WHAT ARE THE RELATIONSHIPS AMONG HIGH SCHOOL ACADEMIC

OUTCOMES AND ATTENDANCE?

by

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DISSERTATION ABSTRACT

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Attendance?

Research for the past decade has examined academic performance gaps among

students from the perspective of sex, race and ethnicity groups, and low socio-economic

status. Across those studies school attendance has been identified as a primary correlate

with academic success. I used a descriptive non-experimental design to investigate the

relationship of student academic outcomes (i.e., GPA, credits earned toward graduation)

among student groups (i.e., sex, race, and special education status) on attendance type of

unexcused or excused absences. This study included two cohorts of 9th grade high school

students ($n = 2,262$) from the Eugene 4J School District during the 2013 to 2016 school

year. I calculated Chi-square tests, Independent t-tests, and Pearson's correlation

coefficient to examine the relationship of attendance with student academic outcomes for

GPA and credits earned toward graduation and to further compare attendance type (i.e.,

unexcused or excused absences) among student groups. Findings indicated statistically

significant differences for unexcused and excused absences and for GPA and credits

earned by specific demographic subgroups – males v. females, white v. minority, special

education v. not special education. There were also statistically significant correlations

for GPA and credits earned based on unexcused and excused absences among

demographic subgroups. In addition, there were statistically significant differences by academic and attendance variables for students who remained in comparison to students who left Eugene 4J.

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CHAPTER I

INTRODUCTION

In this dissertation study, I examined the associations of school attendance and type of absence (i.e., unexcused v. excused) on student academic outcomes (i.e., GPA, credits earned toward graduation) among different student groups (i.e., sex, race, and special education [SPED] status). Additionally, I investigated attendance type by student academic outcomes for student groups. Finally, I identified the relationships among school attendance and student academic outcomes by student groups. In this chapter, I introduce the context of the problem, review relevant literature on student attendance and academic student outcomes, and identify gaps in prior research for school attendance. I conclude Chapter 1 by defining my research questions.

The Attendance Problem

In the United States, all students have the right to a free and appropriate public education (United States Department of Justice, 2016). Education is a pathway that should afford every student the opportunity to learn core academic skills associated with becoming productive contributors of society. One of the most important factors to academic success for the great majority of students begins with attending school on a regular basis (McConnell & Kubina, 2014). Compulsory attendance laws since the 19th and early 20th century have required all students to attend school (National Center for Education Statistics [NCES], 2015; Snyder, Lee-Partridge, Jarmosko, Petkova, & D'Onofrio, 2014). Compulsory attendance age requirements varies by state with nine states beginning school by 5-years of age, 25 states by age 6, 14 states by the age 7, and two states by age 8 (NCES, 2015). The total days students are required to attend school

ranges from 160 to 190 days a year (NCES, 2015). For Oregon, regular school attendance is required for students ages 7 to 18 (ORS 330.010-339.990, 2016), and all grades are required to have minimum instructional hours ranging from 900 to 990 hours of education per year across 165 days (NCES, 2015).

Despite those regulations, there are districts and schools across the US where students frequently miss school. A recent study on improving school attendance by McConnell and Kubina (2014) found that "…on any given day, 10% of public school students are absent from school…" (p. 249). Specifically, more than 5 million of the 50.1 million students across the US miss school daily throughout the school year (NCES, 2015) and in Oregon, 17.1% of all students in 2015 were chronically absent missing more than a full month of school (Chief Education Office, 2016).

Though definitions and calculations for the term *chronic absenteeism* vary among districts and states across the U.S., missing 10% of the school year (i.e., two or more days a month) is becoming a more recognized definition for attendance reporting and for analyzing attendance data (The Chief Education Office, 2016). Several studies (MacIver & Messel, 2013; Nolan, Cole, Wroughton, & Clayton-Code, 2013; Yeide & Korbin, 2009) indicate missing any amount of schooldays directly interrupts student learning, access to classroom content, teacher support, and peer-to-peer connections. Specifically, researchers (MacIver & Messel, 2013; Nolan et al., 2013; Snyder et al., 2014; Yeide & Korbin, 2009) have found students who are chronically absent are more likely to underperform academically than those who attend more than 90% of the year. In addition, students who are considered truant based on missing four full days or eight half-days of unexcused absences in a 20-day period under Oregon's compulsory attendance

law (ORS 330.010-339.990, 2016) have a greater risk of dropping out of school, unemployment, and underemployment than students who attend school (MacIver & Messel, 2015; Nolan et. al., 2013; Snyder et al., 2014; Yeide & Korbin, 2009).

Logically, not attending school enables students' ability to learn daily skills and to apply skills required for earning a diploma. Despite the national dropout rates from 2000 to 2014 have declined from 12% to 7%, (Kena et al., 2015), students are dropping out of schools across the U.S. yearly (NCES, 2015). In Oregon, 7,000 students in 2015 dropped out of school (Chief Education Office, 2016). Consequently, without a high school diploma, a dropout has limited career options based on transferable skills, knowledge, and availability. For every one unemployed high school graduate (14.5%) there are two unemployed high school dropouts (31%) (United States Department of Labor, 2015; Yeide & Korbin, 2009). Heilbrunn (2007) further argued that, "Dropouts are rarely prepared to contribute to the workforce, use more social service dollars than graduates, and require greater criminal justice expenditures than graduates" (2007, p. 19). Therefore, it is a moral imperative that public education produces students with adequate skills and knowledge that contribute to society (United States Department of Education, 2010).

According to The White House & Office of the Press Secretary (2015) press release titled "Giving Every Child a Fair Shot," student outcomes across the United States on average have improved over recent years in four areas: (a) graduation rates, (b) student performance in reading and math on the National Assessment of Educational Progress (NAEP), (c) post-secondary enrolment, and (d) college degree attainment. The 2015 report highlighted that high school average graduation rates reached a national record of 82% and the NAEP standardized test scores in elementary and middle school

students continued a 12-year consecutive increase in achievement. Elementary NAEP test scores improved by 5-points in both subject areas, increasing from 216 to 221 in reading and 239 to 244 in math; and middle school NAEP test scores improved by 6-points from 257 to 263 in reading and 279 to 285 in math. In addition, post-secondary enrollment between 2000 to 2014 for Black and Hispanic students increased by 57% from 1.5 to 2.4 million for Black students and 119% from 1.4 to 3.0 million for Hispanic students (NCES, 2015). Moreover, college degree attainment among all student groups of the total educational attainment population aged 25 and older has increased yearly on average since 1990 to 2015 from 18% to 33% (NCES, 2015).

The White House & Office of the Press Secretary (2015), however, also indicated disparities among school-to-school comparisons for student achievement and rates of graduation and from historically underserved backgrounds (i.e., low income, black, Hispanic, students with disabilities or limited English proficiency). The NAEP student scores from the lowest performing Title I schools (i.e., 5% or 3,000 schools serving more than a million students) compared to other schools across the nation showed performance gaps in reading by 31% and in math by 36% among elementary and middle schools in Title I schools (The White House & Office of the Press Secretary, 2015). In addition, student performance on the NAEP among race, economic status, disability status, and English language proficiency showed gaps in standardized scores (i.e., math and reading) by more than 20% in comparison to white students (The White House & Office of the Press Secretary, 2015). The report stated that students from historically underserved backgrounds to have been "…denied rigorous coursework…[and]…not held to the same high standards as other students." The report further stated that students from low

performing schools are "…at an unacceptably low [graduation] rate [of] 40%" in comparison to all other high schools at 87% (The White House & Office of the Press Secretary, 2015, p. 3). National high school graduation rates continue to drive educational policy by targeting student achievement to improve student performance and by including student attendance rates as an indicator for measuring school and student as success (United States Government Publishing Office, 2016).

Improving educational outcomes and reducing chronic absenteeism are components of educational reform found within the ESSA. ESSA reauthorized the Elementary and Secondary Education Act (ESEA) of 1965 for the previous law of No Child Left Behind (NCLB) Act of 2002 (United States Government Publishing Office, 2016). Under ESSA, states are given autonomy and flexibility to develop accountability standards for student success (United States Government Publishing Office, 2016). New provisions require all schools, districts, and states to report annually on chronic absenteeism even though there are no specific guidelines or a definition for chronic absenteeism to use. Several states including Oregon have adopted 10% as the cutoff score for determining the number of students chronically absent from the school year based on total days of enrollment (Chief Education Office, 2016). Yearly, states must include chronic absenteeism as part of the accountability metrics used for assessing school performance by student success in accordance to ESSA Public Law 114-95 section (viii):

> "Information submitted by the State educational agency and each local educational agency in the State, in accordance with data collection conducted pursuant to section 203(c)(1) of the Department of Education Organization Act (20 U.S.C. 3413(c)(1)), on— (I) measures of school quality, climate, and safety,

including rates of in-school suspensions, out-of-school suspensions, expulsions, school-related arrests, referrals to law enforcement, chronic absenteeism (including both excused and unexcused absences), incidences of violence, including bullying and harassment; and" (United States Government Publishing Office, 2016, p. 48).

ESSA's reauthorization aims to implement strategies that increase school attendance and high school completion (United States Government Publishing Office, 2016). As the The White House & Office of the Press Secretary (2015) stated, "We cannot afford to ignore our lowest-performing 5% of schools, our schools where subgroups of students are not making progress year after year, and our high schools where far too many students do not earn a diploma" (p. 6). Moreover, disparities within the educational system for students attending school and graduating from high school with transferable work skills for careers and college success are of national concern.

In short, the U.S. Department of Education Strategic Plan for Years 2014 to 2018 states, "The goal for America's educational system is clear: every student should graduate from high school ready for college, careers, and life. Every student should have meaningful opportunities from which to choose upon graduation from high school" (United States Department of Education, 2010, p. 19). Considering 18% of high school students did not graduate in 2015 and one million students on average drop out of school every year (Chief Education Office, 2016; NCES, 2015), establishing goals to increase overall student attendance is critical for improving student graduation rates (United States Government Publishing Office, 2016). In addition, the aim is to provide students the skills to become productive citizens.

For this study I examined two thematic elements (a) student attendance and (b) student academic outcomes. In the next section, I turn to the literature reviewed on school attendance and student academic outcomes. I begin with a description of the literature search process and selections followed by a summary of article findings on attendance affects and student academic outcomes.

Literature Search and Review

My initial literature search utilized the digital databases of Educational Resources Information Center (ERIC), University of Oregon's on-line library, and The Education Commission of the State (ECS) to locate information on the topics of school attendance and the effects of attendance on student performance at the secondary level. In addition, I reviewed websites related to relevant government and research centers including: the United States Department of Education, NCES, National Center for School Engagement (NCSE), National Dropout Prevention Center (NDPS), What Works Clearinghouse (WWC), Education Commission of the States (ECS), Attendance Works, Truancy Prevention, and Google Scholar. I begin with a description of literature search process. Next, I provide an explanation of the rationale for my references selection.

Description of the Literature Search Process

To gather relevant references, I followed several steps. I started with seven key words and phrases to conduct my initial literature search (a) attendance, (b) truancy, (c) GPA, (d) student achievement, (e) student performance, (f) attendance interventions, and (g) graduation. Each of the seven words generated a total of 9,788 possible sources. To reduce the amount of references to a more manageable number of sources, I made four additional adjustments to my literature search process when using ERIC as follows.

First, I refined my original selection process to identify the most relevant pool of references by adjusting the search parameters including only peer-reviewed articles from 2005 through 2015 to capture the most current research literature on the topic of school attendance. I then repeated the literature search procedures to further reduce the number of sources. I used the same seven terms separately to filter references pertaining only to attendance references; this change provided 1,905 potential sources for review.

Second, to reduce the number of potential articles, I interchanged seven key words and phrases into several search word combinations for literature searching. For example, I used six search combinations including: (a) attendance interventions and truancy, (b) attendance interventions, truancy, and GPA, (c) attendance and student achievement, (d) attendance and GPA, (e) attendance and truancy, and (g) attendance and graduation. As a result, this adjustment provided 1,246 references,

Third, to further identify potential articles for this study, I added the additional word 'effects' to the seven word phrases previously used to identify articles on the impact of attendance on student outcomes. By filtering my search parameters to only include peer related articles that met the search criteria using key words, decreased the number of articles to 554. Even though I reduced the number of potential sources from 1,246 to 554, I filtered references by removing articles not related to schools.

Fourth, to select specific articles and studies that occurred in a school setting, I again adjusted my search parameters to include the word 'school.' I used the following three key search phrases: (a) school attendance effects and (b) school attendance effect and GPA, (c) school attendance effect and graduation, and (e) school attendance effect graduation and GPA. As a result, I found 86 articles only containing search words and

phrases found among titles, abstracts, descriptions of articles, and as vocabulary terms.

The last steps I took to identify literature for this review included using the previous words and phrases in step four and conducted five additional searches through the University of Oregon's on-line library database through each subject area of Education, Psychology, Law, and Social Science and within the ECS research database. In addition, I searched the websites and search browsers of NCES, NCSE, NDPS, WWC, ECS, Attendance Works, and Google Scholar to identify any additional sources that were not available through ERIC. As s result, I found an additional 19 articles to review. The final pool of articles selected for this study includes 105 references and reflect studies on the effects of student attendance on student academic outcomes.

Literature Selection

To ensure I reviewed the pool of 105 references equitably and to reduce the selection to a more manageable number of articles for my literature review, I took several steps. I started by reading every abstract and the first and the last page to determine whether there was information from one of the following content areas: (a) school attendance (i.e., chronic absenteeism, truancy, and laws), (b) the effects of attendance on student outcomes/performance (i.e., dropout, engagement, graduation, GPA, and test scores) and (c) attendance interventions. Articles that did not provide additional context for my study were discarded. In addition, I eliminated any articles conducted outside of the United States to ensure studies selected represented only one common educational system. I identified 43 potential articles to further review.

I screened the remaining studies by (a) setting, (b) sample, (c) education level, (d) intervention, and (e) research design to select the most salient articles to use for my

study. Specially, I reviewed every article setting and selected studies that took place in both rural and urban settings to examine attendance for students in different locales. Similarly, I identified research articles representing diverse samples/populations in student demographics (i.e., race and ethnicity, socio-economic status, students with disabilities and English Language Learners) on academic outcomes by student groups. By using the above key words, the pool of literature reduced to 26 articles.

I further filtered the studies by educational grade level and removed studies that only pertained to elementary. I kept research articles that covered elementary through high school and college to gain the context and research background on the outcomes of school attendance throughout every grade level. In addition, I screened for articles that encompassed attendance interventions to capture the effects of student attendance on student academic outcomes for student groups. Finally, I reviewed the research designs and analysis used among the articles to identify contextual information and to further examine the relationships of attendance on student academic outcomes by research methods and procedures.

My selection process narrowed the pool of potential sources to 14 key peer-reviewed articles. I found four articles that focused primarily on school attendance interventions, six articles on the relationship of attendance with GPA and graduation rates, and four articles on school attendance and compulsory attendance laws. The articles selected represent a variety of settings, samples, research designs, and research analysis on the topic of school attendance for student academic outcomes (i.e., dropout, engagement, graduation, GPA, and test scores). In the next section, I provide a summary of the relevant literature by participants, sample, setting, measures, and results.

