection entailed the dependent variables described below:

- Chronic absenteeism rate based on students missing school for 10% or more of the mandated days for any reason;
- Drop rate founded on the percentage of high school students who drop out before completion;
- Post-secondary acceptance rate based on the percentage of students accepted into post-secondary institutions;
- Four-year high school graduation percentages based on students in New Jersey that complete their high school education; and
- Free lunch founded on the percentage of students benefitting from free and subsidized lunch.

Data Analysis

Pearson correlation. The computation of the p-value will depend on the formula advocated by Kirk (2007) where the distribution will have freedom of $n-2$ and standard error of Z_r with $n-3$ as the denominator. However, the weak correlation will not be significant at the

small sample necessitating the increment of the sample to 200 where the relationship $r=2$ will be significant at $\alpha=.05$ (Kirk, Brown, & Downar, 2014).

Simultaneous multiple regression. The sample size to produce a statistical significance in the regression model evaluates a p -value $< .05$ with a moderate effect size of at least 0.5. Thus, the sample size for simultaneous multiple regression will be at least of $50+8(k)$ formula, with k being the number of independent variables, to determine the effectiveness of the sample for statistical significance (Field, 2009). Meanwhile, this study comprised of four independent variables indicating a substantial sample will be $50+8(5) = 90$ to effectively detect the effect size of at least 0.5 at the confidence level of 95 (Elite Research, 2013).

Data analysis involved a summary on the factor level, whereby the descriptive statistics of each variable was analyzed. The presence of outliers that skewed the data necessitated winsorizing the data to reduce the emergent clutter. The SPSS software further assisted to compute the mean, standard deviation, lower and upper bounds, and 95% confidence level. Then, the researcher conducted a Pearson correlation to look at initial relationships and identified any potential multicollinearity prior to running the regressions. A comparison of predictor variables allowed the determination of the highest absolute correlation to the dependent variable for the lowering of multicollinearity and increment of R square.

Initially, the results on chronic absenteeism were examined before testing for data assumption for regression. The scatter diagrams illustrated a skewness is exceeding the acceptable limits. On further inspection, the result indicated an outlier score of 32.5% which was far above the mean of chronic absenteeism. In this regard, the winsorizing procedure was deployed to replace the outlier score of maximum value of 32.5% with 12.9%. The procedure improved the mean to 5.923 and the standard deviation to 2.884. On the second examination of

the data, the winsorizing procedure had reduced the skewness by ensuring all the values were within the acceptable range.

Chapter Four presents the analysis of the result from New Jersey Department of Education. The chapter describes the analyzed variables used to evaluate chronic absenteeism. It further presents the mean and standard deviation on impact distribution of factors such as limited English proficiency, disability, free lunch, high school graduation rate, post-secondary acceptance rate, and school dropout rates.

Chapter Four: Findings

Introduction

The study was designed to explain the influence of chronic absenteeism on school dropout rates, four-year graduation rates, and post-secondary acceptance while controlling for specific student and school characteristics. The presentation entails an examination of the correlation between chronic absenteeism to four-year graduation rate and post-secondary acceptance while controlling specific students and school characteristics. Secondary data were gathered from New Jersey Department of Education and was limited to high schools found on the school performance report, which formed our base population that further narrowed to 299 cases.

Dependent and Independent Variables

Results from empirical research suggest that chronic absenteeism affected school dropout rates, making it the independent variable. The New Jersey Department of Education defines chronic absenteeism as the missing of school for 10% or more of the mandated school days. It is differentiated from nonattendance as the latter only refers to unexcused absence from school (Dembo & Gullede, 2009). The explanation of other variables and their labels as used in the analysis are in Table 1.

Table 1

Variable

Variable	Label	Description
Chronic Absenteeism rate	Chronic	Students missing school for 10% or more of the mandated days for any reason
Drop rate	Chronic	Percentage of high school students who drop out before completion
Post-secondary acceptance rate	Post	Percentage of students that transitioned into post-secondary institutions
Four-year high school graduation	Graduate	Students in New Jersey that complete their high school education

percentages		
Free Lunch	FreeLunch	Percentage of students benefitting from free and subsidized lunch
Special Education Disability	Disability	Percentage of students affected with a form of disability
Limited English Proficiency	LEP	Percentage of students with limited English proficiency

Findings

The analysis entailed data summary on the factor level and the descriptive statistics of each variable. Table 2 below presents a summary of the cases analyzed for each variable.

Table 2

Case Processing Summary

Case Processing Summary	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Chronic	256	100.00%	0	0.00%	256	100.00%
DroprateChronic	256	100.00%	0	0.00%	256	100.00%
Post	256	100.00%	0	0.00%	256	100.00%
GradRate	256	100.00%	0	0.00%	256	100.00%
FreeLunch	256	100.00%	0	0.00%	256	100.00%
Disability	256	100.00%	0	0.00%	256	100.00%
LEP	256	100.00%	0	0.00%	256	100.00%

Chronic absenteeism. The Chronic absenteeism results had some outliers that skewed the data (Figure 1). The outliers emanated from data entry, measurement error or legitimate but rare observations. To reduce the clutter caused by the outliers and their effect on the mean and distribution of the data, the data were winsorized by manipulating the outliers, running boxplots, and repeating the process until the outliers dwindled. We started with a mean of 8.099% and a standard deviation of 5.36% with a maximum value of 32.5% and a minimum of 0.0%. After successfully winsorizing the data with the guidance of the boxplots, the final winsorized data had

a new mean of 5.923, a maximum value of 12.9 %, a minimum of 0.0% and an improved standard deviation of 2.884 (Table 3). The data were normalized after winsorizing (Figure 2)

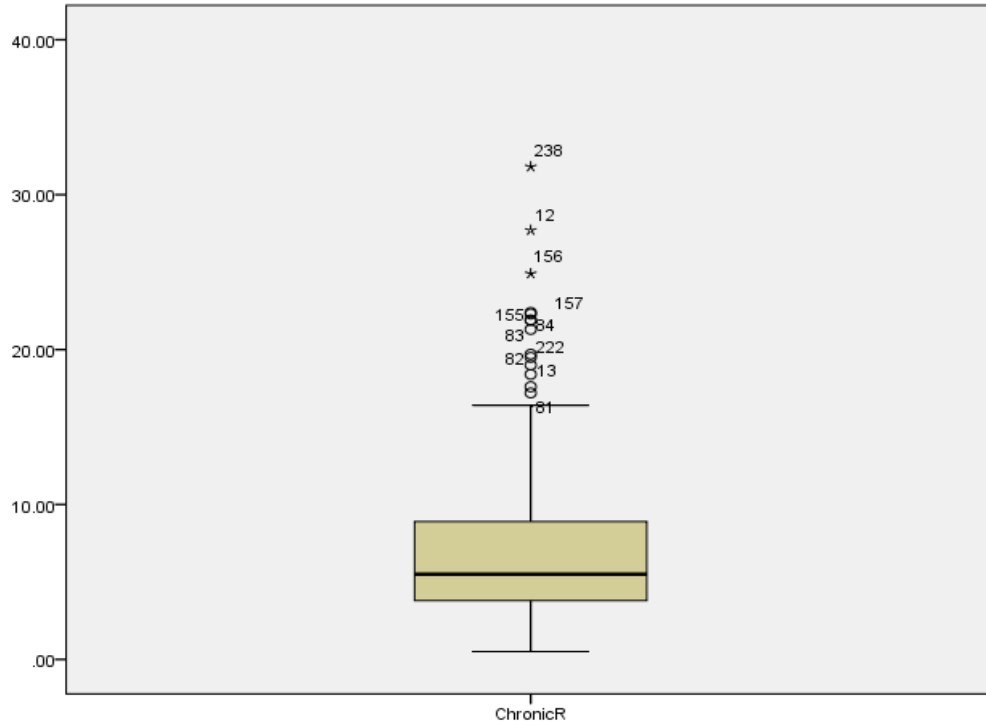


Figure 1. Boxplot of Chronic Absenteeism.

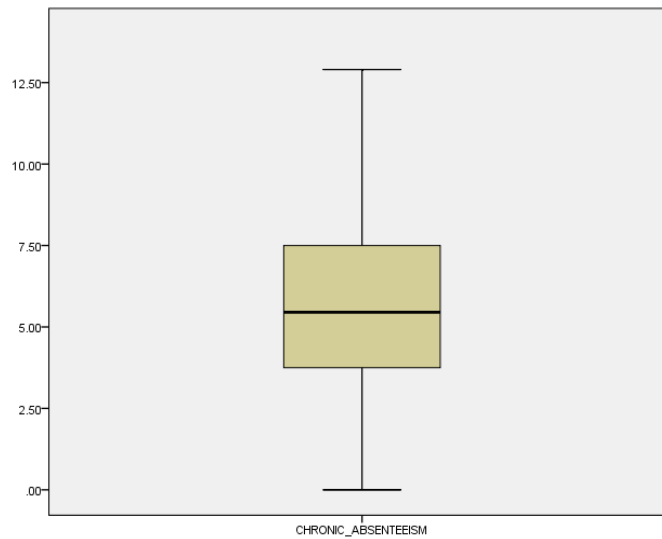


Figure 2. Boxplot of Winsorized Chronic Absenteeism.

