CHRONIC ABSENTEEISM AND ITS EFFECT ON STUDENTS’ GRADE POINT AVERAGE AND ACT SCORES

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Abstract

The purpose of this quantitative study was to examine whether chronic absenteeism affected students’ best cumulative ACT score and GPA. Data were examined to determine if there was a statistical significance between the cumulative ACT scores of students who were chronically absent for one year and those who were chronically absent for two consecutive years. Analysis of the quantitative data found a statistical significance between the best cumulative ACT scores and GPAs of chronically absent and non-chronically absent students. It was determined that absenteeism negatively affects student ACT scores and GPAs. No statistical difference was identified in ACT scores between students who are chronically absent for one year when compared to students who are chronically absent for two consecutive years. The analysis of the quantitative data was informed by the formation of a focus group to gather the perspectives of chronically absent students. The deductively coded data generated by the focus group identified six of the major themes in current research concerning reasons for chronic absenteeism: parent influence, teacher influence, social and learning disengagement, socio-economic status, bullying, and physical ailments. Two additional themes contributing to absenteeism were noted from the focus group: the 1:1 learning environment and administrator influence. Conclusions noted positive student-teacher relationships are of utmost importance, and these relationships are the most crucial and attainable factors that schools can control to address this issue.

Keywords: chronically absent, non-chronically absent, best cumulative ACT, GPA, social cognitive theory, focus interview group, positive student-teacher relationships
Dedication

For as long as I can remember, my parents, Michael and Julie Smith, have constantly pushed me to chase my dreams. They’ve been the first to speak of my successes and the first to be by my side when I needed advice. Their continued support throughout my life has provided me the ability to live life to my fullest and focus on giving back to my family, peers, and students through my own studies and experiences. Knowing that the “student” part of my life will never be over brings about a new kind of reflection after completing this long-term goal. It makes me question what new things I will learn tomorrow, next year, and even a decade from now. For that, this work is dedicated to both of my parents and to my past, current, and future students as they continue to bring about a constant reflective practice in me that I hope to never lose.
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CHAPTER I

INTRODUCTION AND BACKGROUND OF THE STUDY

Chronic absenteeism is an attendance issue that researchers have focused on since the 1970s (Goldstein, Little, and Little, 2003). However, chronically absent students and their reason for absenteeism have become a more serious issue in the past fifteen years due to the passing of No Child Left Behind (Spencer, 2009). While new national laws have superseded No Child Left Behind, this piece of legislation was fundamental in creating specifications and guidelines for states to receive federal money. Absenteeism has played an even larger role in accountability measures as most states choose attendance as their second measure under Every Student Succeeds Act (Balfanz & Byrnes, 2012). As such, Tennessee has also adopted this as one of their measures to receive federal education funding (TN DOE, n.d.).

Due to these two paramount pieces of legislation, over the last fifteen years, researchers have focused on determining what characteristics lead to chronic absenteeism and what interventions and protocols can be put into place to counteract these attendance issues. These studies have primarily focused on elementary school students as chronic absenteeism is oftentimes a habitual cycle that begins in and is highest in one’s kindergarten school year (Gottfried, 2014). As the results of previous studies have shown, there are numerous
characteristics that affect student attendance, but not all are found in each student scenario. However, more often than not, many chronically absent students have several previously identified factors that combine to limit student attendance. As absenteeism has become more of a focal point, empirical studies involving elementary and middle school students have increased, but the focus of high school attendance has not been as emphasized in the literature.

While there are copious amounts of research regarding the effects on truancy and chronic absenteeism and the effect of truancy and chronic absenteeism on student achievement, there are little to no research studies determining whether there is a connection between chronic absenteeism and grade point average (GPA) and ACT scores. Several previous studies have identified issues that lead to chronic absenteeism based on the statistically significant correlations. These characteristics have included but are not limited to binge drinking, substance abuse, delinquent behaviors, bullying, parental educational level, single parent homes, student-teacher relationships, teacher classroom management, and student social and learning disengagement.

While the largest focus in research has been on identifying factors that lead to truancy and chronic absenteeism, several others have provided significant evidence that chronic absenteeism negatively affects student achievement within elementary school students (Gottfried, 2014; Ready, 2010). While the two mentioned studies disagree on the significance that attendance has on math and English scores, both noted that English achievement scores have an inverse relationship to attendance rates (Gottfried, 2014; Ready, 2010). Other research studies focused on higher grade levels and determined that chronic absenteeism also negatively affected students’ achievement scores (London, Sanchez, & Castrechini, 2016; Roby, 2004; Krenitsky-Korn, 2011). However, these studies have been on state-wide achievement tests and have not
focused in on a national test such as the ACT. Due to this, empirical research needs to be completed to determine if the same affects that effect elementary and middle school students also effect high school students. To make a much larger generalization, the ACT will be used in this study as it is a nationally agreed upon and reliable achievement measure that typically all students take during their high school career.

**Statement of the Problem**

While the significance of each previous study has identified chronic absenteeism as having a negative effect on student achievement, there is no research focus for determining how chronic absenteeism is associated with students’ GPA and ACT scores. Because of this missing research component, a study needs to be conducted to investigate these relationships, so schools can focus on creating future-ready graduates. Furthermore, a detailed analysis needs to be completed to determine how chronically absent students of one year or multiple years vary with their GPA and ACT scores when compared to one another. There have been several studies that have looked at math and English achievement scores in the high school setting along with empirical studies regarding college success rates, but there is a missing focus in determining how or if chronically absent students are far worse in meeting post-secondary acceptance requirements (GPA and ACT) than those who are not chronically absent.

**Conceptual Framework for the Study**

The theoretical framework for this study is based on the ideas of Social Cognitive Theory. Prior to Albert Bandura, Social Cognitive Theory was termed social learning theory. However, Bandura expanded the theory to include ideas of self-efficacy (Owens & Valesky, 2015). More specifically, Social Cognitive Theory is a psychological theory that states that “human functions are the result of dynamic connection among personal factors, such as
cognition, environment factors, and behavior” (Owens & Valesky, 2015, p. 139). According to this theory, the learning a person does or the behavior he or she exhibits is due to the interconnectedness of all three factors. A larger portion of what one believes he or she can do is developed through self-efficacy (Owens & Valesky, 2015).

Within Social Cognitive Theory, one learns through observations and what occurs after the behavior is exhibited by another individual doing the action (Swearer, Wang, Berry, & Myers, 2014). More specifically, the action must be observed, analyzed and understood by the observer, and the observer must want to complete the observed action independently (Swearer et al., 2014). As mentioned above, this theory explains that there is a “continuous interaction” between one’s social environment, internal stimuli, and previously learned behaviors (Swearer et al., 2014, p. 272). While these three things must act together to create newly learned behaviors, these new behaviors will not be acted upon unless the person has a high enough level of self-efficacy.

Self-efficacy is simply one’s belief that he or she can perform a newly learned behavior. However, there are four ways in which self-efficacy can be built and behaviors can be exhibited: enactive attainment, vicarious experience, verbal persuasion, and physiological state (Owens & Valesky, 2015). First, enactive attainment is simply whether one has performed the task previously and completed it successfully. If the person has successfully completed the task before, then the higher one’s self-efficacy. Second, a person’s self-efficacy can be affected by how often the person has observed the desired behavior completed. Third, verbal persuasion is defined best by other people verbally stating, positively or negatively, that the person can complete the task. Lastly, one’s physiological state, a positive view or high stress level and anxiety, determines if the person is more likely to complete the task (Owens & Valesky, 2015).
Just as Social Cognitive Theory is affected by one’s previous behaviors, personal factors, and environmental factors, an underlying element is one’s self-efficacy or belief that he or she can complete the task successfully. As such, Social Cognitive Theory explains that students who are or who are not chronically absent exhibit these behaviors based upon their own learned behaviors, their level of self-efficacy, their personal factors, and their environmental factors. In summary, one’s behaviors are influenced by what they observe, feel, and believe they can accomplish based around their current environmental factors.

**Purpose of the Study**

The study’s purpose is to examine whether chronic absenteeism has a significant effect on GPA and ACT scores. Previous research studies detailed how other factors likely created chronic absenteeism and how those identified students scored more poorly on achievement tests than their counterparts. However, there needs to be a greater focus on the connection between chronic absenteeism and how it might negatively affect students’ ACT and GPA scores. As Tennessee has a large disconnect between industry-ready employees, the Drive to 55 campaign was created by Governor Haslam in hopes of bridging the gap between high school and college graduates’ abilities and the identified work force needs for Tennessee’s projected job market for the next twenty years. If a connection can be made between attendance and graduating seniors’ cognitive and behavioral abilities, then further studies can be conducted to discern what is keeping these chronically absent students from meeting these identified benchmarks. To begin investigating this disconnection between graduate readiness and job market needs, the following research questions have been created to determine how major this deficiency might be in response to the pressure of increasing a school’s graduation rate and producing graduates who can fill job market needs.
Research Questions, Hypothesis, and Null Hypothesis

The study will address two research questions:

Question 1: Is there a significant difference between ACT scores/GPA of non-chronically absent students and ACT scores/GPA of chronically absent students?

Question 2: Is there a significant difference between the ACT scores of students who are chronically absent for two consecutive years and those that are chronically absent one year but not chronically absent for two consecutive years?

Hypotheses

H1: There is a significant difference between ACT scores/GPA of non-chronically absent students and ACT scores/GPA of chronically absent students.

H2: There is a significant difference between the ACT scores of students who are chronically absent for two consecutive years and those that are chronically absent one year but not chronically absent for two consecutive years.

Null Hypotheses

NH1: There is no significant difference between ACT scores/GPA of non-chronically absent students and ACT scores/GPA of chronically absent students.

NH2: There is no significant difference between the ACT scores of students who are chronically absent for two consecutive years and those that are chronically absent one year but not chronically absent for two consecutive years.
Rationale for the Study

As chronic absenteeism continues to be an indicator for success rates for schools, it is also apparent that schools are not producing graduates who can meet workforce demands. This is most noted in Tennessee through Governor Haslam’s Drive to 55 campaign, a post-secondary enrollment campaign to bridge the gap between Tennessee’s job market needs and civilian credentials. Because there is such a focus on meeting job market demands, there must be more attention to determining how insufficient attendance and chronic absenteeism affects one’s ability to meet or not meet post-secondary institution requirements. If absenteeism adversely affects a high school graduate’s ability to meet job market demands or college acceptance requirements, then the K-12 educational system is not doing a good enough job in preparing students for the real world. The ACT is the focused measure for this study as it is a national benchmark for college readiness, and it is a test that determines, numerically, how well the entire K-12 educational environment improved students’ cognitive thinking abilities. The GPA measure is also necessary as it provides more of a day-to-day measure on the students’ work ethic, knowledge attainment, and overall behaviors throughout the high school graduation process. As noted by Westrick (2015), a student’s GPA in School A can be much different than that of a student in School B even if they show the same behavioral and cognitive characteristics. Due to the variance in GPAs, both factors are being used to provide a more well-rounded representation of how the behavior of absenteeism affects one’s ability to meet their preferred post-secondary aspirations.

Researcher Positionality Statement

Working as a public high school educator, it is evident that chronically absent or truant students struggle to fulfill high school graduation requirements and meet post-secondary entry
requirements. More specifically, there has been a state-wide and district-wide focus on creating future-ready graduates. These graduates are identified as such by scoring a 21 or higher on the ACT or meeting various early post-secondary opportunities (S. Moody, personal communication, July 19, 2018). Due to the various issues with getting students to meet graduation requirements and the focus on graduating student who are post-secondary ready, the teacher is interested in determining if and to what degree the three factors of ACT, GPA, and attendance are interconnected. As pressure arises from district and school leaders to increase graduation rates and decrease chronic absenteeism, the educator is interested in researching the connection between the two and how this affects students’ ability to meet post-secondary institutional entrance requirements.