Summary of Literature Review

The literature articles that I selected for this review focused on the relationships of student attendance and student academic outcomes. First, I reviewed the literature by categorizing each study by various settings from both urban and rural schools, participants, and samples ranging from 28 to 86,000, and research designs from quantitative to qualitative. Then, I organized the literature review of participants, sample, setting, and measures into the category of student outcomes. I included article context from attendance intervention studies to capture the relationships with school attendance and student academics outcomes. Finally, I summarized the results of the literature review into three specific themes to illustrate where studies converge and diverge according to their results and implications for research and practitioners. In short, I identified themes in the literature review to highlight key findings and to frame the context of research on school attendance and associated student outcomes.

Description of articles. In the following section I describe the 14 articles selected for the literature review. In Table 1, I categorized articles by research design and literature focus area of student outcomes by attendance associations and attendance interventions, and then indicated whether findings were quantitative or qualitative in nature. I included studies that focused on interventions for improving school attendance and studies that examined the relationship of attendance on student outcomes to capture the context of attendance literature for my review. Table 1 displays identifies the type of research design among the articles reviewed and Table 2 provides summaries of the way each reference examined student attendance on student academic outcomes.

Table 1

Types of Research Design Among Literature Review

Citation	Attendance Associations	Attendance Interventions
1	Quantitative	
2	Quantitative	
3		Quantitative
4		Qualitative
5	Quantitative	
6*	Literature Review	Literature Review
7	Quantitative	
8		Quantitative
9		Quantitative
10		Quantitative
11		Quantitative
12	Quantitative	
13	Quantitative	
14		Quantitative

Note. *Literature review captured attendance associations and attendance interventions.

As illustrated in Table 2, nine articles related to the associations of school attendance and student academic outcomes (Burke, 2015; Carl, Richardson, Cheng, HeeJin, & Meyer, 2013; Gentle-Genitty, Karikari, Chen, Wilka, & Kim, 2014; Gottfried; 2010; Heilbrunn, 2007; Maynard, McCrea, Pigott, & Kelly, 2013; McConnell & Kubina, 2014; Snyder et al., 2014; Subedi et al., 2015). In contrast, five articles examined the school attendance on student academic outcomes (Fantuzzo, Grim, & Hazan, 2005; MacIver & Messel, 2013; Marvul, 2012; Nolan et al., 2013; Steward et al., 2008).

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Table 2

Research Emphasis in Attendance Literature

Citation	Research Emphasis
1	Use GPA, grade level, and attendance rates as indicators to identify high school dropouts
2	Examine Middle school and Freshman year, GPA, attendance rate, standardized test scores to identify indicators and predictors for graduation and post secondary attainment
3	Investigate attendance intervention, attendance patterns, and behaviors, and of chronically absent students to identify effectiveness on student academic outcomes; explore behavioral tendencies for truancy, homework completion, grades, and attendance rates
4	Examine attendance rates, grades, test results based on attendance patterns, interventions to identify the relationships with attendance on student outcomes and attendance behaviors
5	Examine Middle school and Freshman year, GPA, attendance rate, standardized test scores to identify indicators and predictors for graduation and post secondary attainment
6	Evaluating Compulsory attendance policy and attendance interventions to reduce chronic absenteeism and increase student outcomes
7	Use GPA, 9th grade students, attendance rates and course failures as indicators for identifying students eligible for graduating high school
8	Examine attendance interventions for reducing truancy and behaviors of chronically absent students; identify behavioral tendencies toward truancy action by surveying students
9	Evaluate attendance interventions designed to reduce truancy and improve student outcomes; examining attendance patterns, behaviors, and response to attendance interventions
10	Evaluate attendance interventions designed to reduce truancy and improve student outcomes; examining attendance patterns, behaviors, and response to attendance interventions
11	Use attendance interventions to improve student outcomes and reduce truancy
12	Explore associations of attendance rates by GPA
13	Use GPA, grade level, and attendance rates as indicators to identify high school dropouts
14	Identify relationships with attendance on student outcomes and attendance behaviors by attendance patterns, grades and test scores

Attendance. Of the 14 articles in the literature pool, 7 studies on attendance interventions examined attendance behaviors and student academic outcomes (Fantuzzo et al., 2005; Gentle-Genitty et al., 2014; Heilbrunn, 2007; Marvul, 2012; Maynard et al., 2013; McConnell & Kubina, 2014; Snyder et al., 2014). For example, Maynard et al. (2013) and McConnell and Kubina (2014) investigated attendance patterns, behaviors, and interventions for chronically absent students referred to truancy to determine the most effective practice for students returning to school, preventing absenteeism, and recovering academic skills. In addition, studies by Gentle-Genitty et al. (2014), Heilbrunn (2007), and Snyder et al. (2014) further examined attendance interventions to reduce truancy by exploring the outcomes from compulsory attendance policy with student attendance rates and student academic outcomes such as grades and student performance on tests. Similarly, Fantuzzo et al. (2005) and Marvul's (2012) evaluated attendance interventions based on student academic outcomes by investigating students' behavioral tendencies toward truancy action (i.e., no action, court based referral, and/or community based referral). Marvul (2012) included a student survey to capture attitudes toward absenteeism and to categorize attendance behavior based on student responses.

Academic Outcomes. Six studies that focused on the relationship between student attendance and student academic outcomes with an emphasis on identifying graduation and dropout indicators (Burke, 2015; Carl et al., 2013; Gottfried, 2010; MacIver & Messel, 2013; Steward et al., 2008; Subedi et al., 2015). Another eight studies explored the associations of school attendance by examining attendance interventions and student academic outcomes—GPA, credits earned toward graduation (Fantuzzo et al., 2005; Gentle-Genitty et al., 2014; Heilbrunn, 2007; Marvul, 2012; Maynard et al., 2013,

McConnell & Kubina, 2014; Nolan et al., 2013; Snyder et al., 2014).

Among the 14 articles, each study examined the relationship of student attendance and student academic outcomes. Steward et al.'s (2013) analyzed the relationship between attendance and GPA to determine the level of association with attending school, where as Carl et al.'s (2013) used GPA, grade level, and attendance rates as indicators for identifying potential high school dropouts. Similarly, MacIver and Messel's (2013) examined GPA, grade level (i.e., freshmen students), and attendance rates, but included course failures as an additional indicator for identifying students graduating high school. In addition, studies by Gottfried (2010) and Burke (2015) emphasized the associations of attendance on student outcomes during middle school and within the first year of high school. Both studies used GPA, attendance rate, grade level specification, but included standardized test scores as indicators and predictors of graduation and post secondary attainment similar to MacIver and Messel's (2013) research.

Participants and Settings. Table 3 displays the participants and settings among the articles reviewed for this study. The six references reviewed on this topic included samples ranging in size from 200 to 86,000 subjects (Burke, 2015; Carl et al., 2013; Gottfried, 2010; MacIver & Messel, 2013; Steward et al., 2008; Subedi et al., 2015). Schools districts from both rural and urban settings are represented in the review of literature across the regions of the Northwest, Midwest, and Northeast, and East Coast locations in the U.S. In addition, the research settings included the elementary, middle, and high school levels.

Table 3

Participants and Settings

Citation	Subjects	Sample	Setting
1	HS (9-12)	80,000	Urban Milwaukee School Districts
2	HS (9)	6,118	Rural and Urban Oregon School Districts
3	HS (9-12)	567	Urban Northeastern School District
4[a]	Focus group	28	Online survey
5	ELM and MS (K-8)	86,000	Urban Philadelphia School District
6[b]	ELM to HS (K-12)	NA	Rural and Urban School Districts
7	HS (9)	12,488	Urban Baltimore City School Districts
8	HS (9-12)	40	Urban Alternative High School
9	ELM to HS (K-12)	1,725	Rural and Urban Schools
10	ELM to HS (K-12)	584	Rural and Urban Schools
11	ELM to HS (K-12)	16,418	Urban Midwestern School District
12	HS (9)	200	Urban School District
13	HS (9-12)	1,004	Urban Florida School District
14	Postsecondary	212	Northeastern University

Note. Citation 4[a], Focus group included education workers, government officials, judges, and truancy experts. Citation 6[b], Article review examined literature for K-12 among rural and urban schools. HS = High School; MS = Middle School; ELM = Elementary School.

Specifically, four studies conducted in an urban setting (Carl et al., 2013; Gottfried, 2010; Steward et al., 2008; Subedi et al., 2015) focused on high school students of color (i.e., Black and Hispanic) with Steward's et al. (2008) study as one out of the four studies concentrating on ninth-grade populace data. Similarly, Burke's (2015)

study included four districts both in the rural and urban settings and targeted freshmen attendance rates and GPA scores as indicators for graduation. Gottfried's (2010) study explored eight-grade level performances (i.e., attendance rate, GPA, and test scores) to determine the probability of graduating from high school in either 4 or 5 years.

The eight research articles reviewed on truancy included samples ranging from 28 to 16,418 subjects (Fantuzzo et al., 2005; Gentle-Genitty et al., 2014; Heilbrunn, 2007; Marvul, 2012; Maynard et al., 2013; McConnell & Kubina, 2014; Nolan et al., 2013; Snyder et al., 2014). In addition, the research settings of the studies encompassed the elementary level through high school and postsecondary college setting. School districts from both rural and urban settings are represented across the regions of the Midwest and Northeast locations in the United States. Specifically, two studies conducted in an urban setting (Fantuzzo et al., 2005; Marvul, 2012) examined truancy for associations with attitude and attendance. Similarly, two rural and urban studies (Maynard et al., 2013; McConnell & Kubina, 2014) investigated intervention effectiveness across various settings to predict attendance behavior outcomes. Gentle-Genitty et al.'s (2014) online study, as part of a qualitative study design, examined various definitions of truancy and implications across the U.S.

Measures. The most common variable identified among all 14 articles reviewed was student attendance. The least common variables used among the studies were behavior reports, test scores, and socio-economic status. Table 4 displays the variables used in each study.

Table 4

Variables Identified in Literature Review Studies

Citation	Attend. Rate	GPA	Course Failure	Socio Status	ELL/ SPED	Sex	Age	Race / Ethnicity	Behavior	Test Scores
1	X	X	X			X	X	X		
2	X	X	X		X	X	X	X	X	
3	X					X	X	X		
4	X									
5	X	X		X	X		X	X	X	X
6	X	X	X	X	X	X	X	X	X	X
7	X	X	X			X	X			X
8	X						X	X		
10	X		X				X			
11	X		X	X	X	X	X	X		
12	X	X					X	X		
13	X	X			X	X	X			
14	X	X								

Note. Ten key variables are displayed across the 14 articles reviewed, where X indicates that the variable was measured in the associated study.

Attendance and academic outcomes. Descriptive variables used within the studies to examine the associations of attendance on student academic outcomes include: (a) GPA (b) course failure, (c) socioeconomic status, (d) ELL and SPED classification, (e) gender, (f) age, (g) race and ethnicity, (h) behavioral referrals and (h) test scores. Of the 14 studies, 7 articles (Burke, 2015; Carl et al., 2013; Gottfried, 2010; MacIver & Messel, 2013; Snyder et al., 2014; Steward et al., 2008; Subedi et al., 2015) investigate the pattern of attendance on student academic outcomes. The remaining 7 articles (Fantuzzo et al., 2005; Gentle-Genitty et al., 2014; Heilbrunn, 2007; Marvul, 2012; Maynard et al., 2013; McConnell & Kubina, 2014; Nolan et al., 2013) explore the relationship with attendance interventions on student outcomes over a period of time.

Among the 14 studies, four key articles (Burke, 2015; Fantuzzo et al., 2005; Gottfried, 2010; Nolan et al., 2013) specifically examined the associations of school attendance on student academic outcomes and the use of attendance interventions. Gottfried's (2010) study examined attendance rates to determine whether a relationship between school attendance and GPA existed, while Burke's (2015) study explored the relationship between attendance rates for students who graduated by comparing GPA scores. Similarly, Nolan et al.'s (2013) correlation study examined attendance and graduation rates to identify associations between attendance and student academic outcomes as indicators for dropping out of school or graduating. Fantuzzo et al.'s, (2005) study was unique to the other three studies in that truancy was examined by student outcomes of GPA and graduation rates and by the relationship with attendance interventions aimed to reduce student risk for dropping out of school. Moreover, all four studies (Burke, 2015; Fantuzzo et al., 2005; Gottfried, 2010; Nolan et al., 2013) measured

associations of school attendance to student outcomes of GPA, and graduation and examined attendance interventions. In the next section, I identify key themes from the 14 articles on school attendance and student academic outcomes.

Thematic Summary

Table 5 displays the results of the literature review. Here I summarized those results by three major themes evident in the literature: (a) missing school affects learning and increases risk for dropping out, (b) middle school transition influences high school success, and (c) attendance affects GPA and graduation eligibility.

Missing school affects learning and increases risk for dropping out. Research indicates students who attend class more frequently tend to perform better and receive higher grades more favorably in comparison to those who attended less (Carl et al., 2013; Snyder et al., 2014; Steward et al., 2008). Students with chronic absenteeism have fewer learning opportunities when absent from school (Fantuzzo et al., 2005; Marvul, 2012). Fantuzzo et al. (2005) asserts students with higher absent rates consequently miss out on other compounding learning opportunities (i.e., classroom activities, peer to peer connections, and staff support) which negatively affects progress toward high school completion and psychosocial development of interpersonal skills. Moreover, students are at risk when school is frequently missed and grades and test scores are low, increasing the chances of dropping out (Burke, 2015; Carl et al., 2013; Fantuzzo et al., 2005; Gentle-Genitty et al., 2014; Gottfried, 2010; Heilbrunn, 2007; MacIver & Messel, 2013; Marvul, 2012; Maynard et al., 2013; McConnell & Kubina, 2014; Nolan et al., 2013; Steward et al., 2008; Subedi et al., 2015).

Table 5

Results of Literature Reviewed for Student Academic Outcomes by Theme

Citation	1	2	3	Student Academic Outcomes
1	X		X	GPA is associated with on time graduation
2	X	X	X	Attendance and GPA in Grades 8 and 9 are positively associated with chronic absenteeism
3	X	X		Truancy remained high and unchanged for non-referred truants; court and community-based truancy decreased absences; community-based maintained reduced rates
4	X			Truancy negatively affects student outcomes of grades and graduation; Truancy definition varies across United States as did outcomes among focus group
5	X	X	X	Attendance has predictive capability for GPA and subject test scores on Math and Reading
6	X		X	Truancy associated with dropping out of school, expulsion, substance use, juvenile delinquency, risky behavior, and crime
7	X	X		Grade 9 attendance and course failure predict graduation along with Grade 8 test-scores for college enrollment
8	X			Negative attitudes toward education with low educational expectations showed higher levels of absenteeism
9	X		X	Interventions effectiveness limited to various settings; effective when focusing on attendance behavior and academic need
10	X	X	X	Parent involvement showed to improve student attendance and academic tracking by calling home and with staff members praise
11	X		X	Risk factor associated with student demographics and student grades and credits earned toward graduation
12	X	X	X	Greater absenteeism associated with lower GPA; lack of coping strategies positively associated with absenteeism
13	X	X		Attendance, goal setting, graduation planning, motivational support, parent contact, teacher support--all predictors for GPA
14	X		X	Positive association between attendance and performance

Note: Theme 1 = Missing School Affects Learning and Increases Risk for Dropping Out; Theme 2 = Middle School Transition Influences High School Success; and Theme 3 = Attendance Affects GPA and Graduation Eligibility.