The *computed* mean for chronic absenteeism was found to be 5.923% and a standard deviation of 2.89. The means for chronic absenteeism was estimated to lie between the most upper bound of 6.28 and the lowest bound of 5.57 (Table 3).

Table 3

Chronic Absenteeism Descriptive Statistics

		Statistic	Std. Error
Chronic Absenteeism	Mean	5.923	0.18053
	95% Confidence Interval for Mean		
		Lower Bound	5.5675
		Upper Bound	6.2786
	5% Trimmed Mean	5.8463	
	Median	5.45	
	Variance	8.343	
	Std. Deviation	2.88844	
	Minimum	0	
	Maximum	12.9	
	Range	12.9	
	Interquartile Range	3.78	
	Skewness	0.416	0.152
Kurtosis	-0.397	0.303	

School dropout rates. The high school dropout rate had a mean of 1.3434%. It had a standard deviation of 1.74779 and a population estimated mean lying between the lower and upper bounds of 1.1282% and 1.5585%, respectively. Besides, the rate had a 95% confidence level as shown (Table 4).

Table 4

School Dropout Rate Descriptive Statistics

		Statistic	Std. Error
Dropout rate	Mean	1.3434	0.10924
	95% Confidence Interval for Mean		
		Lower Bound	1.1282
		Upper Bound	1.5585
	5% Trimmed Mean	1.0949	
	Median	0.8	
	Variance	3.055	

Std. Deviation	1.74779	
Minimum	0.1	
Maximum	14.1	
Range	14	
Interquartile Range	1.2	
Skewness	3.302	0.152
Kurtosis	15.443	0.303

Post-secondary acceptance rate. The post-secondary acceptance rate was summarized in Table 5, having a mean of 60.56% and a standard deviation of 18.08. The population estimates of post-secondary acceptance rate mean were between 62.7851% and 58.3352% at 95% confidence level (Table 5).

Table 5

Post-Secondary Acceptance Rate Descriptive Statistics

			Statistic	Std. Error
post-secondary acceptance	Mean		60.5602	1.12983
	95% Confidence Interval for Mean	Lower Bound	58.3352	
		Upper Bound	62.7851	
			60.6759	
	5% Trimmed Mean		60.6759	
	Median		59.8	
	Variance		326.787	
	Std. Deviation		18.07725	
	Minimum		8.6	
	Maximum		97.2	
	Range		88.6	
	Interquartile Range		25.4	
	Skewness		0.001	0.152
	Kurtosis		-0.483	0.303

High school graduation rate. The high school graduation rate was found to have a mean of 89.70% and a standard deviation of 8.177. The computed confidence interval estimate of the population mean was 88.69% and 90.70% at 95% confidence interval (Table 6).

Table 6

High School Graduation Rate Descriptive Statistics

		Statistic	Std. Error
Graduation Rate	Mean	89.6953	0.51103
	95% Confidence Interval for Mean		
		Lower Bound	88.6889
		Upper Bound	90.7017
	5% Trimmed Mean	90.4905	
	Median	92	
	Variance	66.856	
	Std. Deviation	8.17654	
	Minimum	51	
	Maximum	100	
	Range	49	
	Interquartile Range	8.75	
	Skewness	-1.625	0.152
	Kurtosis	2.948	0.303

Free lunch. The analysis summarized free lunch as offered by schools with a mean of 28.57 and a standard deviation of 23.86. The 95% confidence interval for the population mean for the free lunch variable was 25.6283 and 31.502 (Table 7).

Table 7

Free Lunch Descriptive Statistics

		Statistic	Std. Error
Free Lunch	Mean	28.5652	1.49129
	95% Confidence Interval for Mean		
		Lower Bound	25.6283
		Upper Bound	31.502
	5% Trimmed Mean	27.2026	
	Median	20.425	
	Variance	569.329	
	Std. Deviation	23.86061	
	Minimum	0.11	
	Maximum	99.58	
	Range	99.47	
	Interquartile Range	34.99	
	Skewness	0.795	0.152
	Kurtosis	-0.527	0.303

Disability. The summary statistics for special education disability showed a mean of 15.38 with a standard deviation of 4.02. The 95% confidence interval for the population mean estimate, ranged between 14.88 and 15.87 (Table 8).

Table 8

Disability Descriptive Statistics

		Statistic	Std. Error	
Disability	Mean	15.3789	0.25099	
	95% Confidence Interval for Mean	Lower Bound	14.8846	
		Upper Bound	15.8732	
	5% Trimmed Mean	15.0556		
	Median	15		
	Variance	16.126		
	Std. Deviation	4.01578		
	Minimum	8		
	Maximum	37		
	Range	29		
	Interquartile Range	4		
	Skewness	1.535	0.152	
	Kurtosis	4.183	0.303	

Limited English proficiency. Table 9 summarizes limited English proficiency. It had a mean of 4.08 and a standard deviation of 6.67. The population’s mean was estimated to lie between 3.26 and 4.9 at 95% confidence interval (Table 9).

Table 9

Limited English Proficiency

		Statistic	Std. Error	
LEP	Mean	4.0777	0.41656	
	95% Confidence Interval for Mean			
		Lower Bound	3.2574	
		Upper Bound	4.8981	
	5% Trimmed Mean	3.049		
	Median	1		
	Variance	44.421		
	Std. Deviation	6.66494		
	Minimum	0		
	Maximum	37		
	Range		37	
	Interquartile Range		3.6	
	Skewness	2.705	0.152	
	Kurtosis	7.826	0.303	

Research Question 1. What is the strength and direction of the relationship between chronic absenteeism and school level aggregate-dropout rates? A correlation analysis was conducted to answer the research question on strength and direction of the relationship between chronic absenteeism and school district dropout rates. Chronic absenteeism demonstrated a strong positive, statistically significant ($p \leq .05$) correlation with school dropout rate (see Table 11).

Research Question 2. What is the strength and direction of the relationship between chronic absenteeism and school level aggregate four-year graduation rates? Chronic absenteeism was found to have a strong negative correlation to graduation rate with a Pearson correlation coefficient of (.691) and a significance level of $p < .001$. Primarily, this means that a decrease in chronic absenteeism leads to an increase in four-year graduation rates in the districts.

Research Question 3. The correlation between chronic absenteeism and free lunch was positive, and statistically significant ($p \leq .05$) with a coefficient of 0.623 at five percent

significance level to answer research question three. Disability has a weak positive correlation with chronic absenteeism. It has a Pearson correlation coefficient of 0.194, which is consistent with Stevens and Kim-Gervey (2016). Limited English proficiency has a positive correlation with chronic absenteeism having a Pearson coefficient of 0.439 $p \leq 0.05$.

It is consistent with empirical literature that gives five categories that influence the state of chronic absenteeism in New Jersey, where limited English proficiency is included among the five classes (Rice, 2015). The predictor variables are correlated. However, only two variables (post-secondary acceptance rates and free lunch) are highly correlated (a Pearson coefficient higher than 0.7) to render one of the variables redundant, consequently, suggesting multicollinearity. The researcher settled on free lunch for the regression model over post-secondary acceptance rates as it has the highest absolute correlation to the dependent variable (Pearson correlation coefficient of 0.528 over -0.522) of the two variables and the extant literature suggests that free lunch influences chronic absenteeism.

Table 10

Correlations

		Droprate- Chronic	Post	Grad- Rate	Free- Lunch	Disability	LEP
Chronic	Pearson Correlation	.638**	-.569**	-.691**	.623**	.194**	.439**
	N	260	267	268	271	271	271
Droprate- Chronic	Pearson Correlation	1	-.522**	-.730**	.528**	0.087	.522**
	Sig. (2- tailed)		0	0	0	0.16	0
	N	260	257	257	260	260	260
Post	Pearson Correlation	-.522**	1	.662**	-.719**	-.294**	-.445**
	Sig. (2- tailed)	0		0	0	0	0
	N	257	267	266	267	267	267
GradRate	Pearson Correlation	-.730**	.662**	1	-.774**	-.327**	-.582**
	Sig. (2- tailed)	0	0		0	0	0

	N	257	266	268	268	268	268
FreeLunch	Pearson	.528**					
	Correlation		-.719**	-.774**	1	.173**	.660**
	Sig. (2-tailed)	0	0	0		0.004	0
	N	260	267	268	271	271	271
Disability	Pearson	0.087					
	Correlation		-.294**	-.327**	.173**	1	-0.075
	Sig. (2-tailed)	0.16	0	0	0.004		0.221
	N	260	267	268	271	271	271
LEP	Pearson	.522**					
	Correlation		-.445**	-.582**	.660**	-0.075	1
	Sig. (2-tailed)	0	0	0	0	0.221	
	N	260	267	268	271	271	271

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is insignificant

Regression Analysis

The established significant correlations lay a foundation for simultaneous regression analysis. Each of the independent variables evaluates in terms of its predictive power over the dependent variable and above all that offered by the other variables. The value of R squared explains the amount of variance of the dependent variable of high school dropout rate that is described by the model.