**Definitions of Terms**

Truancy: As the study participants are all Tennessee high school students, truancy will be defined by Tennessee’s Department of Education as “five unexcused absences” within a single school year (TN DOE, n.d.).

Chronic absenteeism: As the study participants are all Tennessee high school students, chronic absenteeism will be defined using Tennessee’s Department of Education definition. It is defined as “missing 10 percent or more of instructional days” for unexcused absences, excused absences, suspension, or expulsion (TN DOE, n.d.).

Student engagement: For this study, student engagement is defined as “simultaneous experiences of concentration and cognitive investment, as well as interest and enjoyment in a task” (Strati, Schmidt, & Maier, 2017, p. 132).
GPA: GPA (grade point average) has been defined as an “academic performance, the degree to which the individual can apply knowledge and perform tasks assessed for grades” (Millea, Wills, Elder, & Molina, 2018, p. 314).

ACT: For this study, ACT has been defined as a standardized test that is “a measure of college readiness” (Millea et al., 2018, p. 314).

Social Cognitive Theory: Social Cognitive Theory, previously termed Social Learning Theory, is defined as human learning that is a “result of dynamic connection among personal factors, such as cognition, environmental factors, and behavior” (Owens & Valesky, 2015, p. 139).

**Limitations and Delimitations of the Study**

This study’s limitations and delimitations center around convenience sampling procedures. More specifically, the study has this sampling delimitation based on the public educator’s ability to attain records of previous data (ACT and GPA) from the school district along with compiling current data from the school’s student population. This sampling technique is a delimitation because the generalizations of this study cannot be broadened to another district or county within the surrounding area unless the demographics are similar in nature.

While convenience sampling is a delimitation, there are two additional limitations within this study. The first limitation involves the sample size. As the aim of this study is to look at over one hundred student attendance and achievement records (GPA and ACT), there are limitations in the sample size of non-chronically absent students and chronically absent students. It is highly likely that the non-chronically absent sample size will have a much larger population than the chronically absent student measures. Secondly, if the chronically absent students miss Tennessee’s state-wide test date, then the population size becomes even smaller if those students
do not desire to take the test on a national test date. The second limitation deals with attendance records. As each teacher and the attendance clerk oversee taking attendance for each member of the school, teacher missed days due to absence and professional development may lead to a skewed or inaccurate measure of the attendance records. Therefore, a chronically absent student may only be identified as truant. In this case, the student would be identified as a non-chronically absent student due to a possible error in the attendance records. As with any human record keeping, there is likely to be some errors that might cause students to be misidentified. However, with the teachers’ due diligence and with chronic absenteeism being a school wide accountability measure and focal point, it can be determined that chronically absent students are chronically absent students and vice versa.

**Assumptions**

Within this study, there are three specific assumptions that were made, and they include dependent variables, multivariates, and confounding variables. An assumption must be made that each dependent variable (ACT and GPA) has an interval measurement. Secondly, an assumption has been made that the dependent variables are multivariate and are normally distributed within each group of the independent variable. The independent variable (chronic absenteeism) is categorical as it will be noted as a “yes, the student is chronically absent” and numerically coded as a 1, while a non-chronically absent student will be deemed as a “no” and have a numerical code of 0. A third assumption must be made that there are other variables that will influence all three specified variables (ACT, GPA, and attendance), but they are not noted within the study. Lastly, an assumption must be made due to population covariance.
Organization of the Document

Chapter One provides the introduction of the study and explains the theoretical framework, definitions, and background information for the study. Chapter Two is a literature review that investigates previous empirical studies surrounding the ideas and relationships of chronic absenteeism to other various factors. Furthermore, it summarizes what student characteristics create chronically absent behavior and how these new behaviors influence a student’s learning and achievement outcomes. Chapter Three identifies the study’s subjects, the procedures for collecting data, and the statistical analysis that is being used for the study. Chapter Four then discusses the findings of these computational and statistical results. Lastly, Chapter Five provides a summary of the results and provides suggestions for future research surrounding chronic absenteeism and high school achievement measures.

Summary

Chapter One is divided among various sections that give a framework for the reader. To better inform the reader of the results, the chapter provides an overview of chronic absenteeism, highlights empirical studies that have been previously completed on the topic, provides a theoretical framework to view the research, identifies the study’s research questions, and discusses the limitations, delimitations, and assumptions that will be made as data is collected and analyzed. The remaining chapters in the study have been structured in such a way that the reader has a firm grasp on chronic absenteeism and how it affects students’ GPA and ACT scores. By viewing the results through a social cognitive perspective, the reader should understand that the relationship of chronic absenteeism, GPA, and ACT are all related and a product of the personal factors, environmental factors, and learned behaviors of the student. If it can be determined that chronic absenteeism, GPA, and ACT are all statistically significant and
correlated to one another, then more research can be conducted to determine which factors have a greater (negative or positive) effect on student behaviors and their ability to meet post-secondary institutional admission requirements.
CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Attendance and absenteeism have long been a focal point within United States K-12 education. As previous studies noted, chronic absenteeism has had a direct influence on students’ lives before, during, and after high school. However, there are a multitude of reasons that keeps absenteeism a focal point for the K-12 educational system. As the literature illustrates, identifying the reason for student absences is a more daunting task than one might imagine. Too often, there is no follow up to why a student is absent, so the school cannot determine the root of the problem. To determine why students become chronically absent, researchers have attempted to pinpoint, hypothesize, and test different characteristics to determine the reasons for the excessive absences. As such, the various sections of this chapter illustrate the number of varying characteristics that lead to chronic absenteeism and how it has negatively affected student achievement and post-secondary opportunities. More specifically, the following chapter includes the following sections: a historical perspective of chronic absenteeism, defining chronic absenteeism, factors regarding chronic absenteeism, student disengagement, student achievement, post-secondary aspirations, and unresolved areas. Due to the amount of research
conducted on chronic absenteeism, one should note the following literature review draws on research studies completed within the last fifteen years.

**Related Literature**

**A Historical Perspective of Absenteeism**

The United States and state educational systems have focused on chronic absenteeism for the past twenty-five years (Goldstein, Little, & Akin-Little, 2003). While laws and policies have only focused on absenteeism in the last three decades, educational systems have created interventions to alleviate the problem as early as the 1970s (Goldstein et al., 2003). As attendance issues came to the forefront, numerous interventions arose that were school-based, community-based, and family-based in hopes of eliminating various characteristics that lead to chronic absenteeism (Mazerolle, Antrobus, Bennett, & Eggins, 2017; Goldstein et al., 2003).

While interventions have started to take place in an attempt to eradicate characteristics of chronic absenteeism, most states have not yet included the issue within state law, though there are several states that have implemented state laws and interventions to help alleviate this factor (London, Sanchez, & Castrechini, 2016; Hendricks, Sale, Evans, McKinley, & Carter, 2010). States created these new laws and guidelines as a response to No Child Left Behind as this legislation made chronic absenteeism an indicator for school success (Spencer, 2009). Even though some states are still working out their decisions and ramifications for chronic absenteeism, Tennessee has defined and uses chronic absenteeism within its school evaluation measures (TN DOE, n.d.). For the purpose of this study, the state of Tennessee and its legislation is used as necessary parameters since the participants of this study reside and attend school within Tennessee.
Defining Chronic Absenteeism

A large problem with identifying chronically absent students and then determining the factors that lead to chronic absenteeism is the numerous definitions and synonyms used throughout the literature as it relates to chronic absenteeism. Specifically, there are varying definitions of truancy, school refusal attendance, and chronic absenteeism, along with degrees of chronic absenteeism.

Truancy

Numerous researchers define truancy as unexcused absences that account for more than the allotted number of days allowed as determined by state or local guidelines (Mallett, 2016). Furthermore, Wilkins (2008) defined truancy as more than an absence or number of absences as guardians are made aware of their students’ absences once they meet this specified number. Mazerolle et al. (2017) defined truancy to be that of student absences where no verified excuses were provided. In short, truancy is a specified number of absences that a student accumulates without providing excuses such as doctor’s note, court documentation, or parental letter and when the school cannot verify the absence through follow up attempts by clerical staff (Hancock, Lawrence, Shepherd, Mitrou, & Zubrick, 2017). In Tennessee, truancy is defined as unexcused absences that account for five or more total absences per student (TN DOE, n.d.). When a student meets truancy, legal ramifications can begin through the juvenile court system (TN DOE, n.d.). As defined by the Tennessee Department of Education, truancy is the starting point and first attempt at eliminating the possibility of chronic absenteeism.
School-refusal attendance

School-refusal attendance and truancy are very similar apart from why the absence occurred. As explained by Havik, Bru, and Ertesvåg (2015), school-refusal absenteeism is absence due to “strong negative emotions,” and truancy is focused more on a student missing school for activities that are deemed more enjoyable by the student (p. 222). As part of these negative thoughts and experiences, students who suffer from school-refusal have parental support at home, but the student struggles from high levels of anxiety that they urge their parents to let them miss school (Carless, Melvin, Tonge, & Newman, 2015). The authors explained further that the students’ inability to believe that he or she can accomplish a school task or work through a situation brings about this anxiety and desire to not attend school (Carless et al., 2015).

Chronic Absenteeism

Due to the varying degrees and definitions of lackluster attendance, chronic absenteeism is used throughout research as a means to not differentiate among truancy and school-refusal. As mentioned earlier truancy and school-refusal are defined differently, but from a legislative standpoint, absences are absences. Specifically, within Tennessee, there is no distinction made by the Department of Education between school-refusal attendance and truancy. Truancy, chronic absenteeism, and expulsion are the only terms identified within this realm (TN DOE, n.d.). However, chronic absenteeism is the next sequential attendance category after truancy. Due to the number of varying characteristics that affect absenteeism, most research articles define chronic absenteeism and do not differentiate their findings between school-refusal and truancy as it becomes an overwhelmingly daunting task.
As noted previously, there are several definitions of chronic absenteeism. Some are done through percentages, total numbers of days missed, or are fractionally based on the researcher and the study’s setting. As an example, London et al. (2016) defined chronic absenteeism as students missing school over and over, while Kearney and Graczyk (2014) defined chronic absenteeism as “10%+” of predetermined school calendar days (p. 2; Balfanz & Byrnes, 2012). However, other researchers identify absences to be more than half of the school day counting as one full school day (Skedgell & Kearney, 2016). This allows the interpretation of chronic absenteeism to broaden even further by students who miss partial, but not entire school days for more or greater than ten percent of the school calendar days. Another group of researchers define chronic absenteeism as eleven or more school days while other researchers determine an either-or category (Kearney & Bensaheb, 2006). This either or category is best defined by Mac Iver and Messel (2013) as more than twenty school days or one-ninth of school calendar days missed. This definition provides much more flexibility to the researcher as most school calendar days are 180, but there are not 180 instructional days within the school year due to teacher professional development, holidays, and unforeseen inclement weather days. While these definitions do vary, it should be noted that the either-or category provides the most flexibility in identifying students who are at-risk or are already chronically absent.

In Tennessee, a ten percent percentage is used to determine chronic absenteeism (TN DOE, n.d.). Furthermore, the Tennessee state law determines that unexcused, excused, and expulsion days all count towards chronic absenteeism (TN DOE, n.d.). Due to this, Tennessee has allowed zero-tolerance offenses to negatively influence a student’s attendance and the evaluation of the school itself due to a student’s poor choice (S. Moody, personal communication, July 19, 2018). More specifically, the school district had 169 instructional days
last year, so the number of absences needed to meet the ten percent benchmark of chronic absenteeism is much lower than twenty days as specified by previous studies.