Middle school transition influences high school success. Student performance during middle school is found to be key a predictor of high school success and graduation readiness (Burke, 2015; Gottfried, 2010; MacIver & Messel, 2013). MacIver and Messel (2013) found eighth-grade student test scores to be indicators for student success in high school as well as attendance rates, and number of course failures as strong predictors for graduation within 4-years. Similarly, both studies conducted by Gottfried (2010) and Burke (2015) indicated attendance rates and GPA earned in middle school to be a positive predictor for graduation and college attainment. Burke's (2015) study found students in eighth-grade to be at greater risk for dropping out when attending school less than 80% of the time and when earning a GPA score of 2.0 or below. Moreover, middle to high school transition is an indicator of whether students graduate on time or dropping out of school (Burke, 2015; Fantuzzo et al., 2005; Gottfried, 2010; MacIver & Messel, 2013; Marvul, 2012; McConnell & Kubina, 2014).

Attendance affects GPA and graduation eligibility. School attendance is associated with GPA—students who have higher attendance rates typically earn higher grades and perform better than those with lower attendance rates below 90% (Burke, 2015; Carl et al., 2013; Gottfried, 2010; MacIver & Messel, 2013; Steward et al., 2008; Subedi et al., 2015). Researchers found chronic absenteeism to negatively affect progress toward completion of graduation requirements while increasing the probability for (a) dropping out of school, (b) participating in delinquent behavior, (c) employment instability, and (d) incarceration for illegal activity (Maynard et al., 2013; McConnell & Kubina, 2014; Nolan et al., 2013). In addition, students with attendance below 90% are more likely to struggle academically and consequently perform lower on tests than of

their peers and more likely to fail a course (Burke, 2015; Carl et al., 2013; Gottfried, 2010; Heilbrunn, 2007). Further, studies conducted by Snyder et al. (2014) and Steward et al. (2008) found significant correlations between absences, grades, attendance rates, and test performance. Moreover, a student missing two days per month on average beginning in kindergarten loses one full year of school by 10th grade, which negatively impacts student progress and learning. In the next section, I identify areas of research needing further exploration and describe the research questions for this study.

Research Gap, Study Purpose, and Research Questions

During the review of the literature on the relationships of student attendance on student academic outcomes, a gap emerged within the research on student outcomes for student groups based on accumulation of absence (i.e., unexcused v. excused). Though current research indicates students who miss school regularly share several academic outcomes such as poor grades, loss of credit, limited skill development, and typically perform below average on tests (Fantuzzo et al., 2005; Heilbrunn, 2007; Maynard et al., 2013; McConnell & Kubina, 2014), the research does not disaggregate nor examine outcomes for students by types of attendance. The research on chronic absenteeism only focuses on the associations of total absences indicating students who miss 10% or more of the school year are more likely to not graduate within four years, a leading factor to dropping out of school (Fantuzzo et al., 2005; Heilbrunn, 2007; Maynard et al., 2013; McConnell & Kubina, 2014). Research on whether there are differences among student academic outcomes based on types of attendance for student groups is a gap in the current attendance literature I examined.

Another gap among the literature I reviewed included the lack of identifying

attendance cutoff points specifically used for measuring the relationship between student attendance and student academic outcomes. Research on the associations between school attendance, GPA/grades, and credits earned for high school graduation is found in several studies that examine the middle to high school transition by using data of total absences, grades, and test scores to show a positive association with class attendance and student performance (Burke, 2015; Gottfried, 2010; MacIver & Messel, 2013; Snyder et al., 2014). Studies reviewed however, do not provide a specific an attendance cutoff rate of when absences negatively affect GPA and/or accumulation of credits toward graduation nor whether cutoff rates vary among student groups by the type of absence.

Given these gaps in the research, I elected to focus my study on those issues. I designed my study to investigate the associations of high school attendance, specifically focusing on unexcused and excused absences, with academic outcomes; i.e., GPA and credits earned toward graduation. Additionally, I examined those associations by three demographic subgroups: sex, race, and special education status. I included two cohorts of 9th grade students drawn from four high schools in the Eugene 4J School District during the 2013 to 2016: Cohort I (2013 to 2016) and Cohort II (2014 to 2016). The research questions I addressed were:

1. Are there differences between Cohort I and Cohort II for demographic, attendance, and academic variables (RQ 1)?

2. Do specific demographic subgroups – males v. females, White v. minority, special education v. not special education - differ in terms of unexcused absences, excused absence, and attendance (RQ 2)?

3. Do specific demographic subgroups – males v. females, White v. minority,

special education v. not special education - differ in terms of (a) GPA, credits earned, and unexcused and excused absences, and (b) GPA and credits earned based on unexcused and excused absence (RQ 3)?

4. How do students who remain in Cohort I through 11th grade differ from students in that cohort who leave before 11th grade (RQ 4)?

CHAPTER II

METHODS

To analyze the association of school attendance and type of absence (i.e.,
unexcused v. excused) on student academic outcomes (i.e., GPA, credits earned toward
graduation) among different student groups (i.e., sex, race, and SPED status), I conducted
a descriptive, non-experimental design (Babbie, 2013; Creswell, 2014). I included two
cohorts of 9th grade students drawn from the Eugene 4J School District from 2013 to
2016. Cohort I consisted of students in 9th through 11th grade from 2013 to 2016, and
Cohort II consisted of students in 9th and 10th grade from 2014 to 2016. To test the
similarity between cohorts, I compared the same 9th and 10th grade students from each
cohort in RQ 1. I then consolidated the cohorts into one cohort for RQ 2 and RQ 3 and
examined demographic, attendance, and academic variables. In RQ 4, I analyzed students
in Cohort I who remained through 11th grade with students who left Eugene 4J.

Theoretical Framework

School attendance can be classified as a behavior that is observable and
measurable during a period of time. To examine attendance, GPA, and credits earned
toward graduation for student groups by type of absences (i.e., unexcused versus
excused), I drew from two major behavioral theories: (a) Social Control Theory (Hirsch,
1969) and (b) Strain Theory (Agnew, 1992; Merton, 1968) Figure 1 illustrates the
theoretical frameworks and variables used in this study.
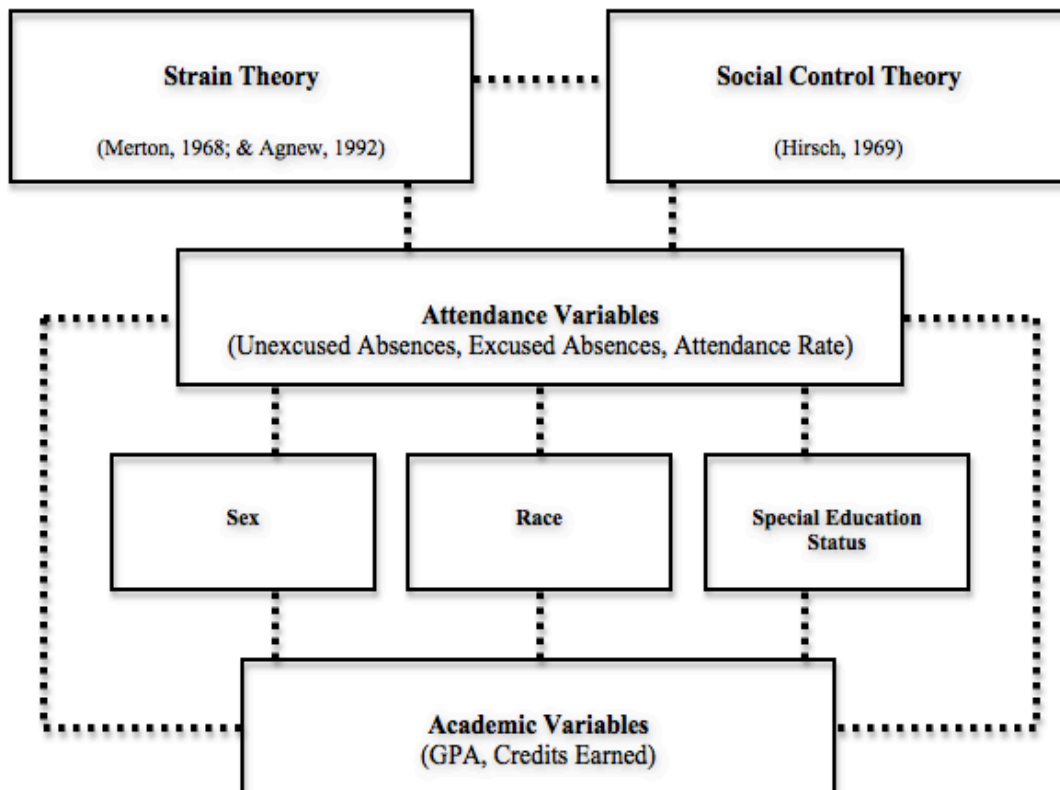
Figure 1. Theoretical and conceptual framework.

Strain theory and social control theory are complementary. Both are criminological based and typically used in research to describe associations of delinquent behavior such as dropping out of school and criminal activity (Hoffmann, 2003; Sweeten, Bushway & Paternoster, 2009). Both theories, however, also offer a breadth and depth of perspective for identifying reasons of non-compliant behavior. Insight from the theories can be applied to the educational setting when examining the associations of chronic absenteeism for groups of students and academic outcomes.

Hirsch's (1969) social control theory explains appropriate behavioral conduct is contingent upon positive relationships and social bonds within a social institution of a school where as delinquent behavior is an indicator of antisocial social impulses due to a

lack of social connection. Similarly, Agnew's (1992) extension of the original strain theory by Merton (1968) elaborated the theory with additional types of strains for understanding delinquent and refusal behavior. Both Merton (1968) and Angew (1992) identify outcomes with school experiences, social status, and academic success as strains that influence levels of conformity behavior for rules and social norms. In other words, if a student has negative school experiences and lacks positive peer relationships, avoiding school reduces strain and reinforces delinquent behavior of not attending school; the motivation then becomes to repeat the behavior for immediate reward.

My research questions are designed to examine associations of school attendance and types of absences (i.e., unexcused or excused absences) on student academic outcomes (i.e., GPA, credits earned toward graduation) among student groups (i.e., sex, race, and SPED status). I incorporate social control theory and strain theory as the theoretical framework and identify differences by academic outcomes for students and student groups based on unexcused versus excused absences.

Dissertation Study Design

I used a descriptive non-experimental design to investigate the relationship of student academic outcomes among student groups based on type of absences. I included two cohorts of 9th grade students ($n = 2262$) from four comprehensive high schools (i.e., Churchill, North Eugene, Sheldon, and South Eugene) in the Eugene 4J School District during the 2013 to 2016 school year. Figure 2 illustrates the groups by school year and grade level.

2013 – 2014	2014 – 2015	2015 – 2016
9th grade - Group I Cohort 1 (n =1,097)	10th grade - Group I Cohort 2 (n =1,165)	
	10th grade - Group I Cohort 1 (n =1,097)	10th grade - Group I Cohort 2 (n =1,165)
		11th grade - Group I Cohort 1 (n =1,097)

Figure 2. Cohorts included in the dissertation study.

Study setting. I selected Eugene 4J based on district size and location. Eugene 4J is located in the metropolitan area of Eugene, Oregon and is the sixth largest urban school district in Oregon, serving 85% of the students in Lane County. Out of the 16 school districts in Lane County, Eugene 4J is the largest and the most diverse in population. Eugene 4J serves 5,338 students in grades 9 through 12 of which 41% identify as economically disadvantaged, 14% receive specialized instruction, and 5% of the student population includes English language learners (Chief Education Office, 2016).

Sample. There were originally 3,093 students for this study. The sample represented 9th grade students from four comprehensive high schools. I removed students if they moved outside of the school district. I only included students who remained for two complete school years. The sample equaled 2,262 students.

Data collection of sample. As a high school building administrator for Eugene 4J I had direct access to student data. It was convenient to conduct research within the district of my employment and useful having results that could be applied to Eugene 4J

(Creswell, 2014). Extant data was extracted from the district's student information

management system called Synergy® Student Information System (SIS). Upon approval

from the institutional review board (IRB), I received a secure data file from the Eugene

4J's Director of Research and Planning. The file held de-identified extant student data

organized by cohorts.

Demographic variables. I included three demographic variables: (a) sex, (b)

race, and (c) SPED status. All descriptors of students were self-reported and extracted

from the Eugene 4J student information system. I categorized sex as male or female and

race as White or minority. I grouped American Indian/Alaska Native, Asian,

Black/African American, Hispanic/Latino, Multi-Racial/Two or More, Native

Hawaiian/Pacific Islander into the minority category for race. I identified SPED status as

students in special education (SPED) or students not (non-SPED).

Attendance variables. I included three attendance variables: (a) attendance rate

(b) unexcused absences, and (c) excused absences. I identified attendance rate by the

number of days attended over the number of days enrolled. The attendance rates included

unexcused and excused absence. I determined unexcused and excused absences by the

accumulation of absences based on the classification assigned. There were 28

classification categories or reasons used for identifying an absence. To conduct

comparisons and analysis, I combined the 11reasons for an unexcused absence and the

16reasons an excused absence into two classification categories of unexcused or excused.

Table 6 displays the complete categories and descriptions for classifying an absence as

either unexcused or excused.

Table 6

Absences Classification

Code	Unexcused	Code	Excused
ABS	Absent	SCK	Sick
SKP	Skipped Class/School	MED	Medical/Dental
BUS	Missed Bus	INJ	Injury
OVS	Overslept	HOS	Hospital/Surgery/Recovery
PAR	Parent Request	FAM	Family Issue/Emergency
MSC	Misc Appointment	BRV	Bereavement
CRN	Chronic Unexcused Absence	REL	Religious Activity
OTH	Other	COL	College Visit
URE	Unaccepted Reason	LEG	Court/Legal Issue
PAU	Planned Absence (not approved)	PLA	Planned Absence (approved)
TRU	Truant	ISS	In School Suspension
		OSS	Out of School Suspension
		HOM	Sent Home
		XCL	Exclusion
		WEA	Weather
		ATH	Athletics

Note. Approved absences classified as excused allow students to access missing homework.

Academic variables. I included two academic variables: (a) GPA and (b) credits earned. I determined the cumulative GPA by grades earned and as recorded from a point scale (i.e., A = 4.0, B = 3.0, C = 2.0, D = 1.0, F = 0.0) and defined as the average of all grades attempted over the history of enrollment. I determined credits earned toward

graduation as the number of classes taken and the value of credits per class earned. Credit

for class completion ranged from 0.125 to 0.500 per trimester with 2.50 to 4.00 credits

possible per trimester. The maximum number of credits possible to obtain during two

school years was 16 credits. To determine whether students were on track to graduate

based on credits, I identified student credit completion using six and twelve credits as

markers toward completing the 24 credits required for graduating high school in Oregon.