Primary research question. What is the influence of chronic absenteeism on indicators of success at the high school level when controlling for student and school characteristics? The model had four independent variables: limited English proficiency, disability, chronic absenteeism, free lunch, and a constant value as predictors. The regression model explained 48% of the variance in high school dropout rates.

Table 11. Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Change Statistics
					R Square Change	F Change	df 1	df 2	
1	.638	0.408	0.405	1.3306	0.408	177.572	1	25	0
2	.660	0.436	0.431	1.30109	0.028	12.835	1	25	0
3	.693	0.48	0.473	1.25207	0.044	21.515	1	25	0
4	.693	0.48	0.471	1.25449	0	0.015	1	25	0.902

- a. Predictors: (Constant), Chronic
- b. Predictors: (Constant), Chronic, Free Lunch
- c. Predictors: (Constant), Chronic, Free Lunch, LEP
- d. Predictors: (Constant), Chronic, Free Lunch, LEP, Disability

Table 12

Anova

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	314.389	1	314.389	177.572	.000b
	Residual	456.786	258	1.77		
	Total	771.175	259			
2	Regression	336.117	2	168.059	99.277	.000c
	Residual	435.058	257	1.693		
	Total	771.175	259			
3	Regression	369.847	3	123.282	78.639	.000d
	Residual	401.329	256	1.568		
	Total	771.175	259			
4	Regression	369.87	4	92.468	58.756	.000e
	Residual	401.305	255	1.574		
	Total	771.175	259			

- a. Dependent Variable: DroprateChronic
- b. Predictors: (Constant), Chronic
- c. Predictors: (Constant), Chronic, Free Lunch
- d. Predictors: (Constant), Chronic, Free Lunch, LEP
- e. Predictors: (Constant), Chronic, Free Lunch, LEP, Disability

Table 12 above shows the results of testing if the model represents an accurate prediction of what would happen in the population. Therefore, this tests the assumption that the model cannot accurately predict the outcome. The p-value in the table above is .000, which makes the

model significant up to 99% confidence level. The null hypothesis that the model explains none of the variations predicts the outcome better than a rejected chance.

Table 13
Coefficients

Model		Coefficients -		Coefficients			Statistics -	
		Unstandardized		Standardized	T	Sig.	Collinearity	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.004	0.129		-0.033	0.973		
	Chronic	0.087	0.007	0.638	13.326	0	1	1
2	(Constant)	0.173	0.135		-1.286	0.2		
	Chronic	0.069	0.008	0.505	8.453	0	0.614	1.629
	FreeLunch	0.015	0.004	0.214	3.583	0	0.614	1.629
3	(Constant)	0.067	0.132		-0.505	0.614		
	Chronic	0.067	0.008	0.493	8.567	0	0.613	1.632
	FreeLunch	0.002	0.005	0.034	0.483	0.629	0.421	2.374
	LEP	0.07	0.015	0.281	4.638	0	0.552	1.811
4	(Constant)	0.087	0.214		-0.408	0.684		
	Chronic	0.067	0.008	0.492	8.456	0	0.602	1.662
	FreeLunch	0.002	0.005	0.032	0.441	0.659	0.399	2.508
	LEP	0.071	0.016	0.284	4.461	0	0.505	1.982
	Disability	0.002	0.013	0.006	0.123	0.902	0.871	1.148

a. Dependent Variable: Droprate Chronic

The tolerance value reflected how other predictor variables in the model did not explain much of the variability of the specified predictor variable. When very small, less than 0.10, then, indicates there might be multiple correlations that are high, thus, suggesting multicollinearity.

The values reflected in the table were higher than .10, showing that we do not have multicollinearity. The Variance Inflation Factor (VIF) of more than 3 indicates possible multicollinearity, and none in Table 13 is higher than 3. The highest value is 2.508, which indicated that there were no multi-collinearity issues in the model.

To know which of the independent variables in the model contributed the most to the prediction of the outcome, we look at the column labeled Beta under standardized coefficients. The variable with the largest absolute Beta coefficient makes the strongest contribution in explaining the outcome. In Table 13, chronic absenteeism has the highest Beta coefficient at 0.492, making the strongest contribution to explaining the outcome. Limited English proficiency made the second highest contribution with a Beta coefficient of 0.284.

The Beta coefficients for the other variables are lower, meaning they make the least contribution in explaining the outcome. To check the statistical significance of the contributions by each variable, we examine the significance level in the table. The significant value that is lower than 0.05 at 95% confidence level of significance means that the variable makes a statistically substantial contribution to the prediction of the outcome.

Only chronic absenteeism and limited English proficiency have a statistically significant value lower than 0.05. Therefore, it means they are the only variables in the model that make a unique statistically significant contribution to the prediction outcome. Free lunch and special education disability do not make statistically significant contributions to the outcome of the prediction. It might be attributive to multicollinearity between the variables.

After doubling the correlation coefficient, we get an indication of the contribution of each variable, which makes to the total R squared of the model in the absence of the effects of correlation. Consequently, this reflects how the variable uniquely explains variance in the outcome and how much of the R squared of 0.48 would drop if the variables receded. Chronic absenteeism has a part value of 0.382, which comes to 0.146 when squared. It means that chronic absenteeism explains 14.6% of the variance in the high school dropout rate.

Limited English proficiency has a part value of 0.202, which comes to 0.041 when squared, meaning that the variable explains 4.1% of the variance in the high school dropout rate. The sum of the two squared part correlations is significantly less than the R squared value, an indication the variables are highly correlated as shown in Table 12. If the model is used as it is and a prediction of the high school dropout rate was made, the projection might be off by 1.25 points, which is the standard error shown in Table 12.

Chapter Five: Conclusions and Recommendations

The chapter explains the critical findings necessary to formulate a reliable conclusion. It summarizes the results and provides a link between chronic absenteeism and success in high school. Chapter Five presents recommendations on policies and practices to curb chronic absenteeism in the state of New Jersey. It culminates with proposals for future research.

This study focused on chronic absenteeism from the description provided by the State of New Jersey Department of Education (2017). The research focuses on the impacts of missing school for ten days or more in an academic year without considering the reason provided. The calculation relies on Cumulative Days in Membership (M) and Cumulative Days Present (P) whereby chronic absenteeism has the formula, $(M-P)/P$ (State of New Jersey Department of Education, 2017). In this view, the research uses the combination of excused and unexcused days to calculate Cumulative Days Present.

The study summarized 299 cases of data (schools) collected from the State of New Jersey Department of Education. The process involved calculation of chronic absenteeism and its influence on high school dropout rate, post-secondary acceptance, high school graduation percentages while controlling for special education disability, free lunch eligibility, and limited English proficiency.

Advocates for Children of New Jersey (2016) evaluated the leading causes of chronic absenteeism including parents, community, and the school. However, studies assessing the correlations between the issue and future academic success are inadequate. Structural reforms stem from the need to deploy multifaceted approaches to increase the graduation rate in high school and control chronic absenteeism in the state of New Jersey. A significant dropout rate in grades 9-12 relies on chronic absenteeism, free lunch, special education disability, and limited

English proficiency as the critical variables. Nonetheless, this study found chronic absenteeism and limited English proficiency as statistically significant ($p \leq .05$) variables that negatively affect success in high school.

Conclusions

Poverty appears to be the driving force, and it manifests itself through chronic absenteeism based on the correlations. Being a student who receives ESL services also associates with poverty, as evidenced by the relationship between ESL and eligibility for free lunch. In the regression model, chronic absenteeism appears to be acting as a suppressor variable to free lunch status. In the literature, chronic absenteeism does not cause or influence student poverty, but poverty does contribute to chronic absenteeism. Thus, we conclude that child poverty is an important factor in chronic absenteeism. The extant literature also supports the notion that student poverty influences the other outcomes related to the dependent variables in this study: (a) graduation rate, (b) high school dropout percentages, and (c) post-secondary acceptance.

The production function theory perceives production in economic terms whereby the process involves generation of outputs from inputs (Lewin, 2005). In this view, poverty is a critical force that enforces chronic absenteeism through interference with inputs. Students miss school to assist parents in supplementing the family income. Moreover, learners with limited English proficiency are more likely to dropout of school. The students face communication challenges that hinder their interaction with peers and tutors (Thurlow & Johnson, 2011). As a result, high schools are unable to attain maximum graduation rates due to chronic absenteeism from learners with limited English proficiency that accelerates the rate of dropout.

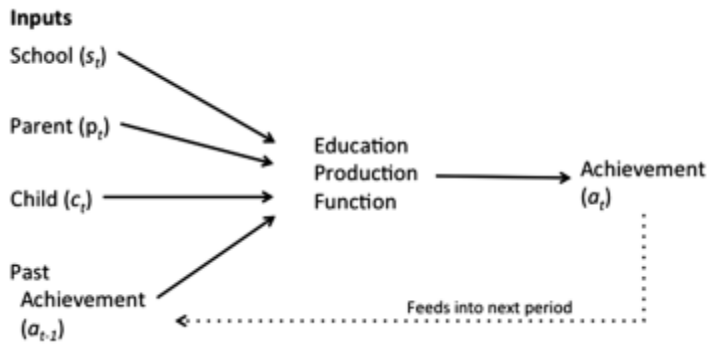


Figure 3. Flow chart denoting the relationship between inputs into the production of education and educational achievement. Reprinted from , CambridgeCore, J.L., Retrieved February 18, 2018, from <https://www.cambridge.org/core/journals/behavioural-public-policy/article/combining-behavioral-economics-and-field-experiments-to-reimagine-early-childhood-education/87AB3312B808558CCA011970F6344678/core-reader#>. Copyright 2018 by Cambridge University Press. Reprinted with permission.