To extend the variations of chronic absenteeism even further and to help identify students who need interventions, Gottfried (2014) defined chronic absenteeism as two consecutive weeks missed or eighteen total days for the school year. However, the author also determined intervals within his definition to be moderate and strong chronic absenteeism. For a student to have moderate chronic absenteeism he must have missed between eleven and nineteen school days. In order to meet the strong chronic absenteeism category, the student had to miss twenty or more school days (Gottfried, 2014). While these intervals are not common throughout other studies, it would allow researchers to determine and target students who are excessively absent out of choice from those who may have a debilitating illness. As the various definitions show, chronic absenteeism is typically determined by researchers based on their participants jurisdiction and guidelines. However, for this study, the researcher will use Tennessee’s Department of Education definition with that of Gottfried’s. As the literature has shown, there have been a mix of percentages used in identifying the varying degrees of the definition which allow researchers to analyze more characteristics more effectively and to determine if chronic absenteeism is a longitudinal problem with the student.

**Factors Regarding Chronic Absenteeism**

There are various factors that affect student attendance rates. Due to an overwhelming number of characteristics that influence or create chronically absent students, studies have targeted specific categories that could pertain to the long-lasting influence of chronic absenteeism. Furthermore, in these studies, students become conditioned to their environments and react to certain characteristics that negatively influence their attendance and overall success.
during and after high school. The literature explained that the following characteristics can influence attendance: substance abuse and binge drinking, physical ailments, socio-economic status, bullying, aggressive behaviors including threatening and harmful actions, parental influence, and teacher influence.

**Binge drinking and substance abuse**

According to Goldstein et al. (2003), alcoholism is an associated factor with students who are chronically absent. While this is only briefly mentioned in Goldstein et al.’s literature review, there are other studies that indicate a stronger connection to binge drinking than what was suggested by Goldstein et al. (2003). Even though there is a link mentioned by Goldstein et al. (2003), it was determined from a previous study that alcoholism was prevalent in the home environment factors that affect chronically absent students. This then created a connection between absent students skipping class to likely participate in the same actions as their parents or other family members within the home when they are absent from school.

A second study explained that since students are more truant in their later schooling years that those absences could be linked to things such as binge drinking (Hunt & Hopko, 2009). While this is assumed within this study, it is determined and noted in another study that students who are chronically absent are likely to binge drink more often than their counterparts. For their study, Barry, Chaney, and Chaney (2011) examined binge drinking in chronically absent students. The researchers first defined binge drinking as five or more consecutive drinks per drinking session. National surveys like, *2008 Monitoring the Future*, indicated that an overwhelming amount of youth have tried and continue to drink. Furthermore, over thirty-five percent of the students polled would be categorized as binge drinkers (Barry et al., 2011). As
explained within the results, binge drinkers were less likely to consider four-year university paths (Barry et al., 2011). This is extremely important to note as this brings about perceptions of post-secondary aspirations and the need to graduate high school or even attend high school on a regular basis. Lastly, Grinshteyn and Yang (2017) conducted a third important study that collected data by using the Youth Risk Behavior Survey. These results determined binge drinking was a cause of school absences and chronic absenteeism as high school binge drinkers missed four or more days of school per month due to their behaviors (Grinshteyn & Yang, 2017). These behaviors could then link themselves to the students being categorized as alcoholics in later years and creating a cyclical pattern within their family environment (Goldstein et al., 2003).

Another behavior that coincides with binge drinking is drug use and abuse. While Grinshteyn and Yang (2017) did not find a statistically significant concern for marijuana use, there are several other studies that mention the effect of substance abuse on attendance. Hunt and Hopko (2009) did not focus on substance abuse within their study; however, they did mention previous studies that determined increased substance abuse as a behavior connected to truancy. Barry et al. (2011) also noted that substance abuse is a factor that leads to higher truancy rates. Another study that looked at the reasons for absenteeism also determined that drug use affected student attendance (London et al., 2016). While these studies briefly mentioned substance abuse, Henry (2007) determined that substance abuse negatively affected student attendance. More specifically, Henry (2007) used Monitoring the Future survey data from eighth and tenth graders to determine their behaviors and family characteristics that influence student attendance. The study found a statistically significant correlation between truant students and substance abuse among those students (Henry, 2007). Therefore, the behavior of substance abuse did influence student attendance and increased absenteeism rates of already truant students.
Physical Ailments

Two important characteristics come up when discussing physical ailments and their effect on chronic absenteeism: body mass index and asthma. Even though Schwimmer, Burwinkle, and Varni, did not intentionally look at absenteeism within their quality-of-life study, they determined that severely obese students with a high body mass index missed an average of six more school days per month than their counterparts (2003). This is highly significant as missing this many days on average would place these students within the chronically absent range. While Schwimmer et al. (2003) found significance, another study conducted by Baxter, Royer, Hardin, Guinn, and Delvin (2011) did not find a significant difference in attendance between their obese and non-obese participants. These results disagree; however, they are likely different as Baxter et al. only used fourth grade subjects and Schwimmer et al. used subjects between the ages of five and eighteen. Another physical ailment that gets attention regarding attendance and absences is asthma. Kearney and Bensaheb (2006) noted that students with asthma miss three times as much school as non-asthma students. Within the study, data showed a statistically significant correlation at the p-value of less than 0.05 between students with asthma, their positive view on absences, and their excessive absences in math and English courses (Kearny & Bensaheb, 2006). While they identified two physical ailments within the literature as significant regarding absenteeism, there were no other research studies that attempted to replicate the similar findings of these studies.

Socio-economic Status

Throughout numerous studies, socioeconomic status was a focal point in determining its possible influence on attendance rates. As Ready (2010) explained, students living in a low
socioeconomic status household are “25 percent more likely to miss school three or more days of school per month” (p. 272). Furthermore, the author linked students with a low socioeconomic status to higher rates of illness that could also affect student attendance rates (Ready, 2010). London et al. (2016) mentioned Ready’s study within their finding but went further with the findings by explaining how the economically disadvantaged students have higher rates of absenteeism along with lower academic performance. Other studies also noted that a low socioeconomic status has a direct influence on academic performance. As Mac Iver and Messel (2013) examined, economically disadvantaged students have lower academic performance and trouble meeting graduation requirements. Other studies found that identifying characteristics of low socioeconomic students was important to determine the connection between absenteeism and poverty. Therefore, researchers were diligent in identifying these characteristics of poor attending, low socioeconomic students. These students tend to have poor hygiene and a lack of available resources such as clean clothes, reliable transportation, and stable housing conditions (Shdaimah, Bryant, Sander, Cornelius, 2011). Due to these identified hardships, many schools who serve students in high rates of poverty also have considerably higher rates of absenteeism to overcome (Sheldon & Epstein, 2004).

Two specific studies collected data to determine whether there is a correlation between socioeconomic status and school attendance. In Baxter et al.’s study (2011), the researchers found no statistically significant correlation between socioeconomic status and attendance among their fourth-grade participants. However, another study found that students from a high socioeconomic family had significantly lower rates of absenteeism when compared to their counterparts (Balkis, Arsland, & Duru, 2016). This study had a high rate of correlation as the p-value was determined to be .05 (Balkis et al., 2016). While the two studies show different results
regarding socioeconomic status and attendance, Balkis et al. (2016) used high school participants while Baxter et al. (2011) only focused on a fourth-grade population.

**Bullying**

A school characteristic throughout K-12 schools for decades and one that continues to be a social issue among students is bullying (Gastic, 2008). However, technological advancements have altered bullying to include electronic communication across various applications and platforms as student access to these devices has exceedingly increased over the past decade (Morgan, 2013). As bullying is a constant and as electronic bullying is increasing, researchers have worked to identify how bullying effects student attendance rates. Due to the limited amount of research regarding absenteeism and bullying, electronic, physical, and psychological bullying are not differentiated in a large degree within the research studies.

In Gastic’s (2008) research study, over 15,000 tenth grade participants were used to determine the correlation and cause and effect among truancy and bullying. The results from this study illustrated a significant difference among bullied and non-bullied peers. Specifically, there was a seven percent increase in chronic absenteeism among bullied students compared to non-bullied students (Gastic, 2008). Furthermore, the study linked the behaviors of bullied peers with a comparable association with disciplinary action. The study identified that students who have been bullied are thirteen percent more likely to have higher absenteeism rates and disciplinary action/punishment through in-school and out-of-school suspensions (Gastic, 2008). Lastly, the study suggested that due to this increase in absences and punishment, there is likely to be an increase in the dropout rate of these bullied students (Gastic, 2008).
To further Gastic’s claims (2008), three other studies were conducted that provided similar results. Havik et al. (2015) found a correlation between social isolation and bullying. The data illustrated that there is a strong correlation between being bullied and school refusal attendance among primary students (Havik et al., 2015). However, as the participants advanced in age, the correlation was much weaker between bullying and school refusal attendance (Havik et al., 2015). Secondly, research noted that psychological bullying had a greater effect on school attendance than physical bullying (Dunne, Sabates, Bosumtwi-Sam, and Owusu, 2013). More specifically, the study found that boys were more likely to have higher rates of absenteeism when bullied when compared to females. The study made a distinction regarding emotional problems. However, the study still noted that including emotional problems within the bullying sector did not differentiate the attendance statistics of either males or females (Dunne et al., 2013). In the study’s conclusion, males and females were two times more likely to miss school after being bullied when compared to their non-bullied counterparts (Dunne et al., 2013).

While the previously mentioned studies focused on bullying as a generality, Grinshteyn and Yang (2017), focused on the effect of electronic bullying. Their study used Youth Risk Behavior Survey data from a 13,000+ high school sampling population (Grinshteyn & Yang, 2017). The results showed a statistically significant correlation among electronic bullying and absenteeism. Specifically, students who noted that they were electronically bullied were over twice as likely to miss two to three days of school per month when compared to non-bullied peers (Grinshteyn & Yang, 2017). These findings are extremely significant as a school calendar is made up of 180 school days or seven months of instruction. If an electronically bullied student is likely to miss two to three days per month, then the student would be deemed truant and likely chronically absent if the bullying continued throughout the school year.
Zero Tolerance and Delinquent Behaviors

While bullying is noted as bringing about aggressive behaviors and the threatening of students, researchers have conducted enough empirical research studies to differentiate between bullying and students exhibiting a sense of aggressive behaviors, feeling threatened, being physically harmed, being arrested, or placed into juvenile detention centers. For investigating the behaviors that lead to chronic absenteeism, it is worthwhile to differentiate between bullying and aggressive or delinquent behaviors that lead to zero tolerance actions as one group is deemed the victim and the other as the aggressor or instigator. Zero tolerance has been defined by the Tennessee state government as student behaviors that include possession or use of illegal drugs, possession or use of a firearm, aggravated assault to a student, or bodily injury to any teacher, administrator, or other employee (TN State Law, n.d.). As zero tolerance is a form of expulsion, these severe incidents influence chronic absenteeism rates as defined by Tennessee school attendance laws (TN DOE, n.d.). While zero tolerance offenses are few and far between, they are indicative of the school to prison pipeline (Monahan, VanDerhei, Bechtold, & Cauffman, 2014). As defined by Monahan et al. (2014), the school to prison pipeline is the connection between expulsion and one’s likelihood of entering juvenile or penal institutions.

Understandably, not all student behavioral offenses are linked to expulsion. However, students who are suspended or expelled have a higher likelihood of higher absenteeism rates along with student arrests (Monahan et al., 2014). The behavioral instances that are associated with school absences include exposure to violence, threats, and being injured by other students who used weapons (Grinshteyn & Yang, 2017). More specifically, there is a clear and significant correlation between students who are vulnerable to violent acts. Students who see this violence are almost two times as likely to miss school at least one day each month. This correlation is
significant at the p-value of .001 (Grinshteyn & Yang, 2017). Students are even more likely to miss at least four days per month, but the p-value, while correlated, was not as significant at the p-value. Another noted absentee correlation is when one is threatened or hurt by a student with a weapon. If threatened or hurt, a student is 2.93 times as likely to miss one day per month with the p-value being less than .0001 (Grinshteyn & Yang, 2017). While the research study did not discuss the student who created the harm, it is understood that disciplinary action would take place that would likely lead to numerous suspension days or expulsion. This would then create the absence of two or more students and increase the absenteeism rates of the school.