Analyses

RQ 1. Are there differences between Cohort I and Cohort II for demographic, attendance,

and academic variables? To answer RQ 1, I calculated descriptive statistics, Chi-square

tests, and independent *t*-tests to describe and compare demographic, attendance, and

academic variables for Cohort I and Cohort II. For the statistical comparisons between

the cohorts, I tested the null hypothesis (there is no statistical difference between groups).

To control for Type I error due to multiple comparisons, I set the set-wise alpha level at

.05 alpha level. Because there were five comparisons in the set, I allocated the alpha level

for each comparison at .01 (.05/5 = .01; Keppel, 1982). In addition, I calculated the effect

size for each comparison and used Cohen's (*d*) standards for comparison between two

means (i.e., 0.2 is small, 0.5 is moderate, and 0.8 or > is large).

RQ 2. Do specific demographic subgroups – males v. females, White v. minority,

special education v. not special education - differ in terms of unexcused absences,

excused absence, and attendance? To answer RQ 2, I calculated descriptive statistics and

independent *t*-tests to describe and compare unexcused and excused variables for specific

demographic subgroups; i.e., sex (male v. female), race (White v. minority), and SPED

status (students in special education v. students not in special education). For each

subgroup comparison, I tested the null hypothesis (there is no statistical difference

between groups) on each at the .05 alpha level. To control for Type I error due to

multiple comparisons, I set the set-wise alpha level at .05 alpha level. Because there were

three comparisons in the set, I allocated the alpha level for each comparison at .016 (.05/3

= .016; Keppel, 1982). In addition, I calculated the effect size for each comparison and

used Cohen's (*d*) standards for comparison between two means (i.e., 0.2 is small, 0.5 is

moderate, and 0.8 or > is large).

RQ 3. Do specific demographic subgroups – males v. females, White v. minority,

special education v. not special education - differ in terms of (a) GPA, credits earned, and

unexcused and excused absences, and (b) GPA and credits earned based on unexcused

and excused absence To answer RQ 3, I calculated descriptive statistics and independent

t-tests to describe, compare, and analyze the association with GPA and credits earned for

specific demographic subgroups by unexcused and excused absences; i.e., sex (male v.

female), race (White v. minority), and SPED status (students in special education v.

students not in special education). For each subgroup comparison, I tested the null

hypothesis (there is no statistical difference between groups) on each at the .05 alpha

level. To control for Type I error due to multiple comparisons, I set the set-wise alpha

level at .05 alpha level. Because there were two comparisons in the set, I allocated the

alpha level for each comparison at .025 (.05/2 = .025; Keppel, 1982). In addition, I

calculated the effect size for each comparison and used Cohen's (*d*) standards for

comparison between two means (i.e., 0.2 is small, 0.5 is moderate, and 0.8 or > is large).

Next, I conducted Pearson correlation (*r*) to analyze GPA and credits earned by

specific demographic subgroups; i.e., sex (male v. female), race (White v. minority), and

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SPED status (students in special education v. students not in special education) and unexcused and excused absences by subgroups. For each subgroup comparison, I tested the null hypothesis (there is no statistical difference between groups) on each at the .05 alpha level. To control for Type I error due to multiple comparisons, I set the set-wise alpha level at .05 alpha level. Because there were two comparisons in the set, I allocated the alpha level for each comparison at .025 (.05/2 = .025; Keppel, 1982). I used Cohen's standards (1988) to determine the correlation level between variables (i.e., weak = .10 to .29, moderate = .30 to .49, and strong = .50 or greater).

RQ 4. How do students who remain in Cohort I through 11th grade differ from students in that cohort who leave before 11th grade? To answer RQ 4, I calculated descriptive statistics, Chi-square tests, and independent *t*-tests to describe and compare demographic, attendance, and academic variables for Cohort I only. For the statistical comparisons between students who remained in Cohort I through 11th grade to students who left 4J**,** I tested the null hypothesis (there is no statistical difference between groups) at the .05 alpha level. To control for Type I error due to multiple comparisons, I set the set-wise alpha level at .05 alpha level. Because there were five comparisons in the set, I allocated the alpha level for each comparison at .01 (.05/5 = .01; Keppel, 1982).In addition, I calculated the effect size for each comparison and used Cohen's (*d*) standards for comparison between two means (i.e., 0.2 is small, 0.5 is moderate, and 0.8 or > is large).

CHAPTER III

RESULTS

The purpose of this dissertation was to examine the association between school attendance and the type of absence and academic outcomes among different student demographic groups. In this chapter, I report the results and conclude with a summary of the results that transitions into greater depth of discussion in the final dissertation chapter.

RQ 1: Are There Differences Between Cohort I and Cohort II for Demographic, Attendance, and Academic Variables?

To address RQ 1, I calculated descriptive statistics, Chi-square tests, and independent *t*-tests to describe and compare demographic, attendance, and academic variables for Cohort I and Cohort II. Table 7 describes each cohort by sex, race, and SPED status. Table 8 presents the Chi-square statistical comparisons between Cohort 1 and Cohort 2 on those three demographic variables.

Table 7

Demographic Variables by Cohort I and II

Source	Cohort I – 2013-2016		Cohort II – 2013-2016		Total count
	Count	% within	Count	% within	
Sex					
Male	555	50.6%	595	51.1%	1150
Female	542	49.4%	570	48.9%	1112
Race					
White	784	71.5%	823	70.6%	1607
Non-White	313	28.5%	342	29.4%	655
SPED status					
SPED	112	10.2%	133	11.4%	245
Non-SPED	985	89.8%	1032	88.6%	2017

Table 8

Cohort Comparison on Demographic Variables Using Chi-square Test

Source	X^2	df	p
Sex	0.05	1	.82
Race	0.19	1	.67
SPED status	0.85	1	.36

Table 9

Attendance and Academic Variables for Cohort I and II Using Independent t-tests with Cohen's Effect Size

Source	Cohort I		Cohort II		t	p	d
	M	SD	M	SD			
Unexcused	9.61	14.36	9.21	14.51	0.65	.52	.03
Excused	12.53	11.38	13.43	12.55	-1.77	.08	-.08
Attendance rate %	95.90	5.21	93.20	7.49	10.12	< .001	.42
GPA	3.05	0.91	2.96	1.00	2.40	.02	.09
Credits earned	13.73	2.54	13.62	2.67	0.97	.33	.05

Figure 3 visually illustrates the sample means for the attendance and academic outcome variables for Cohorts I and II. There were no statistically significant differences in unexcused absences, excused absences, or credits earned. There were, however, statistically significant differences for attendance rate and GPA.

The purpose of this research question essentially was to determine if it would be acceptable to combine Cohorts I and II for subsequent analyses in RQ 2 through RQ 3. I decided that this combination was justified for the following three reasons. First, six of the eight statistical comparisons were not statistically significant. Second, for those two

statistical comparisons that were statistically significant (i.e., GPA and attendance rate as displayed in Table 9), the descriptive means on those specific variables are relatively similar and the effect was small. Third, for a conceptual perspective this study focuses on the 4J district at large, which includes multiple cohorts of students. Given those three premises, I believe it is reasonable to assume that consolidating the cohorts reflects the district during 2013 to 2016. Therefore, I consolidated the cohorts for the following analyses in RQs 2 and 3.
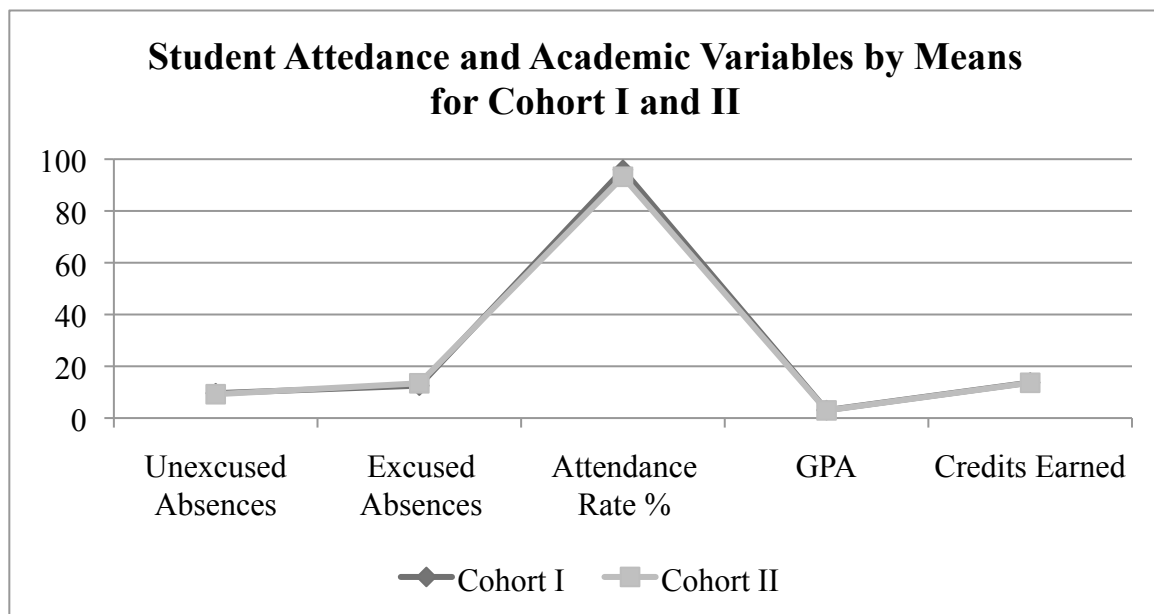
Figure 3. Student attendance and academic variables by means for Cohort I and II.

RQ 2: Do Specific Demographic Subgroups – Males v. Females, White v. Minority, Special Education v. Not Special Education – Differ in Terms of Excused Absences, Unexcused Absence, and Attendance?

To address RQ 2, I calculated descriptive statistics and independent *t*-tests to describe and compare unexcused and excused variables for specific demographic subgroups; i.e., sex (male v. female), race (White v. minority), and SPED status (students in special education v. students not in special education). Table 10 describes the sample

of students by sex, race, and SPED status.

Table 10

Demographics for Combined Cohorts

Source	n	%
Sex		
Male	1150	50.8%
Female	1112	49.2%
Race		
White	1607	71.0%
Minority	655	29.0%
SPED status		
SPED	245	10.8%
Non-SPED	2017	89.2%

Table 11 describes the means for unexcused absences, excused absences and attendance rate by sex. The two columns on the right side of the table present the statistical results. Table 11 displays statistically significant differences between male and female students for excused absences and attendance rate, with females presenting higher rates of unexcused absences and lower attendance rates than males. The effect sizes for the statically significant differences were small for excused and attendance rate by sex.

Table 11

Attendance Variables by Sex for Combined Cohort Using Independent t-tests with Cohen's Effect Size

Source	Male		Female		t	p	d
	M	SD	M	SD			
Unexcused	9.14	15.23	9.68	13.57	-0.88	.38	-.04
Excused	12.15	11.78	13.87	12.17	-3.39	.001	-.14
Attendance rate %	94.96	6.26	94.07	6.96	3.16	.002	.13

Table 12 describes the means for unexcused absences, excused absences, and attendance rate for White and minority students. The two columns on the right side of the table present the statistical results. As reported in Table 12, there was a statistically significant difference between White students and minority students for unexcused absences, with minority students presenting a higher rate of unexcused absences relative to their non-minority peer group. The effect size for the statically significant difference was small for unexcused absences by race.

Table 12

Attendance Variables by Race for Combined Cohort Using Independent t-tests with Cohen's Effect Size

Source	White		Minority		t	p	d
	M	SD	M	SD			
Unexcused	8.51	13.00	11.62	17.36	-4.12	< .001	-.20
Excused	13.24	11.89	12.40	12.27	1.55	.12	.07
Attendance rate %	94.58	6.39	94.12	7.16	1.82	.07	.07

Table 13 describes the means for unexcused absences, excused absences and attendance rate for SPED and non-SPED students. The two columns on the right side of the table present the statistical results. As reported in Table 13, there were statistically significant differences between students in SPED as compared to students not in SPED for all three attendance variables. Specifically, students in special education had higher rates of both unexcused and excused absences, and a lower rate of overall school attendance. Just following, Figure 4 illustrates the means for unexcused and excused absences by demographic subgroups. The effect sizes for the statically significant differences were small for unexcused absences and attendance rate by SPED status.

Table 13

Attendance Variables by SPED status for Combined Cohort Using Independent t-tests with Cohen's Effect Size

Source	SPED		Non-SPED		t	p	d
	M	*SD*	*M*	*SD*			
Unexcused	12.10	14.11	9.10	14.44	3.14	.002	.21
Excused	14.30	14.35	12.84	11.68	1.78	.08	.11
Attendance rate %	93.62	6.12	94.63	6.68	-2.42	.02	-.16
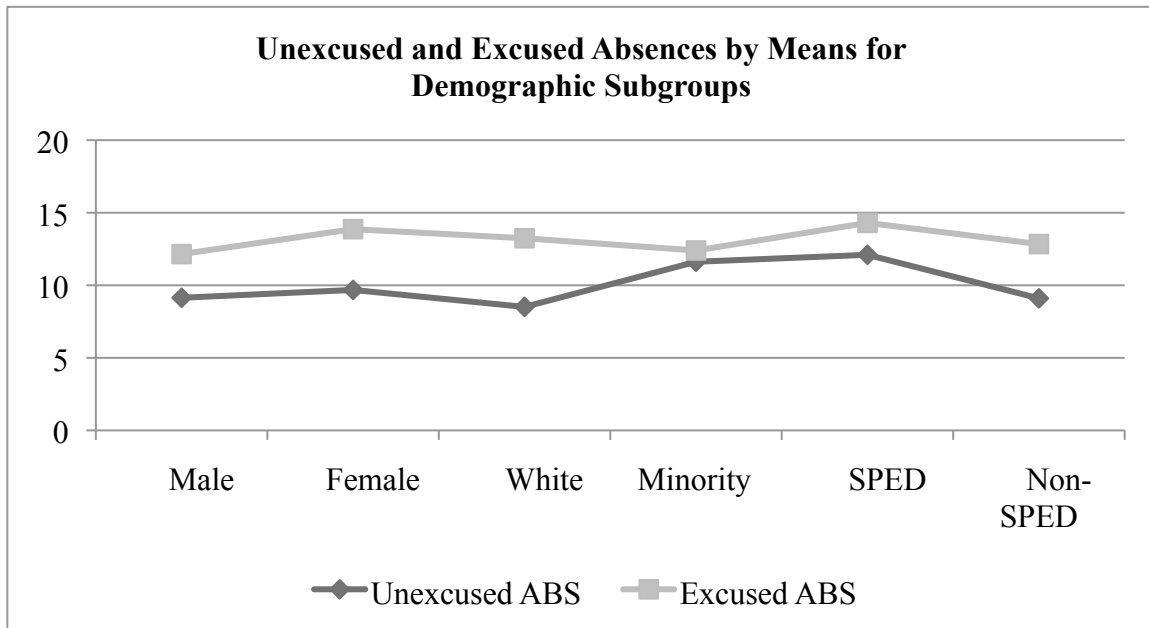
Figure 4. Unexcused and excused absences by means for demographic subgroups.