Figure 3. Relationship between input and achievement.

In Figure 3, production function theory converts the inputs into educational achievement before mapping it into the investment decisions in the next academic year. Chronic absenteeism acts as a suppressor and thus hinders children investment in the education system (Lubienski & Crane, 2010). For instance, a student with chronic absenteeism does not have adequate instruction to pass the end of year examination required for illustrating mastery at a particular level. The imposition of weak inputs to education production function generates low achievement and as such, fewer numbers of graduates (List et al., 2018). As a result, the policymakers reduce the available resources available to schools. Thus, schools further neglect chronic absenteeism allowing it to affect students significantly without intervention. The education production function generates lower achievement to necessitate the reduction of resources by the policymakers. The phenomenon develops into a vicious cycle of decline with a continued reduction of inputs.

The majority of the students from economically challenged households are unable to attend school continuously or compensate learning lost during their absences (Advocacy for Children of New Jersey, 2015). Subsequently, the performance frustrations and the community

environment, enhance impacts of poverty and ELL status on the high school dropout rate. In this view, this study deviates from the conventional approaches that evaluate the causes of chronic absenteeism. Instead, the primary focus intends to explain its consequences for high school success that is assessed using dropout rate and graduation levels.

Chen and Rice (2016) reported that chronic absenteeism was prevalent in low-income households. The presence of community violence, school suspensions, unstable housing, unreliable transportation, and unmanaged healthcare hold back minority and low-income students from attaining academic excellence. However, missing schools has a cup and handle distribution whereby it is high in kindergarten and high school. Students from economically challenged households are likely to miss school for an extended period through illness, as parents will take longer to access finances required for medical treatment (Chen & Rice, 2016). Additionally, students in high school from low-income families participate in economic activities to supplement their family earnings, such as working outside of the home. Primarily, this is because the absence of students in kindergarten and elementary facilities at early stages denies them the opportunity to acquire academic and emotional foundation that is necessary for attaining success and the required motivation in high school (Chen & Rice, 2016). The learners do not develop an academic interest that is essential in promoting resilience and inhibiting high school dropout.

The encompassed literature review and statistical analysis illustrate a significant correlation between student success and chronic absenteeism in New Jersey high school. Although different variables assessed in this study did not yield substantial relationship, they had a certain level of contribution that requires intervention. For instance, poverty and limited English proficient fuels chronic absenteeism rather than high school graduation rate.

Nonetheless, Sammerone (2014) indicated that some variables such as limited English proficiency limit participation of parents in encouraging their students to remain in school.

Lubienski and Crane (2010) argued that several family factors influence school attendance among students from low-income households. Further, various social economic factors influence students' attendance and performance in school. However, the commonly used indicator is the free/subsidized lunch in school (Lubienski & Crane, 2010). The evaluation of students that qualify for free lunch involves the analysis of the family background comprehensively for a reliable description of the social economic standards. Therefore, free lunch is a strong indicator of students that require special assistance from the negative impacts of poverty on school attendance.

This study reviewed the literature about potential interventions on the effectiveness and viability of several intervention strategies in New Jersey high school to reduce chronic absenteeism. Districts and schools need to commit substantial resources to attain the expected outcome. Therefore, the application of inventions to curb chronic absenteeism in New Jersey will depend on the availability of resources and willingness of stakeholders to commit resources to the initiatives. The absence of required capital or lack of sizable investments will foster a continued prevalence of chronic absenteeism in New Jersey high schools. According to DeAngelis (2014), adoption and implementation of strategies should not entail sugarcoating of costs to avoid their abandonment before completion or attainment of the expected objective.

Chronic absenteeism correlates with student success. However, the implementation of strategies to reduce absenteeism is expensive and uneconomical in schools that experience the problem at low levels. As a result, teachers and school administration should focus on inexpensive strategies that discourage emergence and development of chronic absenteeism

within the contexts controlled by school personnel. For instance, the interaction between teachers, students, and parents will identify and resolve issues that may encourage students to miss school. School time should be protected to reduce distraction from schedule changes, and unnecessary interruptions in the school day.

The implementation of each recommendation in this research will require an additional assessment to determine how it affects students' characteristic. Although the assessment considered their ability to encourage attendance, the adoption, and implementation rely on the availability of resources. The identification of specific skill and resource deficiencies increases the success rate of intervention initiatives. The implementation of statewide programs will not curb chronic absenteeism in all schools due to variance in student characteristics.

The researcher identified poverty as a significant variable that motivates chronic absenteeism. Nonetheless, this factor affects different schools at varying levels due to the location, current strategies, and societal perception. The extensive nature of poverty in human settlements requires federal and state interventions rather than initiatives coined and implemented in the New Jersey Department of Education. Currently, available resources are inadequate and ill-suited for handling poverty at the community level. Therefore, the successful reduction of chronic absenteeism in the state of New Jersey has to access external aid that will lessen the burden on the limited resources. The provision of assistance will free students from reliance on part-time work for the satisfaction of the basic needs. In this regard, the inclusion of government and agencies in the reduction of school absences is paramount.

The improvement of education status in the state of New Jersey requires the cooperation amongst all stakeholders including policy-makers and bureaucrats. Statistical analysis of education data and evaluation of the current situation and policies are also essential in fostering

collaboration and improvement. In this view, the state requires execution of several studies to establish the correlation of variables for the formulation of robust strategies and policies that will save taxpayers from unnecessary expenditure while attaining the reduction of chronic absenteeism. The study presents the relationship between success variables and absence in New Jersey schools. For further analysis, consideration of the problem of policymakers and determination of suitable intervention programs and initiatives need consideration. Therefore, the significant and insignificant variables and recommendation in this research are essential in encouraging critical analysis of the problem during policy formulation and decision-making. The implementation of all or some of the proposal may have a considerable reduction in the rate of chronic absenteeism across the state of New Jersey.

Recommendations for Practice

Chronic absenteeism requires a combination of approaches to control its impacts on the dropout rates and some students graduating from high school. For instance, Attendance Works (2013) reported that some states had reduced nonattendance and chronic absenteeism through attendance tracking, building capacity, school improvement, and interagency resource coordination and allocation. This study found that some districts had reduced chronic absenteeism in their schools by enforcing coordinated efforts such as public awareness. For example, Attendance Works (2013) reported achievement in the deployment of frequent communication between schools and parents discussing the absence of their children.

Deitrick et al. (2015) recommended the deployment of a database that provides information to all stakeholders about students' absence. The approach is useful in fostering personalized care to each student depending on his or her causes and the extent of absenteeism. However, the researcher found that the complexity and cost of the strategy have been significant

setbacks that hamper its implementation. In this view, no district or state has ever implemented a unified plan to curb truancy and chronic absenteeism. This study did not consider the viability of an approach or strategy on its sustainability, rather, from its successful implementation and achievement of the primary goal.

The researcher found that the majority of the states are increasingly using cultural and linguistic diversity to reduce chronic absenteeism. The No Child Left Behind (2001) Act emphasized the need for the curriculum and school environment to be more engaging and interactive for each student. Stevens and Kim-Gervey (2016) noted that increasing educators and school diversity improves the teachers' ability by fostering the availability of a wide range of skills and experiences in the school environment. Additionally, the practice enhances the strategies for engaging student and making learning enjoyable for all. Nonetheless, states and districts do not have actual statistics emerging from the deployment of the No Child Left Behind (2001) Act in their schools.

This research identified the production function theory as the most suitable theory to help explain how interventions can influence chronic absenteeism. Besanko and Braeutigam (2011) explained the suitability of the argument in evaluating the research problem through the consideration of a process as the production of outputs from inputs. For instance, the education system in New Jersey needs to generate a significant improvement with the introduction of intervention programs. In this view, we considered New Jersey education system as a production process, whereas the feasibility of each approach in the reduction of chronic absenteeism has to utilize the available resource. Therefore, the production function theory was suitable for the provision of the theoretical framework of the study problem in this study due to consideration of education in economic terms. This suitability emanates from the recognition of both the input

and output variables whereby time spent in school has established possible outcomes, such as reduced dropout rate and increased graduation rate in high school.

Educational administrators should make every effort to set up proactive and positive interventions to deal with the causes of chronic absenteeism to increase the high school graduation rate. They should strive to reduce the detrimental effects it has on the life of students and an entire population (Rice, 2015; Coelho et al., 2015; Pharris-Ciurej et al., 2012). Schools and other stakeholders should identify the causes of absenteeism and tackle them. We recommend a constant improvement of the curriculum to maintain a certain level of enthusiasm amongst the students.