With attendance being a large predictor of success, suspensions and/or arrests of these offenders has created the likelihood that the offender will be arrested outside of school during his suspension (Monahan et al., 2014). Furthermore, when any student is considered truant or chronically absent from school, he or she is more likely to be arrested at much higher rates when compared to students who are not truant (Monahan et al., 2014). These arrests are likely due to behaviors such as aggressiveness, illegal drug possession, and vandalism (Hunt & Hopko, 2009). As a result of these arrests, students may be placed into juvenile detention centers if the offense is considered severe. If this occurs, students will “frequently lose instructional time” (Shdaimah et al., 2011, p. 9). Shdaimah et al. (2011) explained that educational opportunities may be available through juvenile detention centers or forced through exceptional education laws, but it is not comparable to the teaching and learning provided within the K-12 educational setting. In conclusion, delinquent behaviors negatively affect the victim and offender by increasing both of their absenteeism rates.
**Parental Influence**

Understandably socioeconomic status and parental influence have intertwining characteristics (Balkis et al., 2016). However, there are several parental characteristics that affect student attendance outside of socioeconomic status. Specifically, there are two characteristics that were repeated investigations and findings regarding parental self-efficacy, parental monitoring, parental educational level, and family dynamics (i.e. single-parent homes). Various studies disagree or do not show as high of correlation levels compared to others, but the four characteristics were prevalent within the research.

Carless et al. (2015) looked specifically at whether parental self-efficacy had an influence on student school-refusal. The authors used Bandura’s definition for parental self-efficacy and identified it as “an individual’s appraisal of his or her competence in the parental role” (Carless et al., 2015, p. 162). From this definition, the researchers were able to confirm their hypothesis that parental self-efficacy does influence school-refusal attendance. Furthermore, the data provided a statistically significant correlation at the p-value of less than .001 that school-refusal students’ parents had much lower levels of parent self-efficacy than parents of students who regularly attended school (Carless et al., 2015).

Second, researchers analyzed parental monitoring as a second characteristic. Sheppard (2005) defined parental monitoring as a characteristic that positively affected attendance within a previous study based on student interviews (Sheppard, 2005). However, Havik et al. (2015) focused on high school characteristics of truancy, and it was determined that parental monitoring was slightly significant for influencing school attendance. While Sheppard (2005) and Havik et al. (2015) noted associations with parent monitoring and student attendance efforts, Monahan et
al. (2014) found no correlation between this characteristic and helping eliminate suspension or expulsion rates that are included in chronic absenteeism statistics. While these results are different, it is likely due to Monahan et al.’s study (2014) using longitudinal ex-post facto data and Sheppard (2005) and Havik et al. (2015) used specific and current data.

The most notable characteristics within parental influence regarding attendance are family make-up and dynamics and parental educational levels. Hunt and Hopko (2009) noted the influence of single-parent and divorced parents and the association with higher truancy rates when compared to non-divorced and multi-parent homes. The study’s collected data indicated that truancy and family cohesion had a statistically significant and negative correlation at the .05 p-value. Therefore, truancy is more likely for students who come from a broken home (Hunt & Hopko, 2009). Henry and Yelkpieri’s study (2017) identified these same findings within their data analysis.

The last specified characteristic regarding parental influence on truancy and chronic absenteeism is the educational level of both parents. Four studies specifically noted that parents having a higher educational level or attainment of degrees decreased the likelihood that their student would be truant (Henry, 2007; Goldstein et al., 2003; London et al., 2016; Balkis et al., 2016). The literature review of Goldstein et al. (2003) noted a much later study, but the results were significant enough to mention. Goldstein et al.’s review of the literature (2003) noted that over half of truant students came from homes where one or more parents did not attain a high school diploma. While looking at the effect of a parent’s college education on truancy rates, Henry (2007) noted that there is a significant connection between a student’s parent who has a college degree and higher rates of attendance for that student. More specifically, the results of Balkis et al.’s study (2016) proved that a mother’s educational level and a student’s attendance
rates were statistically significant at the p-value of less than .05. Furthermore, the same correlation with the father’s educational level had an even higher significance with the p-value of .01 (Balkis et al., 2016). Another study looked at even more detailed data and found that kindergartener’s attendance and their parent’s attainment of a college degree were positively correlated at a significant level at a p-value of less than .01. In summary, a parent’s educational level is a significant predictor on whether a student is likely to be truant or chronically absent.

**Teacher Influence**

If getting truant students to school is not hard enough, the research details how teachers also have a direct effect on whether students stay and continuously attend their classes once present in the school building. Two noted characteristics of this are classroom management and student-teacher relationships. Through investigating classroom management, several research studies determined this characteristic to be a factor related to student absences. More specifically, Havik et al. (2015) found significant correlations between students’ perceptions of classroom management and their truancy and school-refusal attendance rates. From this study, school-refusal and truancy were compared separately to classroom management. While each variable has varying definitions, both were statistically significant at the p-value of less than 0.01 (Havik et al., 2015). These results are comparable to student perceptions regarding the classroom dynamics such as teacher age, teacher academic support, teacher-student ratios, and teacher to student ratio (Goldstein et al., 2003). Wilkins (2008) extended these findings through a qualitative study. The qualitative data had previously identified truant participants explain their perceptions of classroom management. Furthermore, the data identified low teacher-student ratios to a lesser frequency of referrals. The study also noted that due to these lower teacher-
student ratios, teachers were able to focus on creating a more positive classroom environment that focused on positive student-teacher relationships (Wilkins, 2008).

As an extension of student-teacher relationships, several studies have focused on how these relationships influence school-refusal attendance, truancy, and chronic absenteeism. Based on the findings of Balkis et al. (2016), students who had a negative perception of the school, teachers, and learning environment had more absences than those without this viewpoint. However, this statistic was not statistically significant to previous or future absenteeism unless grouped with several other personal factors (Balkis et al., 2016). A continued focus on student-teacher relationships was found within Attwood and Croll’s study (2006) which identified that poor student-teacher relationships were linked to truancy (Attwood & Croll, 2006). Furthermore, the researchers found a significance between truant students and them having an “anti-teacher” sentiment (Attwood & Croll, 2006, p. 479). Changing the focus to a teacher perspective, Henry and Yelkpieri (2017) identified that teachers felt there was a greater need to increase teacher and guardian communication in hopes of reducing absenteeism. Due to the separate research focuses, more research should be conducted to determine how an increase in teacher-parent communication might reverse the students’ negative viewpoint of teachers.

**Student Disengagement**

There are various characteristics identified around the idea of student disengagement. As such, Kahn (1990) defines disengagement as actions where people withdraw and defend themselves physically, cognitively, or emotionally due to role performance (p. 694). Due to this vague definition, there must be a distinction between learning disengagement and social disengagement. Below the two categories are discussed separately as there are numerous characteristics involved within each subcategory.
Learning Disengagement

Two specific studies attempted to determine how learning disengagement is linked to chronic absenteeism. First, De Castella, Byrne, and Covington (2013), attempted to identify this disengagement through a seven-point likert scale through three specific statements. The conclusion of this study indicated that self-protectors, students who “attribute poor performance to lack of effort rather than lack of ability,” scored the lowest in academic achievement and were more susceptible to truancy and disengagement than the other three student quadrants De Castella et al., 2013, p. 864). These students within this quadrant have higher characteristics that lead to truancy and disengagement when compared to their counterparts. Another study focused specifically on kindergarten students and how chronic absenteeism influenced their learning and social engagement. As explained within the study’s result section, chronic absenteeism negatively affects learning engagement (Gottfried, 2014). Furthermore, while learning disengagement increased as students became chronically absent, social disengagement also increased at the same time for those students (Gottfried, 2014). These results were calculated based on the students’ Early Childhood Longitudinal Study survey subsection titled eagerness to learn and internalizing behaviors. As new studies are created, researchers should attempt to replicate how chronic absenteeism might affect learning and social disengagement within various grade levels to determine if the two are coinciding factors throughout the K-12 educational system.

Social Disengagement

While educational disengagement is linked more heavily to the ideas of student achievement, there are a larger number of studies conducted on social disengagement by
determining how sadness, depression, anxiety, and the feeling of belonging affect rates of truancy and chronic absenteeism. While there are numerous factors associated with the various psychological problems of K-12 students, there has been very little research connecting the “mental health problems” with specific life situations that students encountered (Shdaimah, et al., 2011, p. 8). However, one study by Havik et al. (2014) did find a strong correlation between social isolation and being bullied at school. While the researchers were unable to identify that social isolation occurs specifically due to bullying, it was hypothesized that it was possibly one reason why the participants were school-refusal attendees (Havik et al., 2014). Furthermore, Goldstein et al. (2003) discussed how previous studies determined that a student with a lower self-esteem is more likely to be chronically absent.

More specifically, previous studies have focused on specifics of mental health and psychological factors that affect absenteeism. Nutall and Woods (2013) conducted a very specific case study with two students. Following this study, the researchers noted that “security and belonging, confidence” and “self-esteem and value” all had some influence on the students’ school-refusal attendance, but the connections were extremely vague and glossed over (Nutall and Woods, 2013, p. 359). While many studies specified that there is a connection between psychological factors and attendance, Hunt and Hopko (2009), Grinshteyn and Yang (2017), Skedgell and Kearney (2016) specified these vague connections.

Hunt and Hopko (2009) investigated the factors that lead to chronic absenteeism. They conducted a research study using the Youth Self Report survey and determined that depression and withdrawal were linked with increased absenteeism (Hunt & Hopko, 2009). While the researchers did not thoroughly explain the connection, they did identify two specific psychological factors that likely lead to truancy and chronic absenteeism (Hunt and Hopko,
Another study found that when students feel sad and hopeless for two weeks or longer, they are more likely to miss one to three days of school per month when compared to their counterparts (Grinshteyn and Yang, 2017).

Lastly, Skedgell and Kearney (2016) focused on specifics within the realm of mental health and psychological factors. The middle and high school student participants completed the Revised Child Anxiety and Depression Scale (RCADS) survey that uses a likert scale measure. From these results, Skedgell and Kearney (2016) determined that students with “15-100% absenteeism reported significantly higher levels of RCADS general anxiety, separation anxiety, panic obsessions and compulsions, and depression” when compared to students with less than a fifteen percent absenteeism rate (p. 52). Looking more specifically at each psychological factor, the data indicated that separation anxiety, panic, social phobia, and depression were all statistically significant factors that lead to chronic absenteeism for students between the twenty and thirty-nine percent at a p-value of less than .05 (Skedgell and Kearney, 2016). Furthermore, students who were chronically absent for forty to fifty-nine percent of the school year had a statistically significant correlation (p value of less than .05) with general anxiety. Lastly, students who had the highest amount of chronic absenteeism, eighty to one hundred percent, indicated that their absenteeism was due to obsessions and compulsions. This measure was also statistically significant at the p-value of less than .05 (Skedgell and Kearney, 2016). While many research studies found correlations to broad psychological or mental health factors, Skedgell and Kearney (2016) found the most significant conditions as they related to absenteeism rates. Many people hypothesize that medications can help reduce these mental health issues. However, Kearney and Bensaheb (2006) found that medication had a very limited influence on correcting these psychological factors and increasing attendance.
**Student Achievement**

After reviewing previous literature regarding chronic absenteeism and student achievement, the result is that the two are negatively correlated. Many studies have focused on kindergarten, elementary, and high school students as the lower level elementary grade levels and high school students have the greatest amount of chronic absenteeism (Gottfried, 2014). However, all the research studies reviewed focused primarily on math and English or a state-wide achievement test.