RQ 3: Do Specific Demographic Subgroups – Males v. Females, White v. Minority, Special Education v. Not Special Education – Differ in Terms of (a) GPA, Credits Earned, and Unexcused and Excused Absences, and (b) GPA and Credits Earned Based on Unexcused and Excused Absences?

To address RQ 3, I calculated descriptive statistics and conducted independent *t*-tests to describe, compare, and analyze the association with GPA and credits earned for

specific demographic subgroups by unexcused and excused absences; i.e., sex (male v. female), race (White v. minority), and SPED status (students in special education v. students not in special education). I then conducted Pearson (*r*) correlation to analyze GPA and credits earned by specific demographic subgroups; i.e., sex (male v. female), race (White v. minority), and SPED status (students in special education v. students not in special education) and unexcused and excused absences by subgroups. For each comparison between subgroups, I tested the null hypothesis on each at the .05 alpha level. I used Cohen's (1988) standards to determine the correlation level between variables (i.e., weak = .10 to .29, moderate = .30 to .49, and strong = .50 or greater). Table 14 describes the means for GPA and credits earned by sex. As reported in Table 14 there was a statistically significant difference between male and female students for GPA, with females earning higher average grades. The effect size for the statically significant differences was small for GPA by sex.

Table 14

Academic Variables by Sex Using Independent t-tests with Cohen's Effect Size

Source	Male		Female		t	p	d
	M	*SD*	*M*	*SD*			
GPA	2.89	0.96	3.12	0.94	-5.96	< .001	-.24
Credits earned	13.62	2.67	13.73	2.54	-1.05	.30	-.04

Table 15 describes the means for GPA and credits earned by race. The two columns on the right side of the table present the statistical results. As reported in Table 15 there were statistically significant differences between White students and minority students for GPA and credits earned; for each variable White students performed higher. The effect size for the statically significant differences was small for GPA by race.

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Table 15

Academic Variables by Race Using Independent t-tests with Cohen's Effect Size

Source	White		Minority		t	p	d
	M	*SD*	*M*	*SD*			
GPA	3.06	0.95	2.87	0.97	-4.27	< .001	-.20
Credits earned	13.76	2.52	13.47	2.80	-2.35	.02	-.12

Table 16 describes the means for GPA and credits earned by SPED status. As reported in Table 16, there were statistically significant differences between SPED and non-SPED students for GPA and credits earned, for each variable SPED students performed lower than students not in SPED. Figures 5 and 6 illustrate mean GPA (cumulative on a 4.00 grading scale, where: A = 4.0, B = 3.0, C = 2.0, D = 1.0, F = 0.0). The effect size for the statically significant differences was moderate to nearing large in effect size for GPA by SPED status.

Table 16

Academic Variables by SPED Status Independent t-tests with Cohen's Effect Size

Source	SPED		Non-SPED		t	p	d
	M	*SD*	*M*	*SD*			
GPA	2.31	1.10	3.09	0.91	-10.58	< .001	-.77
Credits earned	12.61	3.09	13.81	2.51	-5.79	< .001	-.04

GPA by Means for Demographic Subgroups
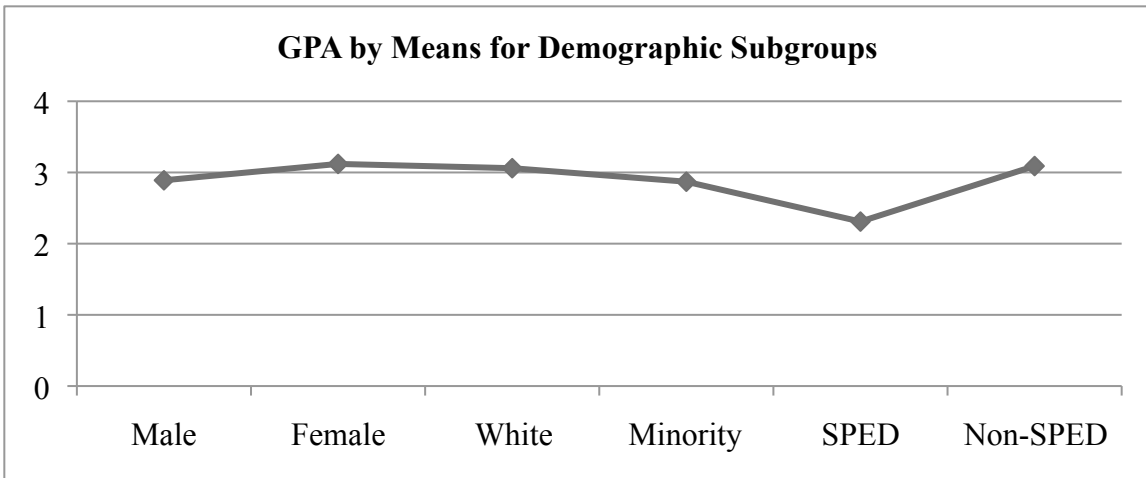
Figure 5. GPA by means by demographic subgroups.

Credits Earned by Means for Demographic Subgroups

Figure 6. Credits earned by means for demographic subgroups.

Table 17 describes and Figure 7 illustrates the correlations for sex, race, and SPED status for unexcused and excused absences. As reported in Table 17 and displayed in Figure 7 there were positive correlations for race and unexcused absences and for SPED status and unexcused absences; for each variable correlations were weak and statistically significant. There was a positive correlation for sex and excused absences that was weak and statistically significant.

Table 17

Correlations of Subgroups for Unexcused and Excused Absences

Source	Unexcused			Excused		
	r	*p*	Cohen's	*r*	*p*	Cohen's
Sex	0.02	.38	-	0.07	< .001	weak
Race	0.10	< .001	weak	-0.03	.11	-
SPED status	0.07	.002	weak	0.04	.08	-

Note. Cohen's (1988) standards (i.e., weak = .10 to .29, moderate = .30 to .49, and strong = .50 or greater) not reported for non-statistically significant Pearson *r* coefficients.
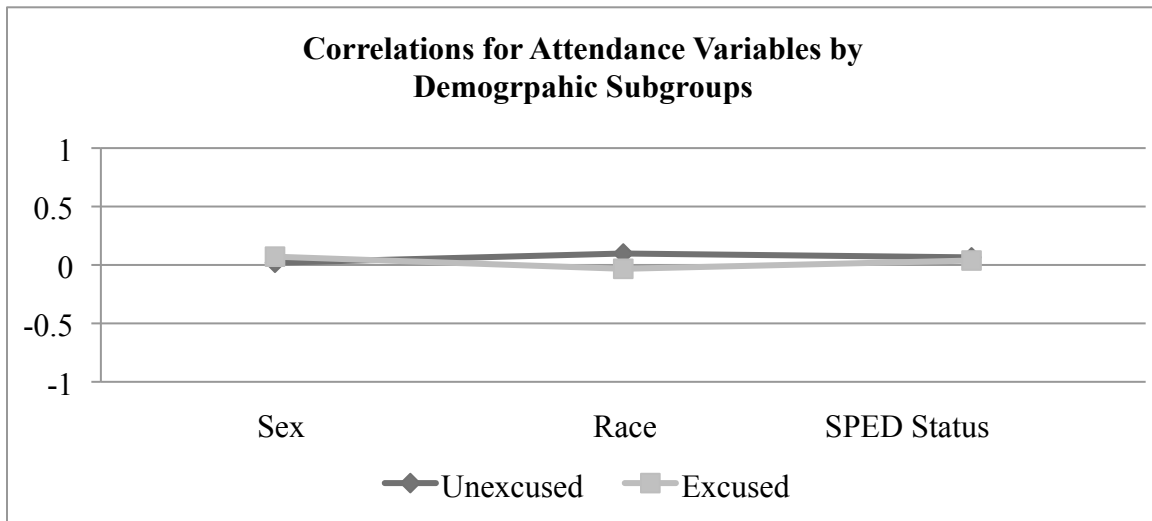
Figure 7. Correlations for attendance variables by demographic subgroups.

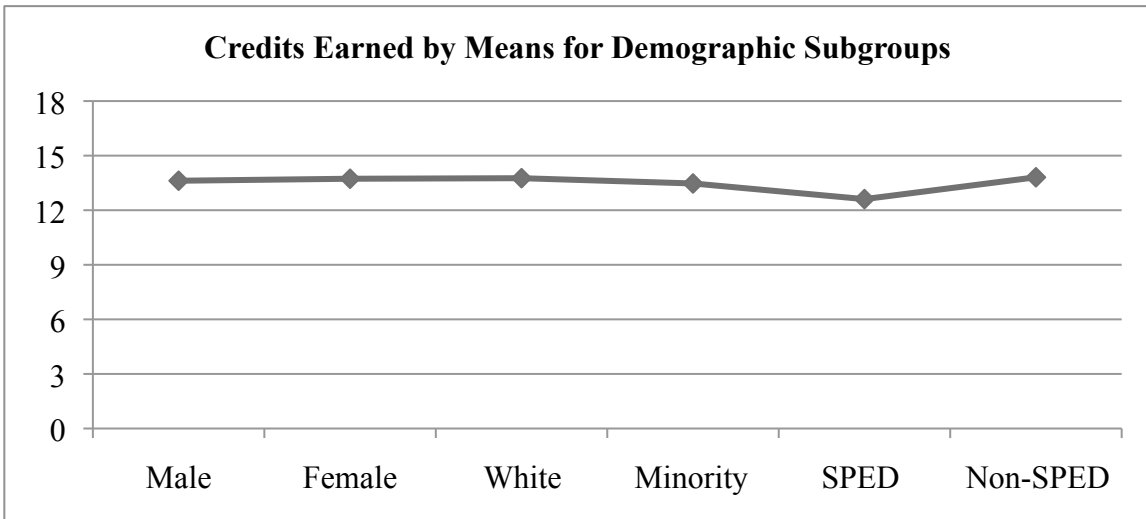Table 18 describes and Figure 8 illustrates the correlations for sex, race, and SPED status for GPA and credits earned. As reported in Table 18 there were positive correlations for sex and GPA, race and GPA, SPED status and GPA; for each variable, correlations were weak and statistically significant. There was a positive correlation for race and credits earned that was weak and statistically significant.

Table 18

Correlations of Subgroups for GPA and Credits Earned

Source	GPA			Credits Earned		
	r	*p*	Cohen's	*r*	*p*	Cohen's
Sex	0.12	< .001	weak	-0.02	.38	-
Race	0.09	< .001	weak	0.10	< .001	weak
SPED status	0.25	< .001	weak	0.07	.002	weak
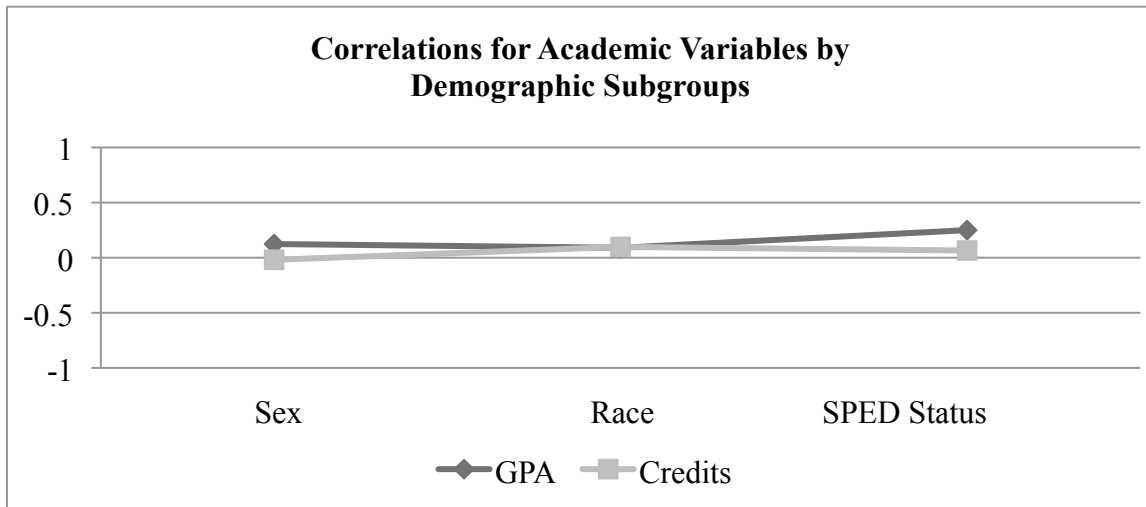
Figure 8. Correlations for academic variables by demographic subgroups.

I calculated multiple Pearson (*r*) correlations to analyze the associations of GPA by excused and unexcused absences for specific demographic subgroup of sex, race, and SPED status (see Table 19). The association between GPA and unexcused absences for demographic subgroups ranged from moderate to strong. There were strong negative correlations in every subgroup and a moderate negative correlation for students in SPED. For excused absences, associations with GPA were weak in every subgroup.

Table 19

Correlations for GPA by Attendance and Demographics

Source	GPA by Unexcused			GPA by Excused		
	r	*p*	Cohen's	*r*	*p*	Cohen's
Male	-.50	< .001	strong	-.22	< .001	weak
Female	-.54	< .001	strong	-.25	< .001	weak
White	-.50	< .001	strong	-.23	< .001	weak
Minority	-.53	< .001	strong	-.22	< .001	weak
SPED	-.32	< .001	moderate	.01	< .001	weak
Non-SPED	-.54	< .001	strong	-.26	< .001	weak
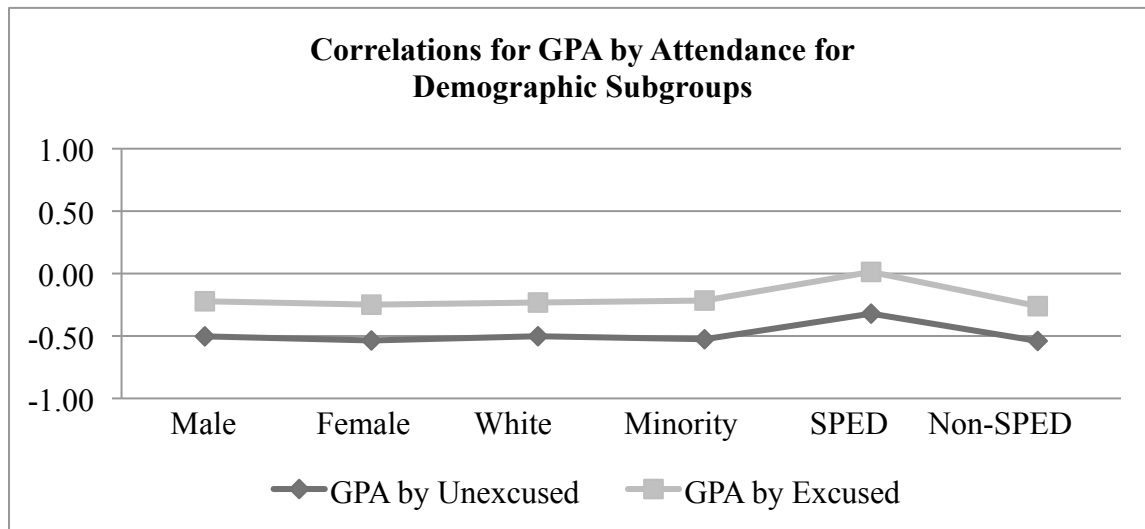
Figure 9. Correlations for GPA by attendance for demographic subgroups.