A study by Stevens and Kim-Gervey (2016) showed that the students with some form of special education disability lacked access to medical care. The New Jersey legislature should apportion funds for schools in communities with high rates of chronic absenteeism to provide medical services and general support services for all students, but especially to those students facing some disability. According to Sammerone (2014), students from economically challenged families are in the risks of weak family structure, unemployment, housing insecurity, gang activity, and exposure to crime in their neighborhoods. The environment does not offer motivation for success through education or encouragement to pursue it. However, the establishment of community resources, such as libraries and health clinics will enhance academic expectations through the accessibility to out-of-school resources and positive role models. The strategy further formulates a culture of attending and staying in school until graduation. As a result, pro-social attitudes and behaviors will encourage peers to abandon antisocial activities, drug use, and violent behavior for engaging in education until graduation.

Countries around the world have varying programs to increase school attendance. Sammerone (2014) acknowledged that such programs in Mexico and Brazil focus on low-income families, which constitute a significant percentage of dropouts. Although this study did not concentrate on the causes of chronic absenteeism, evaluation of diverse sources in the literature review illustrated that the low-income neighborhoods had low graduation rates. For instance, Clark and Astudillo (2017) reported the majority of high schools in Trenton, Newark, and Camden had absenteeism exceeding 50%, whereas 31% of all schools in New Jersey were suffering from chronic absenteeism. Sammerone (2014) indicated that 23 out of 26 schools required exceptional priority in addition to the population of 95% that qualified for free or reduced lunch. Therefore, provision of monthly stipends to needy families would encourage them to send their kids to a center of learning rather than using them to access basic needs.

The majority of the schools focus on the academic welfare of the student fraternity. This approach disconnects them from the needs and preferences of society. In fact, most of the parents cannot identify benefits emanating from school apart from imparting students with knowledge (DeAngelis, 2014). As a result, parents and guardian accord learning lower priority in comparison to other activities such as holidays and picnics. However, the establishment of programs that involve parents may alter their thinking and perception towards schools. For instance, environmental conservation training offered to a parent will improve their understanding of the learning institutions due to the illustration of social concern. DeAngelis (2014) recommended the accessing of the needs of lower socioeconomic areas and providing them with solutions. For example, a parent visit in the school grounds should be greeted with a pop up on their smartphones for them to log into their kids' attendance and performance profile.

Out of School Time (OST) programs are essential in influencing students' perception towards education (DeAngelis, 2014). The absence of coordinated initiatives allows learners to engage in dangerous activities such as drug abuse after school (DeAngelis, 2014). However, OST provides an opportunity for teachers to interact with their students beyond the confines of the classroom. The programs allow education stakeholders to exhibit concern for the welfare of learners. DeAngelis (2014) concluded that the OST initiatives assist in the formulation and cultivation of positive perception towards schools and learning. As a result, participating students have increased the probability of completing schooling and depicting better performance. Therefore, the establishment of OST programs in New Jersey may be crucial in controlling thinking, behaviors, and perceptions of the students in addition to enhancing the relationship between learners and teachers. The controlled activities will ensure students engage in definite issues that build the social and psychological welfare for improved performance in school.

This study identified a correlation between performance and chronic absenteeism. Students with high attendance levels illustrated success in school through dedicating themselves until graduation. Sammerone (2014) reported students with low missed education time had higher GPAs and test scores, whereas those with chronic absenteeism had poor grades that encouraged a vicious cycle of absence. As a result, a school should implement structural changes that suit absentee students rather than national agenda. The establishment of active cooperation between all the stakeholders will encourage the formulation of policies and strategies that efficiently handles each issue that steers chronic absenteeism. For instance, school management should have plans and structures that accommodate students with disabilities to ensure they do not miss classes due to inaccessibility. In this view, the solution implemented should suit the situation and problem instead of facilitating prevailing culture.

This study recognized that a correlation exists between academic performance and chronic absenteeism. Students need to be in class to excel. The school administration should accord absenteeism attention and resource that are similar to other approaches aiming at academic excellence. Although school dropout may not be visible in the overall performance, it reduces education effectiveness in society. In this regard, the school administration should cultivate widespread awareness on chronic absenteeism to ensure parents and guardians have adequate information on the impacts of missing school. The strategy should further ensure that student performance is accessible during and after an extended school absence. Sammerone (2014) acknowledged the benefits of involving parents in attaining children's success in school. However, most of the guardians who are dropout feel intimidated with increasingly challenging coursework, leading to lack of motivation to monitor their kids. As a result, schools should invite guardians for workshops and parent nights to enlighten them how to supervise and assist their children in attaining success in education.

States, school districts, educators and families need to work together to provide students with equal opportunities of learning and recovering lost time (Parrish, 2015), thereby, using comprehensive strategies where the community has a role. Statewide public awareness campaigns through community-based coalitions, combined with attendance tracking as was done in Baltimore (Chang & Leon, 2013) and New York (Balfanz & Bymes, 2012), should be adopted to reduce the occurrence of chronic absenteeism. Regularly compiling and publicly sharing of tracked attendance data on absenteeism and further drilling down the data into smaller units by the school, grade, and other filters of interest will improve the society's awareness. Particular attention should focus on students who show signs of difficulties in attending school. Specifically, there should be a new culture that aims at improving attendance by involving all the

stakeholders for the establishment of a conducive environment (Rice, 2015). A reward system should be devised to acknowledge students who improve their attendance rate significantly.

Talbert-Johnson and Russo (2013) noted that schools maintain minimal records and attention on truancy. Consequently, the majority of administrations perceive truancy as a relatively acceptable practice among students motivating them to use it as a form of punishment (Demir & Karabeyoglu, 2016). Although the excused absences from school may emanate from compliance or issues under administration record, the phenomenon encourages students to enhance the behavior leading to chronic absenteeism. In this context, suspending students from the school as a disciplinary measure is counterproductive to reducing chronic absenteeism.

In Maslow's Hierarchy of Needs, students will evaluate a facility in order of physiological, safety, belonging and love, esteem needs, and self-actualization needs before making their choice. Therefore, a change in the provision of indicated facility disorients students making them prone to chronic absenteeism. Schools with limited resource endowment have a high rate of chronic absenteeism.

Recommendations for Policy

In order to arrest chronic absenteeism, school attendance statistics should be attributive to individuals rather than using an aggregate for schools. The use of aggregate increases the chances of hiding the students' tendency towards chronic absenteeism. The established correlation between chronic absence and high school graduation rates in New Jersey is consistent with the findings of Balfanz et al. (2014). Therefore, a standard definition and measurement system of chronic absenteeism should be crafted to avoid ambiguity and misclassification of the problem.

The New York City model allows students to connect with community mentors identified and assigned by the school to all chronically absent learners. According to Balfanz and Byrnes (2012), this strategy led to the reduction of chronic absenteeism and enhancement of high school credit accrual in New York. The replication of the approach in New Jersey could facilitate the linking of chronically absent students with mentors in society such as businesspersons or community leaders. Besides attainment of the primary goal, the strategy is cost-efficient to schools and benefits students mainly when community mentors are volunteers. Elsewhere, teachers and school need to reward students through recognition of their improvement (Balfanz & Byrnes, 2012). For instance, a student who has absenteeism requires an acknowledgment for an undisrupted month through gifts such as free pizza.

Killian (2015) described a program in California that encouraged teachers to motivate and show affections to their students. The California model utilized in Kern County reduced chronic absenteeism by 43% in a period of one year. Although the state does not have statistic illustrating performance improvement among the students emanating from this strategy, the model is illustrative of increased graduation rate and decreased dropout rates. Killian (2015) further indicated the approach allows teachers to implement the behavior support program, pressurize all students to excel without exhibiting bias, show care, affection, and motivate their students to ensure school environment is friendly and tolerant. Accordingly, implementation of the California model in New Jersey may increase the cooperation and interaction of students and teachers for the reduction of chronic absenteeism.

Gregory (2017) reported that 9.7% of New Jersey students had 18 or more days' absence in 2016. Although the number of chronically absent learners in New Jersey is declining, the number of days is rising sporadically. As a result, Assemblywoman Valerie Huttie is aiming to

sponsor legislation that will require all public schools with absence exceeding 10% of their student population to convene committees and a coalition that will address the issue (Gregory, 2017). The strategy will bring together parents, teachers, and other stakeholders for a regular review and monitoring of chronic absenteeism with the intention of developing a corrective action plan. The recommendation is highly feasible due to the provision of a localized solution to factors promoting truancy and absenteeism in New Jersey schools.

Chronically absent students disconnect from teachers in the period they are away from schools. Besides, teachers do not show concern over what the students were doing during the time of their absence (Flammia, 2016). Flammia (2016) noted that an expression of interest in students' life and behavior have considerable impacts on their school presence. For instance, a "We Miss You" postcard or personal phone call to a chronically absent student from a teacher will establish a connection that motivates classroom attendance. Flammia (2016) reported that Williams Middle School of the Arts used this strategy to reduce chronic absenteeism from 20% to six percent in a period of one month. The adoption of the model in all New Jersey schools could formulate relation between teachers, learners, and their guardians. Consistent attendance in classes requires the establishment of motivation.