**Elementary School Achievement**

Numerous studies determine there is a negative correlation between truancy and chronic absenteeism and student achievement. Specifically, these studies have attempted to focus on numeracy and literacy scores. As such, Gottfried (2014) conducted a study on kindergarten students using National Center for Education Statistics (NCES) data. Based on the results of this study, Gottfried (2014) determined that strong chronically absent students, students missing more than twenty school days, have significantly lower math and reading scores when compared to moderate absentee students (eleven to nineteen days) and non-chronically absent students (Gottfried, 2014). A second study (Ready, 2010) also found the same results as Gottfried (2014), but the researcher incorporated kindergarten and first grade data. The results of this study indicated that chronically absent first graders had an average of a twelve-point difference in math achievement than their non-chronically absent peers (Ready, 2010). However, there was no significant difference in kindergarten students’ math achievement scores based on attendance (Ready, 2010).
London et al. researched regarding kindergarten through eighth grade students, determining that students with multiple years of chronic absenteeism performed at a statistically significant and lower rate on math tests but not on the English test portion (London et al., 2016). Furthermore, the statistics proved that there was a statistically significant difference in one year chronically absent students and multi-year chronically absent students within math at a p-value of less than 0.01. While this is significant, the only significance found in English test results and chronic absenteeism was between one year chronically absent students and non-chronically absent students. However, this statistical significance was much less as it was only at a p-value of less than 0.05 (London et al., 2016). From this study, the authors were able to determine that chronic absenteeism does have a negative effect on student achievement.

While these two studies mentioned focused only on one to two years of schooling, Gottfried (2011) focused on a longitudinal study with sibling pairings. While there are several factors that were introduced and held constant throughout the study, the results deemed that chronic absenteeism negatively affects reading and math achievement. Even though the researcher used a number of variables, the results proved that if these indicators are held constant, then the relationship between absences and academic achievement become even more statistically significant (Gottfried, 2011). Therefore, the study determined similar results as the previous two studies. A fourth study attempted to bridge the gap between elementary and high school achievement scores. Within Roby’s study, fourth, sixth, ninth, and twelfth grade Ohio Proficiency achievement scores were used to determine the effect of absenteeism on achievement. The results indicated that all four grade levels proved to have a statistically significant correlation by using Pearson’s r (Roby, 2004). Most notably, ninth grade students had the strong correlation between absenteeism and achievement scores. While this study provided
evidence that attendance and achievement are related across the K-12 education setting, the study was conducted in a very broad manner. While the results are deemed significant, the attendance was not compiled in a longitudinal manner or within one district. Instead, the data was compiled among all Ohio schools and the attendance ratings were based on each school building and not student. While the study is very generalized in this manner, it is still supported by and supports the findings of the studies previously mentioned.

**High School Achievement**

There are a significant amount of elementary school studies relating to chronic absenteeism and achievement when compared to high school studies; however, there are still significant findings at the high school level. As mentioned previously, asthma is an effect of student attendance. Based on this understanding, Krenitsky-Korn (2011) conducted a study to determine how chronically absent, asthma-diagnosed high school students compared to non-asthma students within the area of achievement. The statistical analysis determined that math scores are negatively affected by absences of both groups. More specifically, the asthma-diagnosed students were more chronically absent and had lower achievement scores in math and English, as they tended to miss these classes more often than their other courses (Krenitsky-Korn, 2011).

A second study revolving around high school students determined that there is a negative and inverse relationship between truancy and educational attainment. While the study and results were broad in nature due to the number of participants, the researchers noted that truancy does have a negative effect on educational attainment and thus student achievement. When looking at differences with socio-economic status, the results still determined that a student’s level of
educational attainment is affected by truancy (Buscha & Conte, 2014). While student achievement measures are not detailed within this study, it is assumed that students who do not attain a high school diploma are likely the same students who perform poorly on standardized and achievement tests as they are required by high school courses that lead to graduation. Henry and Yelkpieri (2017) conducted a study concerning the ideas of student achievement and attendance at the high school level. However, the study was different because it looked at the perceptions of teachers and students and how they viewed attendance and achievement. Researchers provided surveys to the participants, and they were asked to determine the significance of each statement as it related to truancy. The results illustrated that both the students and teachers agreed that “truancy results in poor academic performance of students” (Henry & Yelkpieri, 2017, p. 47). Furthermore, the results noted that not only does absenteeism affect student success, but it can also negatively influence teacher perceptions on how they teach (Henry & Yelkpieri, 2017). While there is not an abundant amount of current research regarding high school absenteeism and academic achievement, it is widely understood that truancy and chronic absenteeism negatively affect high school students’ ability to perform well on standardized tests and meet graduation requirements.

**Post-Secondary Aspirations**

Students from all different backgrounds have limited or excessive aspirations regarding K-12 education. These include dropping out, graduating high school only, attending a technical school, or enrolling in a university. As part of these post-secondary aspirations, grade point average (GPA), class rank, and college entrance exam scores are all indicative of where one’s aspirations and reality meet. Therefore, a student with a low GPA and low ACT/SAT score will not meet the requirements of research one institutions. To determine what characteristics affect
GPA and ACT scores, chronic absenteeism and truancy should be investigated further to determine if they have a significant influence on a student’s post-secondary goals.

**GPA and College Entrance Exams**

Grade point average and college entrance exam scores are both indicators of what colleges and universities high school students can attend. For this purpose, GPA will be defined as an “academic performance, the degree to which the individual can apply knowledge and perform tasks assessed for grades” (Millea, Wills, Elder, & Molina, 2018, p. 314). Secondly, colleges accept specific scores based on one’s American College Test scores (ACT) or the Scholastic Assessment Test (SAT). For this section, ACT will be defined as “a measure of college readiness” (Millea et al., 2018, p. 314). While these definitions are simple, Westrick, Le, Robbins, Radunzel, and Schmidt (2015) defined them in much more specific terms. Specifically, GPA is the cognitive, noncognitive, and behavioral characteristics of a student while ACT only focuses on cognitive characteristics (Westrick et al., 2015, p. 25). Combining these two indicators for post-secondary success and ability allows colleges and universities to have a more well-rounded understanding of the student’s ability (Westrick et al., 2015).

**Grade Point Average**

Researchers conducted several studies at various points throughout the K-12 and college education levels to determine how GPA and attendance can be predictors for one another. From more historical research studies, Balkis et al. (2016) determined that a student’s grade point average from previous years is a predictor of attendance rates. One study specifically investigated the role ninth grade GPAs had on graduation and college acceptance. Based on the results, a student’s ninth grade GPA was strongly correlated with meeting college entrance
requirements (Mac Iver & Messel, 2013). Another study conducted by Balkis et al. (2016) determined that high school students’ GPAs are highly correlated to attendance. Furthermore, a student’s previous GPA from the previous academic year could predict the student’s level of absences for the upcoming school year (Balkis et al., 2016).

**College Entrance Exams**

ACT is a major college entrance exam that can predict and determine what academic environment a student can enroll in after completing high school. Even though Westrick et al.’s research study focused on college students, the results can still be generalized to high school students. Just as GPA is a predictor for academic success and attendance in high school, one’s high school GPA and ACT scores are also correlated to that of a college freshman’s GPA (Westrick, 2015). Specifically, if one’s high school GPA and ACT scores are high, then it is highly likely that their freshman GPA will also be high. In summary, there are limited research studies that have focused on ACT scores, attendance correlations, and future success. However, the results found provided a strong correlation between all three factors.

**Drop Out Rate vs College Aspirations**

As noted from the numerous research studies above, individuals are a product of their upbringing and environment. As such, there is a continuum of beliefs and aspirations surrounding the need for a high school diploma and/or a college degree. Due to this continuum, researchers conduct studies to determine how truancy and chronic absenteeism affect dropout rates and aspirations beyond high school.

While there are numerous studies focused on student characteristics that affect chronic absenteeism, there is very little up-to-date research regarding how truancy and chronic
absenteeism influence or correlate with drop out rates and college aspirations. However, there are two specific studies that attempted to find correlations among these variables. Gottfried (2011) mentioned one study that determined how poor attendance ratings beginning in elementary school has a direct effect on high school graduation. Therefore, if a student is a habitual offender of chronic absenteeism, then he or she is more likely to drop out of high school. More specifically, Barry et al. (2011) conducted a research study to determine how binge drinking, absenteeism, and college aspirations were intertwined. The data determined that students who were binge drinkers and truant had less aspirations to attend four-year colleges (Barry et al., 2011). While the researchers determined this correlation, one of the mathematical computations proved that the correlation was significant and the other did not. Because the researchers did not separate the binge drinkers from the non-binge drinkers or the truant students from the non-truant students, it is difficult to determine the strength of correlation between just truant students and their aspirations. The two characteristics are related, but the degree of relatedness between college aspirations and truant students in this study is too vague to generalize to a greater population.

A more specific study (Henry, 2007) investigated the relationship between eighth and tenth grade truant students and their aspirations or beliefs that they would graduate high school and attend college. The two categories were noted differently, but they each had the same four subcategories or responses of “definitely won’t, probably won’t, probably will, and definitely will” (Henry, 2007, p. 33). For high school graduation, truant students and their answers of “definitely won’t,” “probably won’t,” and “probably will” were all statistically significant with a p-value of less than 0.01. The same statistical significance was also found regarding the truant students’ perceptions of college attendance. However, there was a slightly higher statistical
significance in the truant student’s perceptions of graduating high school over college (Henry, 2007). Since their perceptions led them to believe that they would not graduate high school, then it can be generalized that these same truant students would have the same viewpoint regarding college acceptance and college attendance.

Unresolved Issues

As noted throughout this literature review there is an ample amount of current research and statistical evidence regarding the characteristics that affect students and their attendance rates. In summary, substance abuse, family dynamics, family education attainment, socioeconomic status, bullying, teacher influence, student disengagement, student achievement, and student aspirations are all correlated to absenteeism or attendance in some way. Furthermore, the research studies focused primarily on primary grade levels as previous research studies, prior to 2003, determined that chronic absenteeism is a cyclical pattern that begins within the primary grades. As such, there is a limited amount of current research surrounded around high school students and the effect of chronic absenteeism on this student population. Furthermore, there is even less research and statistically significant evidence that investigates the relationship between students’ GPA, ACT scores, and attendance records. More specifically, a study needs to be conducted to focus on GPA, ACT, and truant students compared to non-truant students. A second component to investigate is the relationship between GPA, ACT and chronically absent students compared to non-chronically absent students. Lastly, a comparison needs to be completed determining the differences between the GPA and ACT scores of truant students compared to the GPA and ACT scores of chronically absent students.
CHAPTER III

RESEARCH METHODOLOGY

Introduction

The purpose of this chapter is to identify and explain the research methodology that was used during this study. This section is divided into several parts including the introduction, population and sample size, description of instruments, used research procedures and time period of study, and data analyses. As noted in more detail below, proportional stratified sampling and convenience sampling were both used within the study. This allowed for the population size to be accurate and proportional to the cohort’s most recent attendance data, the 2017-2018 school year. Ex-post facto data was compiled through the school data collection systems of PowerSchool and Cognos, while the current qualitative data was compiled through the student responses that were compiled during the student focus group interview and based on the interview guide (Appendix A). The time period of the study was completed within the 2018-2019 academic year. However, data from the 2016-2017 and 2017-2018 school years were also used to gather the ex-post facto data needed. After the data were compiled, the gathered data were then placed into Excel to determine the correlation, and the statistical significance, if any, was found between GPA, ACT, and chronically absent students from one year compared to non-
chronically absent students and chronically absent students from two years compared to chronically absent students for one year. After these results were compiled, six students participated in a student focus interview session to determine if the eighteen year or older students have similar reasons or characteristics as noted in Chapter II.

**Research Question 1**

**Question 1:** Is there a statistically significant difference between ACT scores/GPA of non-chronically absent students and ACT scores/GPA of chronically absent students?

**Hypothesis 1:** There is a statistically significant difference between ACT scores/GPA of non-chronically absent students and ACT scores/GPA of chronically absent students.