I calculated multiple Pearson (*r*) correlations and conducted a linear regression to analyze the associations of credits earned by excused and unexcused absences for sex, race, and SPED status. Table 20 displays the correlations of credits earned by those three student subgroups. The associations between credits earned and unexcused absences for demographic subgroups were moderate for all students. There were weak negative associations between credits and excused absences for all students. Figure 10 displays these correlations visually.

Table 20

Correlations for Credits Earned by Attendance and Demographics

Source	Credits by Unexcused			Credits by Excused		
	r	*p*	Cohen's	*r*	*p*	Cohen's
Male	-.45	< .001	moderate	-.22	< .001	weak
Female	-.38	< .001	moderate	-.23	< .001	weak
White	-.41	< .001	moderate	-.23	< .001	weak
Minority	-.43	< .001	moderate	-.22	< .001	weak
SPED	-.37	< .001	moderate	-.14	.28	-
Non-SPED	-.42	< .001	moderate	-.23	< .001	Weak

Figure 10. Correlations for credits earned by attendance for demographic subgroups.

RQ 4: How Do Students Who Remain in Cohort I through 11th Grade Differ From Students Who Leave Before 11th Grade?

To address RQ 4, I calculated descriptive statistics, Chi-square tests, and

independent *t*-tests to describe and compare demographic, attendance, and academic
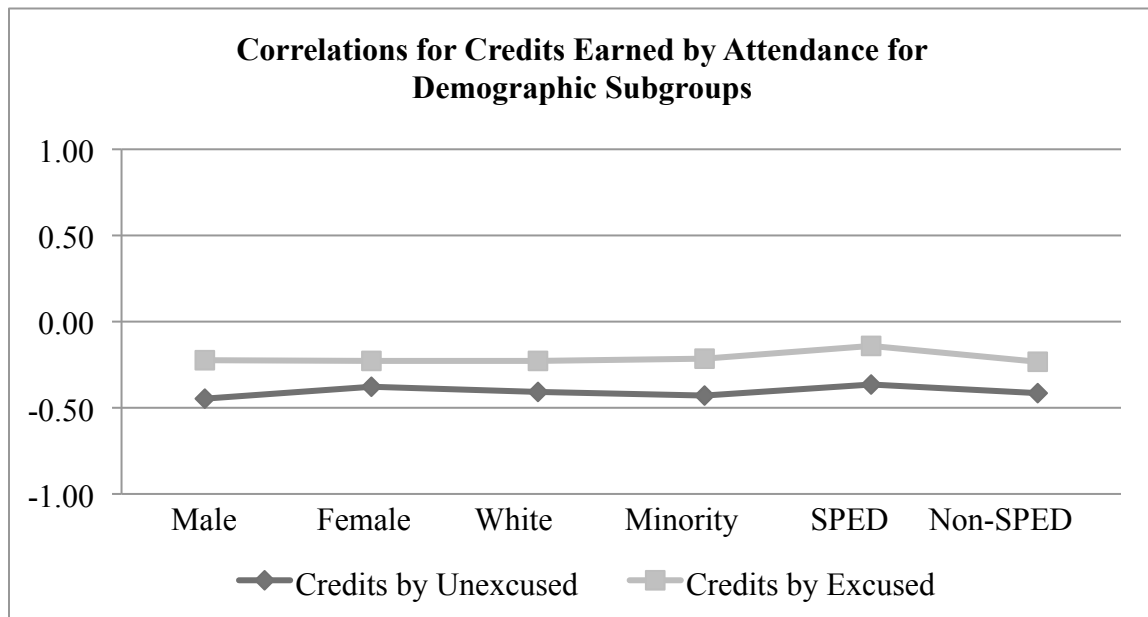
variables for Cohort I only. To examine differences between students who remained with

students who left in terms of academic and attendance variables I conducted independent

t-tests by grade level for comparisons between demographic subgroups. Table 21

describes the sample demographics of sex, race, and SPED status for Cohort I and

displays Chi-square comparisons between students who remained in Cohort I to students

who left Eugene 4J. As reported in Table 19 and shown in Figure 11 there was a

statistically significant difference between students in SPED to students not in SPED,

with a higher proportion of students in SPED leaving Eugene 4J.

Table 21

Cohort I Comparison of Students Who Remained and Left Eugene 4J

Source	Remained		Left		Total count	%	X^2	*p*
	Count	*%*	Count	*%*				
Sex								
Male	555	50.6%	216	49.5%	771	50.3%	0.14	.71
Female	542	49.4%	220	50.5%	762	49.7%		
Race								
White	784	71.5%	291	66.7%	1075	70.1%	3.32	.07
Minority	313	28.5%	145	33.3%	458	29.9%		
SPED status								
SPED	112	10.2%	66	15.1%	178	11.6%	17.80	< .001
Non-SPED	985	89.8%	370	84.9%	1355	88.4%		

Students in Cohort I Who Remained and Left Eugene 4J by Demographic Subgroups
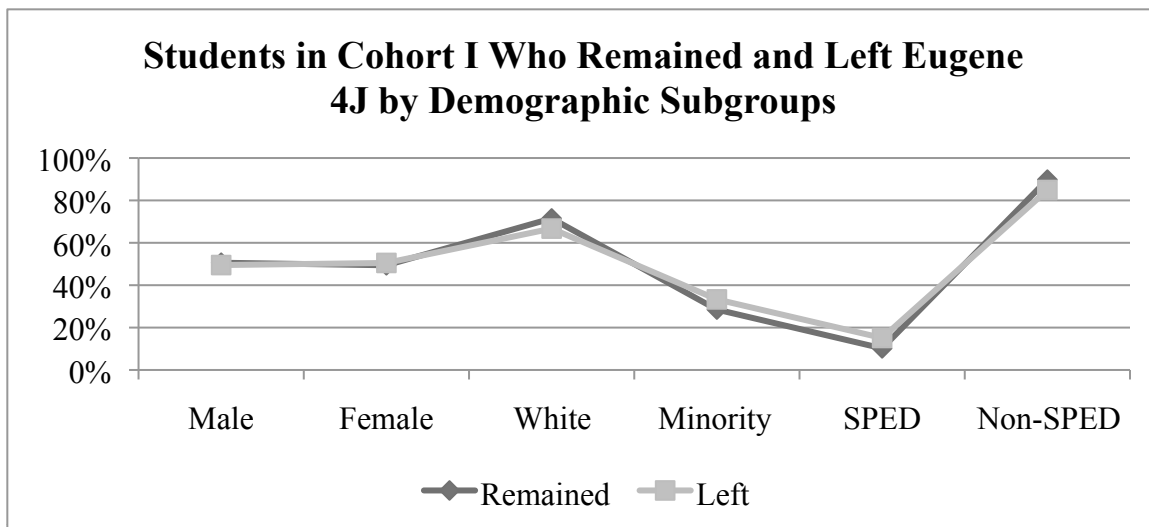
Figure 11. Students in Cohort I who remained and left Eugene 4J by demographic subgroups.

Table 22 describes the attendance and academic variables for students who remained in Cohort I through 11th grade and those students who left. The right columns of that table also report the results of the cohort comparisons. As reported in Table 22, there was not a statistically significant difference between students who remained in Cohort I through 11th grade and students who left because of unexcused absences. There were, however, statistically significant differences for excused absences, attendance rate, GPA, and credits earned for students who left Cohort I before the end of three years. Students who left had on average a lower GPA, fewer credits earned, and lower attendance rates than those students who remained. The effect size for the statically significant differences were moderate for excused absences and attendance rate and large for large for GPA and credits earned for students who remained to students who left.

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Table 22

Cohort I Comparison by Attendance and Academic Variables with Cohen's Effect Size

Source	Remained		Left		t	p	d
	M	SD	M	SD			
Unexcused	17.31	24.18	16.55	20.86	0.58	.57	.03
Excused	19.13	16.86	9.76	12.29	11.98	< .001	.64
Attendance rate %	94.21	6.68	86.92	15.82	9.24	< .001	.60
GPA	3.00	0.90	1.53	1.42	19.50	< .001	1.24
Credits earned	20.17	3.82	6.04	4.15	60.23	< .001	3.54

Table 23 describes by grade level for additional comparison of attendance variables by students who remained in Cohort I through 11th grade to students who left. As reported in Table 23 and illustrated in Figure 12 there were statistically significant differences between students in who remained in Cohort I to students who left for unexcused absences (UNEX), attendance rate, and for excused absences (EXC) in 9th grade only. For each variable, students who left Cohort I at every grade had more unexcused absences and lower attendance rates than students who remained. In comparing students who remained versus left, both groups from 9th grade to 11th grade had attendance rates decrease and unexcused and excused absences increase.

Table 24 describes by grade level for additional comparison of academic variables by students who remained in Cohort I through 11th grade to students who left. Table 24 reports only the grade level means and standard deviations for unexcused absences, excused absences, attendance rates, GPA, and credits earned. The right columns of that table also report the results of the comparisons between the two cohorts by grade level.

As reported in Table 24 and displayed in Figure 13 there was statistically significant differences between students in who remained in Cohort I by grade level to students who left during the each year for GPA and credits earned. At each grade level, students who left Cohort I had lower GPA, fewer credits earned than students who remained. GPA and credits earned decreased for students who remained. GPA and Credits decreased the most during 10th grade for students who left Cohort I. The effect size for the statically significant differences were moderate for unexcused absences for 9th and 10th grade and moderate for 11th. The effect size for excused absences for 9th grade was small and the effect size was moderate for attendance rate in 9th and 11th, but large in effect size in 10th grade. For GPA, the effect sizes were large 9th through 11th grade and large in 9th and 10th for credits earned with 11th grade being moderate in effect size.

Table 23

Cohort I Comparison by Attendance Variables by Grade with Cohen's Effect Size

Source	Remained		Left		t	p	d
	M	SD	M	SD			
Unexcused							
9th grade	3.84	6.86	11.49	13.41	-9.66	< .001	-.72
10th grade	5.57	8.94	15.95	18.66	-6.04	< .001	-.71
11th grade	8.33	12.37	11.43	13.44	-2.62	< .001	-.24
Excused							
9th grade	5.47	5.65	7.23	7.86	-3.65	< .001	-.26
10th grade	6.93	6.72	8.80	11.92	-1.69	.09	-.19
11th grade	7.21	6.99	6.29	6.74	1.48	.14	.13
Attendance rate %							
9th grade	98.79	3.75	91.34	14.86	8.70	< .001	.69
10th grade	93.07	7.81	80.68	17.90	7.56	< .001	.90
11th grade	90.79	11.21	83.37	18.51	4.73	< .001	.49
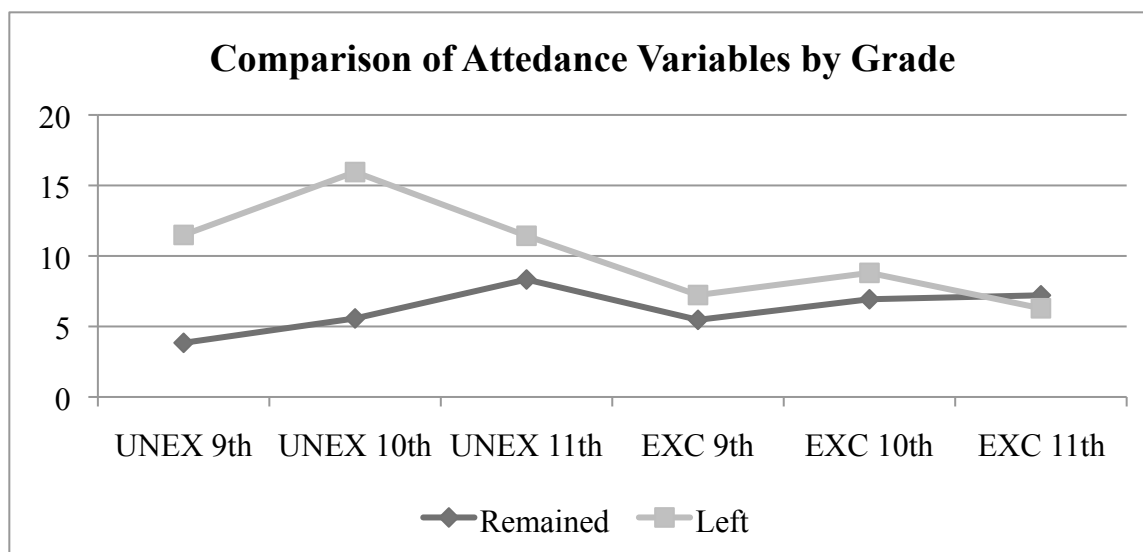
Figure 12. Comparison of attendance variables by grade.

Table 24

Cohort I Comparison by Academic Variables by Grade with Cohen's Effect Size

Source	Remained		Left		*t*	*p*	*d*
	M	*SD*	*M*	*SD*			
GPA							
9th grade	3.08	0.96	1.58	1.41	16.99	< .001	1.24
10th grade	3.03	1.00	1.07	1.43	15.96	< .001	1.59
11th grade	2.92	1.10	1.77	1.61	8.43	< .001	.83
Credits earned							
9th grade	7.09	1.31	4.60	2.54	16.16	< .001	1.23
10th grade	6.66	1.42	4.17	2.69	9.85	< .001	1.16
11th grade	6.49	1.60	4.75	2.72	7.34	< .001	.78

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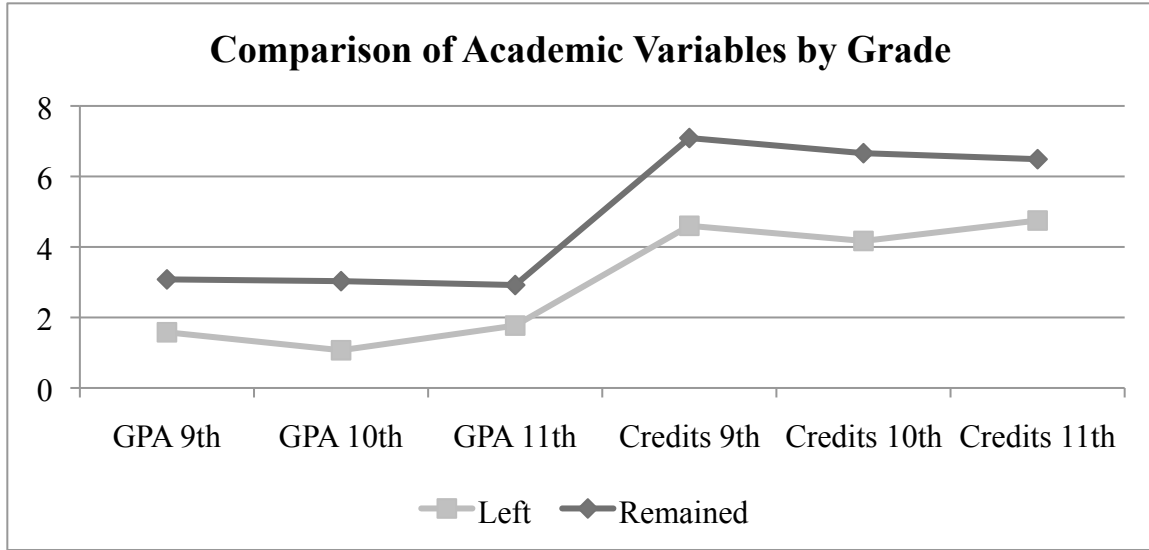
Figure 13. Comparison of academic variables by grade.