The reduction of chronic absenteeism is a multifaceted approach that requires a combination of strategies. However, the most crucial aspect is the provision of adequate resource in all schools in New Jersey. Chen and Rice (2016) recommended the facilitation of staff, data tools, and training by the school district leadership. Besides, Attendance Works (2013) reported the need for skills enhancement in schools for resolution of emerging issues that promotes chronic absenteeism. Consequently, adoption of the recommendation will assist schools in New

Jersey to reduce absenteeism through the availability of adequate professionals such as counselors for monitoring and handling students' issues.

A substantial number of parents do not have adequate information about the kids' behaviors and performance in school. This study recommends frequent communication between the teachers and guardian to facilitate identification of changes in behavior. The timely communication with teachers, principals, parents, and superintendents ensures decisions are informed, accurate, and critically evaluated. The strategy further encourages guardians to develop interest and care in their kids' behavior and performance in school. As a result, intervention practices require initiation before patterns of chronic absenteeism develop.

Chen and Rice (2016) reported that the majority of students depicting patterns of chronic absenteeism in high school has a role in contributing to their families' welfare. The kids have to work and assist in supplementing their household incomes, making schooling a secondary need. As a result, the New Jersey Department of Education should develop alternative education programs for students with additional responsibilities. The strategy requires coordination at school level whereby class scheduling will rely on their availability. For instance, Chen and Rice (2016) reported that Lakewood High School runs classes between 2 p.m. and 7 p.m. for students with financial obligations, leading to the reduction of chronic absenteeism from 32% to 22% in one year.

Recommendations for Future Research

Further research should focus on the kind of interventions required to minimize and eventually eliminate chronic absenteeism. Other factors like grade retention should be studied too, and their effect on the dropout rates examined as the variables that could explain dropout rates in New Jersey's high schools. However, more than 50% of the variance in high school

dropout rates is explainable by other factors that need additional studying. A study examining the causes of absenteeism as a reason for dropout rates should emerge in future.

This study increases the existing literature on chronic absenteeism in high schools. However, the encompassed data emanated from secondary sources including the New Jersey Department of Education repository. In this view, the study does not evaluate the problem comprehensively due to limited data collection methodology. Therefore, future studies should consider the perspectives of all stakeholders, including students, teachers, and parents to determine their perception towards the correlation between success and chronic absenteeism. The deployment of a diversity of methodologies in data gathering will eliminate biases emanating from a single approach. The consideration of several sources of data and utilization of a combination of gathering techniques will increase comprehensiveness and reliability of the findings.

The research utilized data from New Jersey Department of Education repository in public high schools. Besides, the research involved one state, making the finding shallow and unsuitable for generalization. Future studies should explore several states while extending their data gathering to facilitate monitoring of the study topic over a significant period. The researchers need to assess the effectiveness of intervention programs in addition to determining the actual impacts of chronic absenteeism on the students' performance. The observation of actual performance in schools rather than aggregates will evaluate the effects of different variables. The practice will enable future studies to establish a clear correlation between a single variable such as the dropout rate and chronic absenteeism. Nonetheless, the limited nature of this study requires future research to consider the practices.

1. Recreate the study at the national level and in other states for the comparison and generalization of findings.
2. Design an experimental study to determine the correlation between chronic absenteeism and students' success.
3. Conduct a similar study at the grade levels for comparison. The study will establish the relationship between chronic absenteeism and age of the student.
4. Execute research that evaluates the effectiveness of proposed recommendation in this study to determine their long-term viability in the reduction of chronic absenteeism.
5. Recreate the study to determine the correlation between low socioeconomic status and absence from school. The research will assess the effectiveness of intervention programs and plans that do not consider the impacts of poverty.
6. Execute similar studies in school locate in low and medium income neighborhood and compare the findings to determine the suitability of adopting similar interventions across the schools in the state.
7. Conduct studies to determine the impacts of introducing chronic absenteeism interventions at different grades. The strategy will facilitate the identification of the proper time of submitting policies to curb truancy and absenteeism.
8. A recreation of the study in New Jersey to determine the major causes of excused and unexcused absences in high school. The assessment will further define how they affect graduation and dropout rates.
9. Researching to determine the role of parents and guardians in escalating or reducing chronic absenteeism in schools. The evaluation will describe the effectiveness of intervention and strategies that involve parents in lowering truancy in high schools.

References

- Achilles, C. M. (2003). *How class size makes a difference: What the research says on the impact of class size reduction*. New York, NY: SERVE.
- Advocates for Children of New Jersey. (2015). *Chronic absenteeism: A major barrier to learning Mercer County, New Jersey*. Newark, NJ: Advocates for Children of New Jersey.
- Allen, J., Robbins, S. B., Casillas, A., & Oh, I. (2006). Third-year college retention and transfer: Effects of academic performance, motivation, and social connectedness. *Review of Higher Education*, 49(7), 647-664.
- America's Promise Alliance. (2016). *The building blocks of a grad nation: Assets for Keeping Young people in school*. Center for Promise.
- S.1177. (2016). One Hundred Fourteenth Congress of the United States of America at The First Session. Retrieved from <https://www.gpo.gov/fdsys/pkg/BILLS-114s1177enr/pdf/BILLS-114s1177enr.pdf>.
- Attendance Works. (2011). What is chronic absence? Attendance Works. *Attendance Works* Retrieved from <http://www.attendanceworks.org/wordpress/wp-content/uploads/2011/06/What-is-Chronic-Absence.pdf>
- Attendance Works. (2013). *The attendance imperative: How states can advance achievement by reducing chronic absence*. Policy Brief. Attendance Works.
- Attendance Works. (2016). Truancy vs. chronic absence. *Attendance Works*. Retrieved from <http://www.attendanceworks.org/wordpress/wp-content/uploads/2016/01/Click-here-to-download-2.pdf>

- Balfanz, R., Bridgeland, J. M., Fox, J. H., DePaoli, J. L., Ingram, E. S., & Maushard, M. (2014). *Building a grad nation: Progress and challenge in ending the high school dropout epidemic*. Annual Update.
- Balfanz, V., & Brynes, V. (2012). *The importance of being in school: A report on absenteeism in the nation's public schools*. Everyone Graduates Center.
- Baltimore Education Research Consortium. (2011). Destination Graduation: Sixth Grade Early Warning Indicators for Baltimore City Schools: Their Prevalence and Impact. Retrieved from <http://baltimore-berc.org/pdfs/SixthGradeEWIFullReport.pdf>.
- Benham, M. K. P. (2006). A challenge to Native Hawaiian and Pacific Islander scholars: What the research literature teaches us about our work. *Race Ethnicity and Education*, 9(1), 29-50.
- Besanko, D., & Braeutigam, R. (2011). *Microeconomics* (4th ed.). Hoboken, NY: John Wiley & Sons, Inc.
- Borland, M. V., Howsen, R. M., & Trawick, M. W. (2005). An investigation of class size on student academic achievement. *Education Economics*, 13(1), 73-83.
- Bowles, S. (1970). Towards an educational production function. W. L. Hansen (Ed), Education, Income, and Human Capital. *NBER*, pp. 11-70.
- Brewer, D. J., Ehrenberg, R. G., Gamoran, A., & Willms, J. D. (2001). The class size controversy. *CHERI Working Paper #14*.
- Bridgeland, J. M., Dilulio, J. J., & Balfanz, R. (2009). On the Front Lines of Schools: Perspectives of Teachers and Principals on the High School Dropout Problem. Retrieved from <http://www.civicenterprises.net/pdfs/frontlines.pdf>.

- Bruner, C., Discher, A., & Chang, H. (2011). *Chronic elementary absenteeism: A problem hidden in plain sight*. A Research Brief from Attendance Works and Child & Family Policy Center. Retrieved from <http://www.edweek.org/media/chronicabsence-15chang.pdf>
- Burrus, J., & Roberts, R. D. (2012). *Dropping Out of High School: Prevalence, Risk Factors, and Remediation Strategies*. R&D Connection, 18.
- Byrnes, D., & Yamamoto, K. (2001). Academic retention of elementary pupils: An inside look. *Education, 106*(2), 208-214.
- Cassidy, K. J. (2015). *Barriers to Post-Secondary Education Perspectives from Niagara*. Niagara Community Observatory, NCO Policy Brief #22.
- Cemalcilar, Z. (2010). Schools as socialization contexts: Understanding the impact of school climate factors on students' sense of school belonging. *Applied Psychology: An International Review, 59*(2), 243-272.
- Chang, H., & Leon, C. (2013). *Early intervention matters: How addressing chronic absence can reduce dropout rates*. Attendance Works.
- Chapman, C., Laird, J., Ifill, N., & KewalRamani, A. (2011). Trends in high school dropout and completion rates in the United States: 1972-2009, (NCES 2012-006). *U.S. Department of Education, National Center for Education Statistics*. Retrieved from <http://nces.ed.gov/pubs2012/2012006.pdf>.
- Chen, P., & Rice, C. (2016). *Showing up matters: Newark chronic absenteeism in the early years*. Newark, NJ: Advocates for Children of New Jersey.