**Null Hypothesis 1:** There is no statistically significant difference between ACT scores/GPA of non-chronically absent students and ACT scores/GPA of chronically absent students.

**Research Question 2**

**Question 2:** Is there a significant difference between the ACT scores of students who are chronically absent for two consecutive years and those that are chronically absent one year but not chronically absent for two consecutive years?

**Hypothesis 2:** There is a statistically significant difference between the ACT scores of students who are chronically absent for two consecutive years and those that are chronically absent one year but not chronically absent for two consecutive years.
Null Hypothesis 2: There is no statistically significant difference between the ACT scores of students who are chronically absent for two consecutive years and those that are chronically absent one year but not chronically absent for two consecutive years

**Population and Sample**

The population used for this study were twelfth grade students in a Southeast Tennessee high school. Each participant had an ACT score, grade point average, and retrievable attendance records for both the 2016-2017 and 2017-2018 school years. The students were chosen from a random sampling once he or she met the above criteria. To get an equal proportional sample size of non-chronically absent and chronically absent students, the population for the quantitative study and statistical analysis was 100 students. More specifically, a proportional stratified sampling was used within this study to ensure a random sampling of students that met all necessary qualifications. The main reason for using this chosen sampling method was that the chronic absentees within the selected grade level are very much disproportional when attempting to view data on a one-to-one or equal parts sampling as chronically absent students are a much smaller population. Furthermore, based on the previous year’s chronic absenteeism rate for the school, the sampling size and proportion were identical. So, if the chronic absenteeism rate for twelfth grade was 15% from the previous year of the same cohort students, then there were fifteen participants chosen for the study who are chronically absent and the remaining 85% were non-chronically absent students.

Another sampling procedure was the use of convenience sampling. While much of the data was ex-post facto, the study also looked at student perceptions via the student focused interview and interview guide. Due to this, convenience sampling was used to limit the time of the study and for the researcher to have ample and ease of access to data and data collection
procedures. Furthermore, convenience sampling was also used during the student focused interview due to the limited number of students who are eighteen or older along with the students’ availability and willingness to participate in the interview after reading, understanding, and signing the student consent form (Appendix C). While both sampling techniques are noted and are not most ideal, it is understood that the effect of the study and the generalizations sought after within the study were able to be met from these sampling procedures.

**Description of Instrument(s)**

Only two specific instruments will be used within this study. One specific instrument that is used county-wide and within this study’s specific school and population is PowerSchool. PowerSchool is a well-known data collection software used throughout the country that helps with grade records, transcripts, college entrance exam scores, and attendance. To collect the primary set of data and ex-post facto data, PowerSchool was used along with Cognos. Cognos is a more detailed data collection software system. This system varies from PowerSchool as it gives much more specific testing data including TCAP and TN Ready data scores for each student. If any data were not retrieved from PowerSchool, then Cognos was used to gain those needed data sources.

The variable of absenteeism is a known and calculated measurement technique that was compiled by teachers and school staff using PowerSchool. This measure is noted as valid and assumed as valid based on the professional actions of school officials, teachers, and the attendance clerk to keep accurate and updated attendance data. ACT scores are also a noted variable and have already been established by ACT and understood as an established measure. Grade point average (GPA) was the third major variable used, and it was also calculated within the PowerSchool system. This measure is valid as it is computed through the PowerSchool
system. The reliability of this measure can also be noted by the continued use of the measure and the amount of years PowerSchool has been used as a reliable school management system.

As the data were collected via PowerSchool and Cognos, they were entered into Excel to calculate the correlation and statistical significance of each identified variable. These variables are noted as absenteeism being an independent variable, and ACT scores and GPA being dependent variables. For absenteeism, a categorical approach was taken and deemed with a “1” if chronically absent and “0” if not chronically absent. ACT scores were a dependent variable and was viewed as an interval scale. Lastly, GPA was also looked at through an interval variable scale.

The non-ex-post facto data that were collected and used for this study included the completion of the created student focused interview guide (Appendix A). This interview guide consisted of eight questions that were asked of the six, eighteen or older chronically absent students. This interview took place in order to help inform the analysis of the quantitative data. This allows for specific characteristics to be identified and generalized over the entire group and to identify factors that have led or possibly led to students being chronically absent. The first questions of the interview guide ask the students how many days they believe they have missed this year. From these questions, more questions are asked regarding why the students feel like they miss school, what their parents think about their attendance, and if their teachers genuinely care about the students and their attendance. Lastly, the students were asked if they believe their attendance and grades are linked in any way along with what the school could do to improve their attendance. The measure itself is surrounded around the idea of student environments and behaviors and how it might influence their attendance. From these three assessment tools and measures, ex-post facto data and the collected student viewpoints have furthered the effect of the
study by not only identifying how absenteeism might affect ACT and GPA scores, but also which specific environmental or behavioral factors may have led to this chronic absenteeism.

**Research Procedures and Time Period**

This study was conducted and completed over the Fall and Spring semesters of the 2018-2019 school year. While the study was conducted at this time, ex-post facto data was gathered from the two previous school years and current semester. Therefore, the data used included the 2016-2017 and 2017-2018 school years and the Fall 2018 semester. Once the sampling sizes were determined and proportional, the information needed was gathered by district’s Research and Accountability Office after the school system reviewed the data request (Appendix B). Once the data was provided by the school district, the data were entered into Excel. Both research questions were handled in the same manner to ensure an appropriate number of students were selected for the study but only identifiable by their student identification numbers. This allows for the students to be identifiable across both school years and semester. If identified as chronically absent for the past two consecutive years, students were asked to participate in the student focused interview process. Due to the sample size for the interview being that of six, eighteen or older, twelfth grade students who were chronically absent for both identified school years. The reasoning for this was due to convenience sampling and to inform the quantitative data analysis with qualitative data. While each student was not a part of the sampling for the qualitative portion of the study, the only identifiable mark was the student identification numbers. This was simply for data tracking over the two-year period and to identify six twelve graders that met the criteria previously mentioned. Each student who agreed to participate in the focused interview were given pseudonyms to protect their identity.
Due to time constraints during the school day, each student who met the criteria to participate in the focus interview group all signed a student waiver to further their participation in the study. Once the waivers were read, clarified if necessary, and signed, then the group participated in a student-focused interview with one another and the facilitator. The interviews required one hour to complete and clarifying, or associated questions were asked in such a way as to only gather more data or receive student clarifying remarks based on previous questions and answers.

**Data Analyses**

To compare the ex-post facto data of chronically and non-chronically absent students, the data were entered into Excel. Based on each research question, students were categorized with a “1” for being chronically absent and a “0” if not chronically absent. This is the same for question two where participants were given a “1” if they were chronically absent for two consecutive academic years, and participants with chronic absenteeism for only one year (2017-2018) were given a “0.” By using this type of categorical data, it allowed for statistical significance to be found within each group and then compared to that of the other group or non-chronically absent participants. The student focused interview group occurred once the able population was identified as chronically absent and of age to participate in the interviews without parental consent. The students are aware that they have been chronically absent for two years, but the results and effect of their absences on their GPA and ACT scores will not be provided or mentioned to them during the interview.
Research Question 1

Within question one, non-chronically absent students and chronically absent students for the 2017-2018 school year and who are within the 2019 graduating cohort were used as participants. Excel was used to determine and categorize data to run analysis of variance (ANOVA) test. Within this test, students were deemed or noted as chronically absent or non-chronically absent and the statistics from their attendance records, specific days, GPA, and ACT scores all had to be accessible to run the appropriate test. ANOVA was used to determine if differences existed between the two dependent variables, ACT and GPA, and absentee rates. This test was specifically chosen as it shows variations, if any exist, within and among groups. Nominal coding was used to numerically identify students as chronically absent, as indicated with a “1,” and non-chronically students, as indicated with a “0.”

Research Question 2

Research question two was also handled in the same fashion as research question one. The participants were identified as being chronically absent for consecutive academic years, 2016-2017 and 2017-2018 and compared to that of only chronically absent students for 2017-2018 school year. Nominal grouping was also used to identify these students just as noted above for research question 1. However, students who were chronically absent for both school years, 2016-2017 and 2017-2018 were noted numerically with a “1” and chronically absent students for only the 2017-2018 school year were noted with a “0.” An ANOVA test, specifically a t-test, was used to determine the statistical significance between the variables when holding absenteeism as a constant. Since the relationship was significant, then a post hoc test was also conducted to
determine if the absenteeism had a greater effect on ACT or GPA and for each group. If differences arose, each variable was held constant and compared to that of their counterpart.

**Student Focused Interview**

For a student to participate in the focused interview session, the student had to be eighteen years or older, sign the student consent form, and be chronically absent for both the 2016-2017 and 2017-2018 school years. The student focused interview was audio recorded, and this was noted verbally before the interview session and within the signed student consent form. The interview process took less than one hour to complete. The interview guide consisted of eight interview questions with several clarifying or extended questions based on student responses. In order to code the qualitative data, deductive coding was used based on the literature review. Deductive coding is the most appropriate coding method for the interview guide responses. As deductive coding is used, it allows the data to be identified in a syllogism sequence as major premise, minor premise, and a conclusion (Ary, Jacobs, Sorenson, & Walker, 2013). By using this coding process, deductive coding helps “organize premises into patterns that provide convincing evidence for a conclusion’s validity” (Ary, Jacobs, Sorenson, & Walker, 2013, p. 4). In this instance, the literature review will provide the major premise barriers as the students’ interview response are logically coded and concluded.

The interview guide has the possibility to lead to connections and topics found within the literature review that affects attendance among K-12 students. Specifically, questions ask why students miss school, if teachers can affect student attendance, and how parents effect attendance rates. Furthermore, the interview guide focuses on student perceptions on whether they believe attendance and grades have a positive correlation with one another. Lastly, the students were
asked whether or if the school can adjust increase student attendance rates among the six
identified and interviewed students. If these answers are similar to the literature review and
previous studies, then generalizations regarding Southeast Tennessee high school students and
their reasons for chronic absenteeism are possible and discussed further in Chapter IV. Each
interview question is specifically outlined and deductively coded for further understanding and
the statistical analysis on absenteeism and its effects on GPA and ACT scores are found within
Chapter IV: Findings. Chapter IV goes into greater detail regarding the statistical significance of
absenteeism on the outcomes of the participants’ ACT scores and GPA. Furthermore, Chapter IV
explains if the qualitative data of the student focused interview accurately matches the
quantitative data results and Chapter II: Review of Related Literature.
CHAPTER IV
ANALYSIS OF THE DATA

Introduction

Chapter IV provides a thorough explanation of the quantitative data of 2018-2019 senior cohort students’ ACT and GPA scores when comparing chronically absent to non-chronically absent cohort members during the 2017-2018 academic year, as well as comparing the best cumulative ACT scores of groups that were chronically absent for two consecutive years (2016-2017 and 2017-2018) with chronically absent students for one academic year (2017-2018). The purpose of this study was to compare ex-post facto data (attendance, ACT, and GPA scores) to determine if there was any statistical significance between the two groups used in each research question. An analysis of variance, a t-test, and other varying statistical tests (via Excel) helped appropriately analyze the quantitative data by providing mean, median, standard deviation, and z-scores for QQ plots. A focus interview group that followed the interview guide (Appendix A) provided the qualitative data. Deductive coding of transcribed audio reveals whether the chronic absenteeism factors as explained in Chapter II: Review of Related Literature were similar or different than the factors identified in the seven participating students’ dialogue. In each descriptive statistics section, the sample sizes are provided, and the data analyses are explained.
Quantitative Data

To determine if chronic absenteeism was an indicator for differences in ACT and GPA scores of the 2018-2019 senior cohort group, an analysis of variance was conducted for Research Question 1 and a t-test was conducted for Research Question 2. For Research Question 1, stratified proportional sampling was able to be used with a one hundred student sample size. Due to the school’s chronic absenteeism rate of 27.8%, twenty-eight of the chronically absent students were compared to seventy-two non-chronically absent students for the 2018-2018 academic year. While this sampling opportunity was available for Research Question 1, it was not available for Research Question 2 as the sample size was much smaller for Research Question 2. While the sample size was smaller for Research Question 2 due to the nature of the research question, the sample size was still able to compare nineteen students to fourteen students within the 2018-2019 senior cohort. The research questions and null hypotheses are listed below as well as a thorough statistical explanation of each research question, sample sizes, and results.