Summary of Results by Research Question

I used four research questions to examine the associations of school attendance and type of absence (i.e., excused v. unexcused) on student academic outcomes (i.e., GPA, credits earned toward graduation) among different student groups (i.e., sex, race, and SPED status). The following are the statistically significant findings as they pertain to each research question.

RQ 1: Are there differences between Cohort I and Cohort II for demographic, attendance, and academic variables?

- Attendance rates were higher in Cohort I than in Cohort II.

- GPA scores were higher in Cohort I than in Cohort II.

RQ 2: Do specific demographic subgroups – males v. females, white v. minority, special education v. not special education - differ in terms of unexcused absences, excused absence, and attendance?

- Unexcused absences were higher for minority students and students in SPED.

- Excused absences were higher for female students and students in SPED.

- Attendance rates were lower for students in SPED.

RQ 3: Do specific demographic subgroups – males v. females, White v. minority, special education v. not special education - differ in terms of (a) GPA, credits earned, and unexcused and excused absences, and (b) GPA and credits earned based on unexcused and excused absence.

- GPA were lower for males, minority students, and students in SPED.

- Credits earned were fewer for males, minority students, and students in SPED.

- Positive correlations by race and SPED status for unexcused absences were weak.

- Positive correlations by sex for excused absences were weak.

- Positive correlations by sex, race, and SPED status for GPA were weak.

- Positive correlations by race and SPED status for credits earned were weak.

- Negative correlations were strong for GPA in all demographic subgroups based on unexcused absences.

- Negative correlations were strong for credits earned in all demographic subgroup except for students in SPED based on excused absences.

RQ 4: How do students who remain in Cohort I through 11th grade differ from students in that cohort who leave before 11th grade?

- Unexcused absences were higher for students who left Cohort I.

- Excused absences were higher left Cohort I.

- Attendance rate were lower for students who left Cohort I.

- GPA scores were lower for students who left Cohort I.

- Credits earned were fewer for students who left Cohort I.

CHAPTER IV

DISCUSSION

In this chapter, I frame the discussion of the findings as they pertain to the literature reviewed and conclude with the implications for practice and future research. This study began with a review of the literature on school attendance and the associations of school attendance on student academic outcomes. I examined several topics under attendance interventions and student academic outcomes including school truancy and chronic absenteeism. Subsequently, I identified a gap in the field of attendance research. Prior to this study, there has been limited research on school attendance by type of absence (i.e., unexcused v. excused). Therefore, to examine the gap and contribute to the pool of research for school attendance, this study examined the associations of unexcused and excused absences and student academic outcomes (i.e., GPA, credits earned toward graduation) among different student groups (i.e., sex, race, and SPED status). In this chapter I address four sections: (a) limitations of the research, (b) discussion of the results by research question, results interpretation, (c) implications for future study and (d) implications for practice.

Limitations

Although the purpose of this research study was to provide the Eugene 4J School District empirical evidence on the relationships with school attendance and student academic outcomes, there were limitations within the non-experimental study. I only examined and interpreted the relationship of attendance based on the identification of statistically significant differences and correlations among variables for specific demographic subgroups. However, it is important to acknowledge school attendance is

more complex than whether a student has attended, obtained a certain GPA, and earned enough credits to graduate high school. There are other factors such as aptitude and ability, individual determination, onto connections with peer and positive school experiences that all provide greater insight as to why students succeed in school (Agnew, 1992; Maynard et al., 2013; McConnell & Kubina, 2014; Merton, 1968)

The scope of my study was narrowed to examine attendance and academic variable and variables were not manipulated. Therefore, caution must be used in the interpretation of non-experimental results because the demonstration of a relationship among groups does not imply that the relationship or differences are causal (Creswell, 2014). In the next section, I describe the limitations of the research by potential threats to validity.

Threats to internal validity. In this study there were at least four potential threats to internal validity to be considered (a) history, (b) instrumentation, (c) maturation, and (d) mortality (Creswell, 2014). Given there were limitations to this study, I took several steps to reduce the risks for internal validity by standardizing conditions within the research design and collecting subgroup information for my analysis as described in the sections below. I do not discuss threats to external validity as the setting for which the results are valid and germane are located in 4J

History. The procedure for taking attendance and reporting attendance rates were the greatest threats to internal validity and accuracy of data for this study. Records for attendance data have been directly affected by the history of events and the school district's actions toward implementing effective attendance policy. Prior to 2011, teachers in Eugene 4J were not required to take attendance every period, only by the end of the

school day for each day. Due to teachers not taking attendance consistently, in 2012 a new attendance policy emerged requiring teachers to take attendance within the first 10 minutes of each class and for every day. By 2013, Eugene 4J transitioned to a common high school schedule, created attendance practices to monitor students' unexcused absences, and adopted a new student information system for communication, grades, and attendance. To have multiple years of consistent attendance data under new policy, I excluded student data prior to 2012 and included student data from 2013 to 2016. Results from this study indicated a statistically significant difference in attendance rates for Cohort I and Cohort II. The differences were statistically significant for one out of the three attendance variables (i.e., unexcused absences, excused absences, and attendance rate), the effect size based on Cohen's d standards was small for the attendance rate.

Instrumentation. Although I only included extant data, the preexisting attendance records may not have been entirely accurate due to the default setting within the student information system for when not taking attendance. For example, if a teacher failed to report a student absence, the default within the student information system would have automatically recorded the student as present rather than absent. Consequently, the records of attendance for attendance rates and counts of unexcused and excused absences for each cohort could have been skewed.

Mortality. The duration of the study and the rate of student mobility were two factors that could have impacted the results of data. Therefore, I established concurrent cohorts by excluding students who moved outside or entered the school district after the start year of the cohort. I later examined Cohort I and included the students who left with students who remained for comparison. Thus, the mortality or participants lost from the

study affected the validity and analysis of data for Cohort I (Creswell, 2014). In light of the limitations presented for the study, there were statistically significant differences and correlations among subgroups of sex, race, and SPED status for academic and attendance variables. The following section further discusses the results and the interpretations as they pertain to literature reviewed.

Discussion of the Results

This study was designed to examine the relationships of unexcused and excused absences on student academic outcomes of GPA and credits earned by student groups from the Eugene School District 4J. In this section, I discuss the results for each of the four research questions by academic and attendance variables.

RQ 1. This question examined whether there were differences between Cohort I and Cohort II for demographic, attendance, and academic variables. The purpose of RQ 1 question was to examine statistical comparability to determine if cohorts should be treated separately or could be combined for analyses. When examining the means for attendance and academic variables, the Independent t-tests indicated there were no statistically significant differences for unexcused absence, excused absences, or credits earned. Although there was a statistically significant difference between Cohort I and Cohort II for attendance rate, the effect size was small and the means were similar in comparison.

As found in Burke's (2015) study on examining indicators for graduation outcomes including demographic, attendance, and academic variables, four school districts were combined to increase the sample size for cohort analyses. Based on results from the Chi-square and the Independent t-tests, I combined Cohort I and Cohort II into

one cohort. Though the sample size was relatively moderate in this study and reflected

the high school demographics found in Oregon schools, results from this study were only

generalizable to the Eugene 4J School District.

RQ 2. This question examined specific demographic subgroups – males v.

females, white v. minority, special education v. not special education – to determine

whether there were differences in terms of unexcused absences, excused absence, and

attendance. Independent *t*-test reported statistically significant differences between (a)

male and female students for excused absences and attendance rate, (b) white students

and minority students for unexcused absences, and (c) students in SPED to students not

in SPED for unexcused absences, excused absences, and attendance rate. Several research

studies (Fantuzzo et al., 2005; Marvul, 2012; McConnell & Kubina, 2014) have found

demographic subgroups to vary by attendance rates, few have examined beyond the

aggregate of absence types. This study did not investigate the reasons students attend

school, but it did identify whether there were statistically significant differences among

student groups for school attedance. Although my study identified differences, it is

possible that there were other factors that influenced whether students attended school

such as family obligations, transportation restrictions, onto mental health impairments

(McConnell & Kubina, 2014; Nolan et al., 2013).

The literature and research on school attendance patterns (Fantuzzo et al., 2005;

Gentle-Genitty et al., 2014; Gottfried, 2010) support the findings of my study by further

suggesting minority and SPED students are at the greatest risk for being truant when

having higher unexcused absences than white students and students not in SPED. My

research also highlights female students and students in SPED to be excused from school

more than male students and students not it SPED. Although results indicated statistically significant differences for sex and attendance, reasons for attending school were not indentified due to the research design and purpose of this study.

School absences, however, under the lenses of social control theory (Agnew, 1992; Merton, 1968) and strain theory (Hirsch, 1969) classify attending school as a compliant behavior. Research (McConnell & Kubina, 2014; Nolan et al., 2013) points to school attendance by student groups as being associated with individual and family expectations as well as school and societal pressures to achieve. Findings from McConnell and Kubina, (2014) and Nolan et al (2013) reported greater compliancy for school attendance found from male students, white students, and students not in SPED. As found in the research by Burke (2015) students in SPED attended school less than students not in SPED. In addition, results from this study suggest students in SPED from Eugene 4J are at the greatest risk for not accessing education based on having the lowest attendance rates.

Although the purpose of this question was not designed to explain attendance differences between groups, the findings from my study point toward the literature and research (Fantuzzo et al., 2005; Gentle-Genitty et al., 2014; Heilbrunn, 2007) on disparities among student groups by sex, race, and SPED status for school attendance. This study indentifies statistically differences with unexcused and excused absences among student groups and illustrates a gap for student groups accessing education when absent from school. Steward et al. (2008) research examined educational gaps and found students of colors and students with high academic need tended to miss school due to a lack of feeling supported and connected to school. This may explain why some non-white

students and students in SPED missed more school than their peers, but it doesn't explain why excused absences for subgroups of sex, race, and SPED status were statistically different by subgroups and differed in comparison to unexcused absences.

One possible reason disparities exists may be from families being unaware of district policy and school practice for requesting an absence be excused. As found in research by Marvul (2012), lack of school-to-home communication about school attendance negatively affected students' attendance. For this study, families unaware of the process to call school within 48hrs to report/request an absence be excused by school officials would have impacted the mean for unexcused absences. Similarly, families aware of the attendance process would have potentially influenced the number of absences approved across subgroups by knowing the procedures for having an absence reviewed to be excused. Moreover, comparisons of subgroups showed female students, non-white students, and students in SPED to have highest means in both unexcused and excused absences which may be associated with social connection to school and peers, and academic outcomes (Gottfried, 2010; Heilbrunn, 2007; McConnell & Kubina, 2014).

RQ 3. This question examined specific demographic subgroups – males v. females, white v. minority, special education v. not special education – to determine whether there were differences in terms of (a) GPA, credits earned, and unexcused and excused absences, and (b) GPA and credits earned based on unexcused and excused absence. This question also analyzed the associations by specific demographic subgroups for GPA and credits earned based on unexcused and excused absences.

Results from the Independent *t*-test reported statistically significant differences between (a) male and female students for GPA, (b) minority students for GPA and credits

earned, (c) students in SPED to students not in SPED for GPA and credits earned. Several studies (Burke, 2015; Nolan et al., 2013; Snyder et al., 2014) have identified differences with school grades, standardized tests scores, and graduation rates among students groups by race, and special education status. Similarly, this study found GPA and credits earned toward graduation were lower for minorities and students with disabilities. Other studies have examined the disproportionate numbers of underperforming students and have found strong associations between skills and access to educational support (Gottfried, 2010). Though this study does not directly examine links between skills and academic outcomes, it does highlight differences by GPA and credits earned toward graduating high school within 4 years.

GPA. Results from this study indicated there were statistically significant differences across subgroups for GPA, which supports MacIver and Messel's (2013) research on GPA as an indicator for graduation. My study found GPA to vary by sex, race, and SPED status. In addition, research by Burke (2015) found a similar relationships between attendance levels and GPA, but used the correlation of attendance rates with GPA as indicators in a predictive model to identify potential dropouts. My study differed from both Burke's (2015) and MacIver and Messel's (2013) research in that I only examined the relationships between attendance variables (i.e., unexcused and excused absences) with subgroups (i.e., sex, race, and SPED status) and academic variables (i.e., GPA and credits earned) with subgroups. Results from my study revealed positive correlations for sex, race, and SPED status with GPA as Burke (2015) found. Logically, such findings suggest there could be other reasons that influenced the correlation found among students groups with attendance and academic outcomes.

The second part of RQ 3 examined whether specific demographic subgroups differed in terms of GPA and credits earned based on unexcused and excused absences. There were moderate to strong negative correlations for GPA by all subgroups based on unexcused absences and weak correlation for excused absences. Although previous research by MacIver and Messel (2013) identified attendance being strongly associated with academic success, my study further highlighted the relationship in a disaggregate form of unexcused and excused absences. Having a stronger correlation with GPA and unexcused absences by subgroups than with excused absence could be influenced by school policy. For example, an unexcused absence does not allow a student to access missed work, however an excused absence does permit a student to access and submit late work. Logically, such policy and practice could have been a factor to the strength of the correlations for GPA among student groups with unexcused absences versus excused. Findings from my study do not explain or offer causal explanations; they only indicate correlations among variables.

Credits earned. Several studies have reported school attendance to be correlated with academic progress; students with lower attendance rates typically passed fewer classes and earned less credit toward graduation (Burke, 2015; Carl et al., 2013; Gottfried, 2010; Heilbrunn, 2007). My results support similar findings, but only indicated weak correlations between credits earned based on demographic subgroups. Students by race and SPED status indicated statistically significant correlations for credits earned based on demographics suggesting differences among white and minority students and for students in SPED to students not in SPED. Similarly, found in research by MacIver and Messel (2013), demographic correlations for credits earned were strongly correlated

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but included school attendance as a factor. As found in the research by Carl et al. (2013) academic outcomes for earning course credits and attending school were also associated with graduating high school in 4 years. Carl et al. (2013) found credits earned predicted whether students graduated on time where as my study only showed the correlation of credits earned by subgroups and attendance by subgroups.