- Chen, X., & Soldner, M. (2013). STEM Attrition: College Students' Paths Into and Out of STEM Fields. *National Center for Education Statistics, Statistical Analysis Report*. Washington: U.S. Department of Education.
- Child Trends. (2014). High school dropout rates. *Child Trends*. Retrieved from <http://www.childtrends.org/?factors=high-schooldropout-rates>.
- Chizmar, J. F., & Zak, T. A. (1983). Modeling multiple outputs in educational production functions. *The American Economic Review*, 73(2), 18-22.
- Chronic Absenteeism Working Group Report. (2015). Report on the Chronic Absenteeism Working Group of the National Collaborative on Education and Health National. Retrieved from <https://healthyschoolscampaign.org/wp-content/uploads/2016/11/Chronic-Absenteeism-Working-Group-Report.pdf>
- Clark, A., & Astudillo, C. (2017, April 17). New data shows how many kids missed too much school in every N.J. town. *N.J.Com*. Retrieved from http://www.nj.com/education/2017/04/see_how_many_kids_miss_too_much_school_in_every_nj.html.
- Coelho, R., Fischer, S., McKnight, F., Matteson, S., & Schwartz, T. (2015). *The effects of early chronic absenteeism on third-grade academic achievement measures*. Workshop in Public Affairs. Robert M. La Follette School of Public Affairs.
- Cook, L. D. (2010). Factors influencing students' absenteeism in primary schools in Jamaica. *Caribbean Curriculum*, 17, 33-57.
- Cortis, S., Zahra, M., & Farrugia, S. (2014). *Addressing attendance in schools*. Policy. Respect for All Framework.
- Cumbo, G. L., Burden, H., & Burke, I. (2012). *Truancy reduction: Research, policy, and practice*. Center for Children and Youth Justice.

- DeAngelis, P. (2014). The Influence of the Length of the School Day on Grade 11 NJ HSPA Scores. *Seton Hall University Dissertations and Theses (ETDs)*. 1978.
- Deitrick, S., Ye, F., Childs, J., & Zhang, C. (2015). *Connecting people and place – Improving communities through integrated data systems. Chronic school absenteeism in public schools in Pittsburgh, PA*. Pittsburgh, PA: University of Pittsburgh - University Center for Social and Urban Research.
- Dembo, R., & Gullledge, L. M. (2009). Truancy intervention programs: Challenges and innovations to implementation. *Criminal Justice Policy Review*, 20(4), 437-456.
- Demir, K., & Karabeyoglu, Y. A. (2016). Factors associated with absenteeism in high schools. *Eurasian Journal of Educational Research*, 16(62), 37-56. doi: 10.14689/ejer.2016.62.4
- Dunlap, C. A. (2016). *The influence of chronic absenteeism on grade 6, grade 7, and grade 8 2014 New Jersey assessment of skills and knowledge*. Seton Hall University Dissertations and Theses.
- Elite Research. (2013). *Multiple regression*. Kent State University.
- Farrington, C. E., Roderick, M., Allensworth, E., Ngaoka, J., Keyes, T. S., Johnson, D. W., & Beechum, N. O. (2012). *Teaching adolescents to become learners: The role of non-cognitive factors in shaping school performance*. Chicago, IL: Consortium on Chicago School Research, University of Chicago. Retrieved 3/30/015 from <https://ccsr.uchicago.edu/publications/>
- Field, A. P. (2009). *Discovering statistics using SPSS* (3rd ed.). Thousand Oaks, CA: Sage.
- Finn, J. D., & Gerber, S. B. (2005). Small classes in the early grades: Academic achievement and graduation from high school. *Journal of Educational Psychology*, 97(2), 214-223.

- Finnie, R. (2012). *Access to post-secondary education: The importance of culture*. (Working Paper No. 2012-02). Ottawa, Canada: Education Policy Research Initiative.
- Finnie, R., Childs, S., & Wismer, A. (2011). *Access to post-secondary education among under-represented and minority Groups: Measuring the gaps, assessing the causes* (Working Paper No. 2011-2001). Ottawa, Canada: Education Policy Research Initiative.
- Flammia, D. (2016, September 15). 136,000 NJ students were ‘chronically absent’ last year. Here’s what schools can do. *New Jersey 101.5*. Retrieved from <http://nj1015.com/136000-nj-students-were-chronically-absent-last-year-heres-what-schools-can-do/?trackback=tsmclip>.
- Frenette, M. (2009). *Career goals in high school: Do students know what it takes to reach them and does it matter?* Ottawa, Canada: Statistics Canada.
- Frenette, M. (2014). *An investment of a lifetime? The long-term labor market premiums associated with post-secondary education. (Analytical Studies Branch Research Paper Series No. 359)*. Ottawa, Canada: Statistics Canada.
- Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children’s academic engagement and performance. *Journal of Educational Psychology*, 95(1), 148-162.
- Gemellaro, D. M. (2012). *What is the relative influence of NJ School Report Card Variable on NJ Ask 5 Scores?* Seton Hall University Dissertation and Thesis.
- Ginsburg, G. S., Drake, K. L., Tein, J., Teetsel, R., & Riddle, M. A. (2015). Preventing onset of anxiety disorders in offspring of anxious parents: A randomized controlled trial of a family-based intervention. *The American Journal of Psychiatry*, 172(12), 1207-1214.

- Gottfried, M. A. (2014). Classmates with disabilities and students' noncognitive outcomes. *Educational Evaluation and Policy Analysis*, 36(1), 20-43.
- Grayson, J. P., & Grayson, K. (2003). *Research on Retention and Attrition*. Montreal, Canada: Millennium Scholarship Foundation.
- Gregory, P. (2017, November 20). Chronic school absenteeism Rate in NJ drops. WBGO. Retrieved from <http://wbgo.org/post/chronic-school-absenteeism-rate-nj-drops#stream/0>.
- Gyimah-Brempong, K., & Gyapong, A. O. (1991). Characteristics of education production functions: An application of canonical regression analysis. *Economics of Education Review*, 10(1), 7-17.
- Hagedorn, L. S., Lester, J., Moon, H. S., & Tibbetts, K. (2006). Native Hawaiian community college students: What happens? *Community College Journal of Research and Practice*, 30, 21-39.
- Hanushek, E. A. (1979). Conceptual and empirical issues in the estimation of education production functions. *The Journal of Human Resources*, 14(3), 351-388.
- Hanushek, E. A. (1986). The economics of schooling: Production and efficiency in public schools. *Journal of Economic Literature*, 24(3), 1141-1177.
- Hanushek, E. A. (2008). *Education production functions*. London, UK: Palgrave Macmillan.
- Henderson, T., Hill, C., & Norton, K. (2014). *The connection between missing school and health: A review of chronic absenteeism and student health in Oregon*. Upstream Public Health.
- Heppen, J. B., O'Cummings, M., & Therriault, S. B. (2008). *Developing early warning systems to identify potential dropouts*. Retrieved from <http://files.eric.ed.gov/fulltext/ED521558.pdf>.

- Jacob, B. A., & Lovett, K. (2017). Chronic absenteeism: An old problem in search of new answers. *Brookings*. Retrieved from <https://www.brookings.edu/research/chronic-absenteeism-an-old-problem-in-search-of-new-answers/>.
- Jensen, U. (2011). *Factors Influencing Student Retention in Higher Education. Summary of Influential Factors in Degree Attainment and Persistence to Career or Further Education for At-Risk/High Educational Need Students*, Pacific Policy Research Center. Honolulu, HI: Kamehameha Schools–Research & Evaluation Division.
- Jepsen, C., & Rivkin, S. (2009). Class size reduction and student achievement: The potential tradeoff between teacher quality and class size. *Journal of Human Resources*, 44(1), 223-250.
- Kaufman, P., Bradbury, D., & Owings, J. (1992). *Characteristics of At-Risk Students*. Washington, DC: National Center for Education Statistics
- Killian, S. (2015). 10 Proven Ways To Improve School Attendance. The Australian Society for Evidence-Based Teaching. *Evidence-Based Teaching*. Retrieved from <http://www.evidencebasedteaching.org.au/improve-school-attendance/>
- King, A. J. C., Warren, W. K., King, M. A., Brook, J. E., & Kocher, P. R. (2009). *Who doesn't go to post-secondary education? (Colleges Ontario Collaborative Research Project)*. Toronto, Canada: Colleges Ontario.
- Kirk, R. E. (2007). *Statistics: An introduction*. Belmont, CA: Wadsworth Publishing Company.
- Kirk, U., Brown, K. W., & Downar, J. (2014). Adaptive neural reward processing during anticipation and receipt of monetary rewards in mindfulness meditators. *Social Cognitive and Affective Neuroscience*, 10(5), 752-759.