Research Question 1

Question 1: Is there a significant difference between ACT scores/GPA of non-chronically absent students and ACT scores/GPA of chronically absent students?

H1: There is a significant difference between ACT scores/GPA of non-chronically absent students and ACT scores/GPA of chronically absent students.

NH1: There is no significant difference between ACT scores/GPA of non-chronically absent students and ACT scores/GPA of chronically absent students.
Research Question 2

Question 2: Is there a significant difference between the ACT scores of students who are chronically absent for two consecutive years and those that are chronically absent one year but not chronically absent for two consecutive years?

H2: There is a significant difference between the ACT scores of students who are chronically absent for two consecutive years and those that are chronically absent one year but not chronically absent for two consecutive years.

NH2: There is no significant difference between the ACT scores of students who are chronically absent for two consecutive years and those that are chronically absent one year but not chronically absent for two consecutive years.

Descriptive Statistics

As previously noted, the sample size for Research Question 1 consisted of a stratified proportional sampling where the chronically absent sample size is twenty-eight students (n=28), and the non-chronically absent sample size is seventy-two students (n=72). This sampling was also completed by using a random integer assigned by Excel. Once these random numbers were assigned, the non-chronically absent students were chosen based on the number succession from 1 to 125 and done secondly through alphabetical order until the seventy-two-student sample size was achieved. The chronically absent students were also randomly chosen through the same random integer process described above but compiled from the number succession from 1 to 35 and then through alphabetical order until the twenty-eight-student sample size requirement was fulfilled.
Research Question 1 Descriptive Statistics

The following are the statistics used for Research Question 1. Table 4.1 is the randomly assigned chronically absent students, and Table 4.2 is the randomly assigned non-chronically absent students.

Table 4.1  
*Chronically Absent Random Sample Size (n=28)*

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<td>3.903</td>
</tr>
<tr>
<td>33</td>
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<td>2.71</td>
</tr>
<tr>
<td>34</td>
<td>20</td>
<td>3.699</td>
</tr>
<tr>
<td></td>
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<tr>
<td>35</td>
<td>35</td>
<td>27</td>
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<tr>
<td>36</td>
<td>36</td>
<td>16</td>
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<tr>
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<td>63</td>
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<td>64</td>
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<td>13</td>
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<td>65</td>
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<td>13</td>
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<tr>
<td>66</td>
<td></td>
<td>20</td>
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<tr>
<td>67</td>
<td></td>
<td>25</td>
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<tr>
<td>68</td>
<td></td>
<td>18</td>
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<tr>
<td>69</td>
<td></td>
<td>23</td>
</tr>
<tr>
<td>70</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>71</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>72</td>
<td></td>
<td>29</td>
</tr>
</tbody>
</table>
To determine if there was a statistical significance, an analysis of variance (ANOVA) single factor was applied to the sample groups to determine if there was a statistical significance.

The results are as follows:

Table 4.3
ANOVA: Chronically Absent and Non-chronically Absent Samples

<table>
<thead>
<tr>
<th>Groups</th>
<th>Count</th>
<th>Sum</th>
<th>Average</th>
<th>Variance</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>28</td>
<td>476</td>
<td>17</td>
<td>13.48148</td>
<td>3.671714</td>
</tr>
<tr>
<td>GPA</td>
<td>28</td>
<td>66.957</td>
<td>2.3913</td>
<td>0.518387</td>
<td>0.719991</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
<th>F crit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2987.789</td>
<td>1</td>
<td>2987.789</td>
<td>426.831</td>
<td>2.63E-27</td>
<td>4.019541</td>
</tr>
<tr>
<td>Within Groups</td>
<td>377.9965</td>
<td>54</td>
<td>6.999934</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3365.785</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ANOVA: Non-chronically Absent

<table>
<thead>
<tr>
<th>Groups</th>
<th>Count</th>
<th>Sum</th>
<th>Average</th>
<th>Variance</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>72</td>
<td>1331</td>
<td>18.48611</td>
<td>20.92938</td>
<td>4.574864</td>
</tr>
<tr>
<td>GPA</td>
<td>72</td>
<td>208.803</td>
<td>2.900042</td>
<td>0.497983</td>
<td>0.705679</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
<th>F crit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>8745.32</td>
<td>1</td>
<td>8745.32</td>
<td>816.2759</td>
<td>9.68E-61</td>
<td>3.907782</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1521.343</td>
<td>142</td>
<td>10.71368</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10266.66</td>
<td>143</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Secondly, QQ Plots were constructed using z-scores to illustrate the standard variation of each sample group (chronically and non-chronically absent students) for ACT super scores. Due to both groups having minimal data points that extend beyond two standard deviations (Figure 4.1 and Figure 4.2), the data can be determined as within the necessary standard deviation for each sample group that adequately reflects the larger population size.
Figure 4.1 QQ Plot Chronically Absent: ACT

Figure 4.2 QQ Plot for Non-chronically Absent: ACT

Figure 4.3 and Figure 4.4 show similar standard deviations for the chronically and non-chronically absent sample students. An overwhelming majority fall within two standard deviations, so the standard deviation for the GPAs of each group fall within the normal and acceptable range to accurately represent the larger population.
In order to more specifically answer Research Question 1, a t-test: two-sample assuming unequal variances was conducted on the sample groups for both ACT and GPA. Due to the p-value for the samples’ best cumulative ACT scores being less than .05 (p<.05) for the one-tail t-
test, the null hypothesis was rejected (Table 4.4). Furthermore, the two-tail t-test identified the p-value to be less than .10 (p<.10) which provided a 90% level of confidence. Therefore, Table 4.4 illustrates a statistically significant difference between the best cumulative ACT scores of chronically and non-chronically absent students on both the one-tail t-test at less than .05 (p<.05) and the two-tail t-test at less than .10 (p<.10).

Table 4.4

<table>
<thead>
<tr>
<th></th>
<th>Chronically Absent</th>
<th>Non-Chronically Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>17</td>
<td>18.486</td>
</tr>
<tr>
<td>Variance</td>
<td>13.48148148</td>
<td>20.92938185</td>
</tr>
<tr>
<td>Observations</td>
<td>28</td>
<td>72</td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>t Stat</td>
<td>-1.691202324</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;=t) one-tail</td>
<td>0.047950903</td>
<td></td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>1.670219484</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;=t) two-tail</td>
<td>0.095901806</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>1.999623585</td>
<td></td>
</tr>
</tbody>
</table>

The same t-test was completed using the GPAs of the sample groups. Since the p-value is less than .01 (p<.01) for the one-tail t-test, the null hypothesis for Research Question 1 was rejected entirely. The t-test also passed the two-tail test with a standard of 90% confidence as the two-tail p-value is also less than .01 (p<.01). As found in Table 4.5, these statistical values suggest a significance that chronic absenteeism does affect one’s cumulative GPA (Table 4.5).
<table>
<thead>
<tr>
<th></th>
<th>Chronically Absent</th>
<th>Non-Chronically Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.391321429</td>
<td>2.900041667</td>
</tr>
<tr>
<td>Variance</td>
<td>0.518387115</td>
<td>0.49798266</td>
</tr>
<tr>
<td>Observations</td>
<td>28</td>
<td>72</td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>t Stat</td>
<td>-3.19009531</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;=t) one-tail</td>
<td>0.001253458</td>
<td></td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>1.677224196</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;=t) two-tail</td>
<td>0.002506916</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>2.010634758</td>
<td></td>
</tr>
</tbody>
</table>

**Research Question 2 Descriptive Statistics**

Stratified proportional sampling was not able to be used for Research Question 2 as the size of the population required to create the sampling procedure was unattainable based on the 2018-2019 senior cohort. Since the stratified proportional sampling could not be used, and the size of the two different population groups was so small, each sample that met one of the requirements was used to achieve the largest population and sample size possible. The following are the sample statistics used for Research Question 2. Table 4.6 is the sample size (n=14) of 2018-2019 senior cohort who were chronically absent for both 2016-2017 and 2017-2018. Table 4.11 contains a sample size of nineteen (n=19) chronically absent students for consecutive years (2016-2017 and 2017-2018), and Table 4.7 is the randomly assigned chronically absent students for only the 2017-2018 school year.
Table 4.6  
**Chronically Absent Student Sample**  
*(16-17 and 17-18)*

<table>
<thead>
<tr>
<th>Sample Student Number</th>
<th>Highest ACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>3</td>
<td>21</td>
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<td>4</td>
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<td>7</td>
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<td>9</td>
<td>19</td>
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<td>10</td>
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<td>11</td>
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<td>12</td>
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</tr>
<tr>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>14</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 4.7  
**Chronically Absent Student Sample (17-18 Only)**

<table>
<thead>
<tr>
<th>Sample Student Number</th>
<th>Highest ACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
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<tr>
<td>2</td>
<td>25</td>
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<tr>
<td>3</td>
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<tr>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>19</td>
<td>13</td>
</tr>
</tbody>
</table>

QQ Plots were created using z-scores from each sample group to determine the standard deviation of each sample group (chronically absent for only 16-17 and chronically absent for both 16-17 and 17-18). While the standard deviation is not comparable to a larger sample size for Research Question 2, the graphs (Figure 4.5 and Figure 4.6) do illustrate that there are no outliers within each individual sample group as no individual sample is outside two standard deviations of the mean.
To further analyze the data with more simplistic statistics, the two following statistical charts were created to analyze the sample groups side by side to see varying comparable statistics. Table 4.8 emphasizes the descriptive statistics for the chronically absent students of
both the 2016-17 and 2017-18 academic years while Table 4.9 provides the descriptive statistics for chronically absent students of only 2017-18 for the 2018-2019 senior class cohort.

Table 4.8
*Chronically Absent Statistics 16-17 & 17-18*

<table>
<thead>
<tr>
<th>Statistic</th>
<th>16-17 &amp; 17-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>17.92857143</td>
</tr>
<tr>
<td>Standard Error</td>
<td>1.183514443</td>
</tr>
<tr>
<td>Median</td>
<td>18.5</td>
</tr>
<tr>
<td>Mode</td>
<td>13</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>4.42830557</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>19.60989011</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.554984549</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.470874896</td>
</tr>
<tr>
<td>Range</td>
<td>14</td>
</tr>
<tr>
<td>Minimum</td>
<td>13</td>
</tr>
<tr>
<td>Maximum</td>
<td>27</td>
</tr>
<tr>
<td>Sum</td>
<td>251</td>
</tr>
<tr>
<td>Count</td>
<td>14</td>
</tr>
</tbody>
</table>

Table 4.9
*Chronically Absent Statistics 17-18 Only*

<table>
<thead>
<tr>
<th>Statistic</th>
<th>17-18 Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>16.63157895</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.734331563</td>
</tr>
<tr>
<td>Median</td>
<td>16</td>
</tr>
<tr>
<td>Mode</td>
<td>16</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>3.200877073</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>10.24561404</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>1.288251955</td>
</tr>
<tr>
<td>Skewness</td>
<td>1.124226012</td>
</tr>
<tr>
<td>Range</td>
<td>12</td>
</tr>
<tr>
<td>Minimum</td>
<td>13</td>
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<tr>
<td>Maximum</td>
<td>25</td>
</tr>
<tr>
<td>Sum</td>
<td>316</td>
</tr>
<tr>
<td>Count</td>
<td>19</td>
</tr>
</tbody>
</table>

To fully answer Research Question 2, a t-test was conducted on the sample groups using their highest ACT scores. Due to the p-value for the samples’ best cumulative ACT scores being
greater than 0.05 (p > .05), the null hypothesis was accepted (Table 4.10). Therefore, there is no statistical significance between the best ACT scores of chronically absent students for both the 2016-17 and 2017-18 school years and chronically absent students for only the 2017-18 academic year.