The second part of RQ 3 also examined whether specific demographic subgroups differed in terms of credits earned based on unexcused and excused absences. There were moderate correlations for credits earned by all subgroups based on unexcused absences and weak correlations for excused absences except for students in SPED. Previous research by Nolan et al. (2013) and Snyder et al. (2014) found attendance to be associated with being on track to graduate and being career ready. Similarly, my study found a moderate correlation with credits earned based on unexcused absences and a weak correlation with excused absences for student groups. Results indicated unexcused absences were stronger in association with credits earned than excused absences. Moreover, as found with GPA, credits earned have a relationship with attendance. Although my study was not intended to provide causal claims, it is logical to state there are more variables not identified in this study that are associated with GPA and credits earned other than specific demographics and attendance patterns.

Attendance. As conducted in Gottfried's (2010) research, I examined correlations of subgroups based on school attendance and disaggregated the attendance data into unexcused and excused absences. Results from the correlations of unexcused and excused absences by demographic subgroups indicated there were statistically significant differences for race and SPED status by unexcused absences and statistically significant

differences for sex by excused absences. Also found in the research by Subedi et al. (2015) there were differences among student groups associated with motivational support. Though my study does not explore predictor variables to explain differences as Subedi et al., (2015) and Burke's (2015) research, it does illustrate associations to draw conclusion based on observations. For example, in Eugene 4J, students by race and by SPED status are affected the most by attendance and have the least amount of access to missed work. In addition, there were statistically significant differences for minority students and students in SPED indicating minority students and students with disabilities underperformed, and attended less in comparison to peers.

 RQ 4. This question examined whether students in Cohort I who remained in school through 11th grade were different than students who left school. The purpose of RQ 4 question was to identify demographic characteristics of students in Cohort I and to draw conclusions about the association of students who remained in school with students who left school. There were no statically significant difference for sex or race, indicating students who left compared to students who remained in Cohort I through 11th grade were similar by sex and race. The association between SPED status, however, did report a statistically significant difference, indicating students who left compared to students who remained were not similar by SPED status. Findings support research on the prevalence of students with learning disabilities having disproportionate numbers of absences compared to peers (Fantuzzo et al., 2005; Gentle-Genitty et al., 2014; Heilbrunn, 2007). My study revealed students who left Cohort I had greater unexcused absences than students who remained. More students in SPED left Cohort I than students not in SPED, and more minority students left than White students.

My research did not examine reasons why students remained or left Cohort I, however, my findings lead to more investigative questions that other researchers and theorists have examined. For instance, research by Marvul (2012) analyzed motivational factors for engaging students to attend school. Marvul (2012) and other researchers (Maynard et al., 2013; McConnell & Kubina, 2014) reported low expectations of students and lack of school connection with peers as common reasons students stopped attending or moved to other schools. Other reasons researchers (Gottfried, 2010; Heilbrunn, 2007) have found associations with not attending school to derive from involuntary to voluntary parent factors such as new employment or loss of work and change in residency. In addition, the premises of strain theory (Agnew, 1992; Merton, 1968) and social control theory (Hirsch, 1969) suggest students' likelihood to attend school occurs more frequently when school experiences are positive and meaningful.

Although reasons and theories found from research (Gottfried, 2010; Heilbrunn, 2007; Marvul, 2012; Maynard et al., 2013; McConnell & Kubina, 2014) may explain why some students left Cohort I, my research only highlighted comparisons of student demographics by subgroups indicating there were statistically significant differences between groups. Results revealed students who left Cohort I had lower attendance rates, lower GPA, and fewer credits earned than students who remained through 11th grade suggesting mobility affects academics.

Comparisons show year-to-year by students who remained with students who left Cohort I during the first three years of school. Students on average by each year had higher GPA scores and earned more credits from year-to-year. There were statistically significant differences for students who left Cohort I than students who remained in GPA

and credits earned. Findings suggest students who moved out of district from Cohort I were at a disadvantage with GPA and credits earned. Given GPA determines access to scholarships and college entrance and credits earned is another graduating high school, students who left Cohort I were further behind in credits earned toward graduation. Moreover, students who left school had lower academic outcomes

Other comparisons of year-to-year for students who remained to students who left Cohort I indicated students who left had more unexcused and excused absences than students who remained year-to-year. School attendance decreased every year for students who remained where as student who left in 10th grade had attended the least by missing more than two months of school and had the lowest GPA and fewest credits earned. In addition, the comparison for excused absences indicated statistically significant differences for students who left. Students in Cohort I who left had lower GPA, fewer credits, and higher unexcused and excused absences than student who remained.

Implications for Future Study

In this study, I examined the relationship of student academic outcomes among student groups and types of attendance. I conducted Chi-square Independent *t*-test along, and Pearson Correlation with descriptive and comparative statistics to examine the associations of school attendance with student academic outcomes for demographic subgroups. Implications of the findings warrant further investigation. Though this study has laid the foundation for further empirical investigation of the associations with unexcused and excused absences on academic outcomes, adding variables of mobility rate and socio-economic status with sex, race, and SPED status could offer greater insight to school attedance.

In addition, replication of this study with another comparable school district could further identify potential disparities among student groups for attendance and academic variables. Including one to two complete cohorts (i.e., 9th through 12th grade) would increase the sample for greater statistical conclusions about the relationships of attendance and academic outcomes. Measurable outcomes for future research should continue to include GPA and credits earned while adding other variables such as 4-year graduation and 5-year completion rates, and standardized test scores. In addition, using multiple assessment measures should be considered for further research application including linear regression, ANOVA, and logistic regression.

Examining the relationships of attendance by unexcused and excused outcomes at educational levels may also bring further insight on whether types of attendance varies from elementary to high school levels. Introducing a student survey could also yield qualitative insight and identify reasons students choose to attend school. Furthermore, examining the interconnectedness of attendance patterns during transitional periods would add to the field of attendance literature.

Although results are limited to scope of this study, findings lead to more questions for future research and evaluation. For example, analyzing predictive variables for academic outcomes and examining the relationship with unexcused and excused absences could lead to greater insight on the associations and indicators for attendance and student academic outcomes by student groups. Results could also help define the academic cost of missing school and determine whether specific students groups were affected more by an absence than their peers. Such data could better inform district officials on where to allocate funds for target attendance programs. In addition, identifying relationships with

school attendance, student motivation, and perception of school success offers a vantage point for policymaking and interventions. Moreover, implications for future study should investigate school attendance beyond the aggregate form of attendance type and extend across educational levels down while examining specific times of the day.

Implications of Practice

Though all students begin on a track to move through the structured hallways of education toward attaining the goal of college and career readiness, there are disproportionate numbers of students not graduating high school in Oregon and across the nation. Results from this study revealed gaps in attendance and student academic outcomes among student groups by sex, race, and SPED status. Although my study only examined students in high school, it is important to acknowledge academic skill development and school behaviors such as attending school, completing homework and learning develop early on in elementary. More often than not, schools are left to bear the responsibility to serve all students yet struggle due to limited resources for providing the range of supports needed to assure student success. Nevertheless, it is a moral imperative that the educational system ensures every student has the skills and knowledge to obtain the quality of life they seek upon receiving a diploma.

Having students attend school is the first logical step toward graduating high school. Results, however from this study, indicated student groups varied with attendance and academic outcomes. Students in special education and minority students had lower rates of attendance and GPA and fewer credits earned toward graduating high school. By disaggregating attendance my study indicated unexcused absences were more correlated with both GPA and credits earned than excused absences for every subgroup with

minority students and students in special education presenting lower academic outcomes than their peers. Although my study did not indicate whether students with positive academic experiences and academic success were more likely to attend school, it did identify statistically significant differences among student groups based on academic outcome and attendance variables.

Given within the Eugene 4J combined cohort there were statistically significant differences for unexcused versus excused absences with minority students and students in SPED, it is critical to provide additional support for those students and others who have indicators of truancy and credit deficiency toward graduating high school. My study provides the rationale and need to develop a secondary multi-tired attendance and academic support system. Based on my study, there are key indicators that should be incorporated in an early warning system: (a) unexcused absences, (b) excused absences, (c) attendance rate per trimester (i.e., 12 weeks) and annually, (e) GPA annually and by grading periods with number of non passing grades, and (f) credits earned annually and by grading periods. Although my study did not examine (g) school tardiness or (h) school discipline referrals, including them would further address the complexities in supporting student attendance and academic outcomes.

In addition to developing a system to purposefully monitor student attendance and academic progress, creating a multi-tiered intervention that supports students based on the early warning system report is critical and should produce a risk score for use. The following three supports should be incorporated in the multi-tired attendance and academic support system based on risk scores: (a) universal supports – a low level support to be provided as school-wide and as needed to reinforce desired behaviors (e.g.,

attending school, completing homework, and passing classes); (b) targeted support – a moderate level of support to be provided frequently to students with attendance and academic need; and (c) individualized support – a high level of support to be provided consistently and as prescribed to students with the highest risk score based on attendance and academic need. Furthermore, supports should be implemented systematically from the classroom to the building level and simultaneously across schools in Eugene 4J.

Results from this study indicate a growing need for continued research on the associations of attendance and academic outcomes. Based on the results from this study, the Eugene 4J administrative leaders have an opportunity to further examine attendance policy and building-based practices. In addition, empirical data from this study identifies the need for school-based attendance and academic interventions. Although my study did not examine the relationship among mental health status for attendance and academic outcomes, such a study could provide greater insight on school attendance and students academic outcomes for specific demographic subgroups.

Given there were statistically significant differences among student groups with unexcused and excused absences and with GPA and credits earned toward graduation, implementing the multi-tiered interventions to increase school attendance and improve student academic outcomes is necessary. Specifically, attendance and academic interventions as described earlier that target minority students and students in SPED are paramount for improving educational opportunity and critical to increasing graduation rates. In addition, a support system that is adaptable and can be replicated is needed.

Findings from this study also support state and federal policy initiatives in reducing chronic absenteeism and improving student achievement. For example, Oregon

state policy initiative HB 4002 (i.e., addressing chronic absenteeism) and federal policy under ESSA (i.e., school accountability measures) are designed to address the prevalence issues of attendance and student academic outcomes. Implementing a district-wide multi-tired attendance and academic support system with an early warning system tool aligns with state and federal initiatives. In addition, my study identified targeted subgroups of students to establish goals and action plan for improvement. The minority students and students in SPED were subgroups of risk based on attending school less and performing lower academically in comparison to peers. Demographic subgroups of sex, race and SPED status were associated with school attendance and student academic outcomes. In addition, there were statistically significant correlations for GPA and credits earned based on unexcused and excused absences by demographic subgroups. Moreover, the study adds to the pool of attendance literature by providing a research view and methodological approach to analyzing attendance data beyond absences as an aggregate outcome.

The implication of practice based on this study recommends researchers continue examining the relationship with attendance on academic outcomes for subgroups by including additional variables to better capture the complexities of school attendance. In addition, practitioners and school officials should implement practices that welcome students to attend school to have positive relationships and social bonds with peers.

Conclusion

My study examined school attendance and student academic outcomes by specific demographic subgroups. I addressed a gap in the literature on attendance in whether there were differences between unexcused or excused absences for student academic outcomes by student groups. Results from this study found school attendance

by unexcused and excused absences to differ for specific demographic subgroups – males v. females, white v. minority, special education v. not special education. In addition, results indicated GPA and credits earned to differ for specific demographic subgroups. Results also reported positive correlations for subgroups by academic variables and by attendance variables across subgroups. There were negative correlations for GPA and credits earned based on unexcused and excused absences for demographic subgroups. Similarly, results revealed students who remained in Cohort I to students who left differed in comparison of academic and attendance variables. As highlighted in this study, school attendance is a universal correlate to academic success and associated with academic success.

APPENDIX

LITERATURE REVIEW STUDIES

This appendix includes the list of the research studies cited in the literature review (see Tables 1 to 5 and Figure 1).

1. Carl, B., Richardson, J. T., Cheng, E., HeeJin, K., & Meyer, R. H. (2013). Theory and application of early warning systems for high school and beyond. *Journal of Education for Students Placed at Risk*, *18*(1), 29-49. doi:10.1080/10824669.2013.7453742.

2. Burke, A. (2015). Early identification of high school graduation outcomes in Oregon leadership network schools (REL 2015–079). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest.

3. Fantuzzo, J., Grim, S., & Hazan, H. (2005). Project start: An evaluation of a community-wide school-based intervention to reduce truancy. *Psychology in the Schools*, *42*, 657-667. doi:10.1002/pits.20103

4. Gentle-Genitty, C., Karikari, I., Chen, H., Wilka, E., & Kim, J. (2014). Truancy: A look at definitions in the USA and other territories. *Educational Studies*, *41*, 62-90. doi:10.1080/03055698.2014.955734

5. Gottfried, M. A. (2010). Evaluating the relationship between student attendance and achievement in urban elementary and middle schools: An instrumental variables approach. *American Educational Research Journal*, *47*, 434-465. doi:10.3102/0002831209350494

6. Heilbrunn, J. Z. (2007). Pieces of the truancy jigsaw: A literature review. Denver, CO: National Center for School Engagement.

7. MacIver, M., & Messel, M. (2013). The ABCs of keeping on track to graduation: Research findings from Baltimore. *Journal of Education for Students Placed at Risk*, *18*(1), 50-67. doi:10.1080/10824669.2013.745207

8. Marvul, J. N. (2012). If you build it, they will come: A successful truancy intervention program in a small high school. *Urban Education*, *47*(1), 144-169. doi:10.1177/0042085911427738

9. Maynard, B. R., McCrea, K. T., Pigott, T. D., & Kelly, M. S. (2013). Indicated truancy interventions for chronic truant students: A Campbell systematic review. *Research on Social Work Practice*, *23*(1), 5-21. doi:10.1177/1049731512457207

10. McConnell, B. M., & Kubina, R. M. (2014). Connecting with families to improve students' school attendance: A review of the literature. *Preventing School Failure: Alternative Education for Children and Youth*, *58*, 249-256. doi:10.1080/1045988X.2013.821649

11. Nolan, J. R., Cole, T., Wroughton, J., & Clayton-Code, K. P. (2013). Assessment of risk factors for truancy of children in grades K-12 using survival analysis. *The Journal of At-Risk Issues*, *17*(2), 23-30.

12. Steward, R. J., Steward, A. D., Blair, J., Jo, H., & Hill, M. F. (2008). School attendance revisited: A study of urban African American students' grade point averages and coping strategies. *Urban Education*, *43*, 519-536. doi:10.1177/0042085907311807

13. Subedi, B. R., Reese, N., & Powell, R. (2015). Measuring teacher effectiveness through hierarchical linear models: Exploring predictors of student achievement and truancy. *Journal of Education and Training Studies*, *3*(2), 34-43. doi:10.11114/jets.v3i2.666

14. Snyder, J. L., Lee-Partridge, J. E., Jarmoszko, T. A., Petkova, O., & D'Onofrio, M. J. (2014). What is the influence of a compulsory attendance policy on absenteeism and performance? *Journal of Education for Business*, *89*, 433-440. doi:10.1080/08832323.2014.933155

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