- Kuh, G. D., Kinzie, J., Schuh, J. H., Whitt, E., & Associates. (2005). *Student success in college: Creating conditions that matter*. San Francisco, CA: Jossey-Bass.
- Legters, N., & Balfanz, R. (2010). Do we have what it takes to put all students on the graduation path? *New Directions for Youth Development*, 127(1), 11-24.
- Lewin, P. (2005). The capital idea and the scope of economics. *The Review of Austrian Economics*, 18(2), 145-167.
- Lichter, D. T., Cornwall, G. T., & Eggebeen, D. J. (1993). *Harvesting human capital: family structure and education among rural youth*. *Rural Sociology*, 58(1), 53-75.
- List, J. A., Samek, A., & Suskind, D. L. (2018). Combining behavioral economics and field experiments to reimagine early childhood education. *Behavioural Public Policy*, 1-2
- Lubienski, S. T., & Crane, C. C. (2010). Beyond free lunch: Which family background measures matter? *Education Policy Analysis Archives*, 18(11).
- Lund, C. (2009). Why are students dropping out of school? The factors that contribute to the United States high school dropout rate. *Sociology Analysis*, 1(1).
- Lyttle-Burns, A. (2011). Factors that contribute to student graduation and dropout rates: An in-depth study of a rural Appalachian School District. *Encompass: Paper 13*.
- Makaukane-Drechsel, T., & Hagedorn, L. S. (2000). Correlates of retention among Asian Pacific Americans in community colleges: The case for Hawaiian students. *Community College Journal of Research & Practice*, 24(8), 639-655.
- Mangold, W. D., Bean, L. G., Adams, D. J., Scwab, W. A., & Lynch, S. M. (2002). Who goes, who stays? An assessment of the effect of a freshmen mentoring and unit registration program on college persistence. *Journal of College Student Retention: Research, Theory, & Practice*, 4(2), 95-122.

- Maslow, A. H. (1970). *Motivation and personality*. New York, NY: Harper & Row.
- McCoy, A. R., & Reynolds, A. J. (1999). Grade retention and school performance: An extended investigation. *Journal of School Psychology, 37*(3), 273-298.
- McLaughlin, R., & Peace, D. (2006). *Youth Engagement Strategy: Understanding and Addressing Chronic Student Absence Behaviour, School Refusal and Truancy in Primary and Secondary Schools: A Comprehensive Summary of Reports*. Queensland Studies Authority.
- Moore, T. J., Glancy, A. W., Tank, K. M., Kersten, J. A., Smith, K. A., & Stohlmann, M. S. (2014). A Framework for quality K-12 engineering education: Research and development. *Journal of Pre-College Engineering Education Research, 4*(1), 2.
- National Association of School Psychologists. (2003). Position statement on student grade retention and social promotion. *National Association of School Psychologists*. Retrieved from http://www.nasponline.org/about_nasp/pospaper_graderetent.aspx.
- National Center for Educational Statistics. (2013). *Common Core of Data (CCD), NCES Common Core of Data State Dropout and Completion Data File, School Year 2009-2010, Version 1*.
- Neild, R. C. (2009). Falling off track during the transition to high school: What we know and what can be done. *The Future of Children, 19*(1), 53-76.
- Norrie, K., & Zhao, H. (2011). *An overview of PSE accessibility in Ontario*. Toronto, Canada: Higher Education Quality Council of Ontario.
- No Child Left Behind Act. (2001). *U.S. Department of Education*. Retrieved from <http://www2.ed.gov/nclb/landing.jhtml>

- Ogbuagu, A. B. C. (2011). Factors affecting high school graduation rates in metropolitan Atlanta public schools. *ETD Collection for AUC Robert W. Woodruff Library*. Paper 214.
- Okoye, N. S. (2009). *The effect of gender, socioeconomic status, and school location on students' performance in Nigerian integrated science*. Retrieved from http://findarticles.comlp/articles/mi_qa3673/is_3_129/ai_n31481908/
- Orsuwan, M., & Cole, D. (2007). The moderating effects of race/ethnicity on the experience of Asian American and Pacific Islander community college students. *Asian American Policy Review, 16*, 61-85.
- Osterman, K. F. (2000). Students' need for belonging in the school community. *Review of Educational Research, 70*(3), 323-367.
- Owings, W. A., & Magliaro, S. (1998). Grade retention: A history of failure. *Educational Leadership, 56*(1), 86-88.
- Papanastasion, C. (2002). Effects of background and school factors on mathematics achievement. *Journal of Educational Research and Evaluation, 8*(1), 55-70.
- Parrish, D. (2015). AFS membership: How much should it cost? *Fisheries, 40*(3), 95-95.
- Pearson, P. L. (2015). *High school culture, graduation rates, and dropout rates*. Retrieved from The Aquila Digital Community. (Paper 55).
- Pharris-Ciurej, C., Hirschman, C., & Willhoft, J. (2012). The 9th-grade shock and the high school dropout crisis. *Social Science Research, 41*(3), 709-730.
- Pong, S. L., & Ju, D. B. (2000). The effects of change in family structure and income on dropping out of middle and high school. *Journal of Family Issues, 21*(2), 147-169.
- Price, P. C. (2016). *Research methods in psychology: Core concepts and skills, v.1.0*. Flat World Education.

- Railsback, J. (2004). *Increasing student attendance: Strategies from research and practice*.
Portland, OR: Northwest Regional Educational Laboratory
- Reardon, S. F. (2011). The widening academic achievement gap between the rich the poor: New evidence and possible explanations. In Richard J. Munane (Ed.), *Whither opportunity? Rising inequality, schools, and children's life chances*. New York, NY: Russell Sage Foundation.
- Reeves, J. (2008). Between a rock and a hard place? Curriculum for excellence and the quality initiative in Scottish schools. *Scottish Educational Review*, 40(2), 6-16.
- Reimer, M., & Dimock, K. (2005). *Best practices and model truancy programs*. Clemson, SC: National Dropout Prevention Center/Network, Clemson University.
- Rice, C. (2015). *Showing up matters: The state of chronic absenteeism in New Jersey*. Newark, NJ: Advocates for Children of New Jersey.
- Ritter, B. (2015). *Factors Influencing High School Graduation*. Washington Student Achievement Council. Retrieved from <http://www.wsac.wa.gov/sites/default/files/2015.12.3.Ritter.Graduation.Issue.Brief.pdf>
- Rumberger, R. W. (2011). *Dropping out: Why students drop out of high school and what can be done about it*. Cambridge, MA: Harvard University Press.
- Sammarone, D. R. (2014). The Influence of the Length of the School Day on the Percentage of Proficient and Advanced Proficient Scores on the New Jersey Assessment of Skills and Knowledge for Grades 6, 7, and 8. *Seton Hall University Dissertations and Theses (ETDs)*. Paper 1995.
- Shekhat, V. M. (2015). *Theory of production*. Darshan, Institute of Engineering and Technology.

- Sheldon, S. B., & Epstein, J. L. (2004). Getting students to school: Using family and community involvement to reduce chronic absenteeism. *The School Community Journal, 14*(2), 39-56.
- Shepard, L. A., & Smith, M. L. (1990). Synthesis of research on grade retention. *Educational Leadership, 47*(8), 84-88.
- Shonkoff, J. P., Garner, A. S., Siegel, B. S., Dobbins, M. I., Earls, M. F., McGuinn, L., ... & Committee on Early Childhood, Adoption, and Dependent Care. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics, 129*(1), e232-e246.
- Solakoglu, O., & Orak, U. (2016). School truancy among Turkish high school students: A test of general strain theory. *International Journal of Human Sciences, 13*(1), 1460-1472.
- State of New Jersey Department of Education. (2016). *Division of early childhood education: Guidance on school attendance for young children preschool through 3rd grade*. Trenton, NJ: NJ Department of Education. Retrieved from <http://www.nj.gov/education/ece/psguide/attendance.htm>
- Stevens, A. C., & Kim-Gervey, C. (2016). *Chronic absenteeism report*. Salem, OR: Chief Education Office.
- Talbert-Johnson, C., & Russo, C. J. (2013). Attending school matters: Policies to eliminate chronic absenteeism. *School Business Affairs, 79*(7), 37-39.
- The Individuals with Disabilities Acts. (1975). *U.S. Department of Education*. Retrieved from <http://www2.ed.gov/about/offices/list/osers/idea35/index.html>
- The Newark Public Schools. (2014). *Absences and excuses: Policy. File code 5113*. Newark, NJ: The Newark Public Schools. Retrieved from http://www.nps.k12.nj.us/wp-content/uploads/sites/61/2014/08/attendance_policy.pdf

- The State of New Jersey Department of Education. (2017). New Jersey Department of Education guidance for reporting student absences and calculating chronic absenteeism.
- Thurlow, M. L., & Johnson, D. R. (2011). The high school dropout dilemma and special education students. *University of California, Santa Barbara, Santa Barbara, CA.*
- Townsend, L., Flisher, A. J., & King, G. (2007). A systematic review of the relationship between high school dropout and substance use. *Clinical Child and Family Psychology, 10(4)*, 295-317.
- Williams, L. L. (2002). Student absenteeism and truancy: Technologies and interventions to reduce and prevent chronic problems among school-age children. *Action Research Exchange, 1(1)*, 1-14.
- Witmer, S., Hoffman, L., & Nottis, K. (2004). Elementary teachers' beliefs and knowledge about grade retention: How do we know what they know? *Education, 125(2)*, 173-193.
- Zorc, C. S., O'Reilly, A. L., Matone, M., Long, J., Watts, C. L., & Rubin, D. (2013). The relationship of placement of experience to school absenteeism and changing schools in young, school-aged children in foster care. *Child Youth Service Review, 35(5)*, 826-833.