Table 4.10
\textit{t-Test: Two-Sample Assuming Unequal Variances: ACT One to Two Year Comparison}

<table>
<thead>
<tr>
<th></th>
<th>17-18 Only</th>
<th>16-17 &amp; 17-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>16.63157895</td>
<td>17.92857143</td>
</tr>
<tr>
<td>Variance</td>
<td>10.24561404</td>
<td>19.60989011</td>
</tr>
<tr>
<td>Observations</td>
<td>19</td>
<td>14</td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>t Stat</td>
<td>-0.931198506</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;=t) one-tail</td>
<td>0.18071151</td>
<td></td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>1.713871528</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;=t) two-tail</td>
<td>0.36142302</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>2.06865761</td>
<td></td>
</tr>
</tbody>
</table>

\textbf{Qualitative Data}

To gain a further understanding of the quantitative data a focus interview group was brought together to discuss reasons for their chronic absences in the 2018-2019 school year. To meet the guidelines of the research study, thirteen eighteen-year-old students were identified as being chronically absent as of January 10, 2019. Out of the thirteen, eleven students were in attendance enough to learn about the study, and they agreed to participate. The main goal was to have four to eight students participate in the focus group discussion. Each of the eleven students had signed the student informed consent (Appendix C), but only seven were present the day of the interview. The focus interview group was held on Friday, February 1, 2019. Of the seven students, five were female and two were male. Also, six of the seven participating students were
chronically absent for the 2017-2018 school year, and four of those six students were chronically absent for consecutive school years (2016-17 and 2017-18). The one interviewed student that did not meet either category was a transfer student for the 2018-19 school year, and he was deemed chronically absent for the 2018-2019 school year, but the data from his previous academic years were unattainable. The following table illustrates descriptive statistics of the students’ GPA and best ACT score for the seven focus interview group participants (Table 4.11). These students are provided with the same sample number, and it corresponds directly to the transcribed interview discussed below.

<table>
<thead>
<tr>
<th>Student Interview Number</th>
<th>Best ACT</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>16</td>
<td>2.323</td>
</tr>
<tr>
<td>S2</td>
<td>13</td>
<td>2.242</td>
</tr>
<tr>
<td>S3</td>
<td>18</td>
<td>2.85</td>
</tr>
<tr>
<td>S4</td>
<td>13</td>
<td>1.67</td>
</tr>
<tr>
<td>S5</td>
<td>17</td>
<td>1.77</td>
</tr>
<tr>
<td>S6</td>
<td>16</td>
<td>3.552</td>
</tr>
<tr>
<td>S7</td>
<td>16</td>
<td>2.917</td>
</tr>
</tbody>
</table>

**Analysis of Qualitative Data**

To further the quantitative data, the seven, eighteen-year-old students who were previously mentioned agreed to participate in a focused interview group session to help further inform the analysis of the quantitative data. More specifically, the interview consisted of fifty-one minutes of audio that was transcribed into thirty-three pages of dialogue. Once the audio was transcribed, the data were deductively coded using the predetermined factors from Chapter II: Review of Related Literature. To accurately code the qualitative data, nine varying factors or themes were targeted from Chapter II: Review of Related Literature and compared to the
interview transcription to see if the seven participating students were affected by these same themes as noted within previous research studies. The focus interview guide (Appendix A) was used as a guide to determine if these seven students would identify with any of these same previously determined themes as factors that affect or have affected their attendance and/or have led to their chronic absenteeism up to the interview date for the 2018-2019 school year. For reference, the nine themes found within the literature review were: binge drinking, substance abuse, physical ailments, socio-economic status, bullying (electronic and physical), zero tolerance and delinquent behaviors, parental influence, teacher influence, and disengagement (learning and social).

**Themes Identified in the Focus Interview**

Through the focus interview session that occurred on Friday, February 1, 2019, the seven students answered the questions from the interview guide (Appendix A), and it was determined that each student at least identified with one of these themes. The themes that were identified from the dialogue included physical ailments, socio-economic status, bullying (physical and electronic), parental influence, teacher influence, and disengagement (learning and social). Below, these six themes were examined further and tied to direct quotes from the interviewed students. To ensure confidentiality, each student was identified using the number above or with the use of “he” as a general, third-person pronoun.

**Physical Ailments**

Five out of the seven interviewees noted physical ailments as being a cause for their chronic absenteeism during the 2018-2019 school year or years prior. Several students mentioned that they missed school for being sick, but others were more specific in stating why.
Student 7 explained that he missed school due to his physical therapy while Student 3 noted that he missed days to sickness caused by stress. Specifically, Student 3 noted, “I feel like I get so stressed out about-I have to do so much work-And then I’ll get sick from stress.” While none of the other students went into detail about their illness, they were quick to identify sickness as a reason for some of their absences.

**Socio-economic Status**

Six of the seven students noted socio-economic status as an indicator and reason for current or previous chronic absenteeism. Student 4 noted that, “I didn’t have a way,” while three noted that their attendance was reliant upon bus transportation. Student 7 was the most explanatory regarding his socio-economic status as he quickly noted how he was “working at least 40 hours a week or more…” Another student was also quick to mention working late hours to support his family and a small child, of whom he is not the parent. Student 5 mentioned that due to his socio-economic status, he would not be able to attend college if it was not for Tennessee Promise. Within the dialogue, his low socio-economic status was discussed as a cyclical restraint if not for certain scholarship opportunities.

**Bullying (Physical and Electronic)**

Bullying was identified as a concern for chronic absenteeism. The three students who alluded to bullying did not describe bullying of a physical or electronic nature. Instead, the bullying was discussed in a face-to-face setting. The bullying was mentioned in a vague way, but it should be noted that Student 7 noted “drama” as a cause for absences. More specifically, one student noted being bullied due to his LBGQTQ affiliation and students discussing him in a negative way. He specifically noted that “I don’t want to come to school when I could be
walking down the hallways, and someone could be saying something to me.” While bullying was
the least noted theme, it confirms a theme found within Chapter II: Review of Related Literature.

**Parental Influence**

Parental influence was discussed by five of the seven interviewed students as a cause for
and against their chronic absenteeism. Student 5, Student 6, and Student 7 discussed how their
parents care about their attendance and contact the student if he is marked as absent for the
school day. The students noted that the school provides a phone call home for students who are
absent for the day which leads to the communication from their parents. While these three
students noted a positive influence from their parents, two students were quick to note that their
attendance is a concern only to the student. Student 4 stated, “Honestly, my family don’t care
about them attendances ‘cause they know where I be at when I don’t be at home, I mean when I
don’t be at school.” Another student mentioned how he lives alone and that his parents want him
to graduate, but “at the end of the day, they don’t really care” (Student 1).

**Teacher Influence**

At the beginning of the 2018-2019 school year, administration became concerned with
chronic absenteeism as attendance affects numerous areas related to student achievement and the
school-wide TVAAS scores. As such, all seven students noted that they had been adopted by a
faculty member who facilitates discussions with them regarding grades and courses necessary for
graduation. Of the two most discussed themes found within the literature review, teacher
influence was the major focus of discussion throughout the focus interview group. Furthermore,
all seven students noted teacher influence as having either a positive or negative effect on school
attendance. The underlying concern for each student was having positive relationships with
teachers and those teachers showing a concern for their students outside of learning the required content. The students were the most talkative while discussing teacher influence, and they provided several examples of both positive and negative results due to current or previous teachers.

Student 1 was quick to note how he heard one of his teachers talking negatively about him to another teacher. He was quick to note that it made him sad and that he felt like “you get treated like you’re in prison” while at school. Several other students noted that they wished their teachers had compassion towards them and a passion for their content area instead of going through the motions in order to earn a check and pay bills. When the interviewees were asked about how they are treated by their teachers when they returned from an absence, several noted that the teachers generally had a lack of concern for student absences and when they did return the focus was on missing work and not the students’ well-being.

While there were numerous comments regarding the negative affect of teachers which caused student absences, there were also several students who noted specific teachers who they could rely on or who have reached out to them as they were concerned for them on a personal level. Five individual teachers were identified by the interview group as having a positive influence on their outlook of school. Student 5 summarized the groups perception of teacher influence by stating how, “I prefer to have a teacher who does like their job because that means that they actually care about me, they care about the class, so they’re gonna try their hardest to make it fun…” Student 3 quickly identified teacher relationships as a large indicator for whether he attended school by stating that it “doesn’t change the fact that it feels good to be… to know that someone cares about you.” While all seven noted teacher influence as a primary influence on their attendance, they were quick to mention how the teacher’s attitude and classroom
environment quickly provided them with a sense of excitement to come to school or a sense of boredom because “it feels complacent” (Student 3).

**Disengagement (Learning and Social)**

The second most prominent theme identified by the seven students in the focus interview group were social and learning disengagement. Four of the seven interviewed students noted social disengagement as a reason for not attending school. Student 3 and 6 stated that extracurricular activities were a major reason why they attended school. However, Student 3 also stated “I hate coming here every single day.” Another theme found within social disengagement was the lack of school pride in the majority of school events. Many of the students identified that school spirit initiatives like pep rallies and spirit week would increase their attendance because they want activities that are fun and not an everyday occasion.

Learning disengagement was the only other theme that all seven students identified as a reason for absences. Collectively, the students were verbally upset that the ACT has such a direct connection with defining success and acceptance into a postsecondary school. Instead, the students pondered, at great length, why a senior project, that involved job shadowing in the career field of their choice, could not represent their aspirations for postsecondary success over their GPA and ACT scores. Two students noted that teachers give too much work, while the remaining majority stated that the content being taught and learned in classes does not correlate to content necessary for adulthood. Specifically, Student 2 stated that “every teacher gives you so much work,” and Student 4 explained school as “…repeating the same day over and over again. And it’s just, it gets old and it gets boring.” Other students asked rhetorical questions regarding basic life skills and why they are not taught. These included how to change a tire, balance a
checkbook, and complete their federal tax return. Several scenarios were mentioned how the students go through the same motions each day, and they look for something different, new, and exciting instead of the typical “Get on your computers; your stuff’s online” (Student 6). From the fifty-one-minute interview, it can be understood that these seven students do not attend or have not historically attended school because they feel that the instruction provided is not worthwhile, engaging, or applicable to the adult world that awaits them in three short months or that they are already a part of the adult world due to socio-economic issues. If students are already working during the week to make money and pay bills, they already partially reside in the adult world without the supports or education to support their workforce needs.

**Themes Not Identified in the Focus Interview**

Out of the nine themes found within the literature review, binge drinking, substance abuse, and zero tolerance and delinquent behaviors were not mentioned during the focus interview group.

**New Themes Found in the Focus Interview**

Once the focus interview group was completed and the audiotape was transcribed and analyzed, there were two new themes identified within the dialogue that were not found to be within the literature review. Student dialogue revealed the themes of administrator influence and the 1:1 learning environment. These are most noted as students independently brought these categories up through their conversation. After discussing a teacher’s influence and concern for student attendance, Student 6 asked “so when are we going to talk about the administration?” The conversation about administration did not occur until roughly ten minutes later, but it was clear that the students perceived the administration and their actions to have a negative effect on
the students’ attendance. Secondly, the 1:1 classroom environment was brought up by Student 1 when he asked, “Why would I come to school if it’s online?” He furthered the rhetorical question by providing a very simple response of, “all the work is online; you can literally look it up on Google.” While these statements can be linked to academic disengagement, it should be noted that the 1:1 environment and its effect on attendance should be researched further as several students made comments regarding how the 1:1 environment has provided them with an opportunity to miss school since their independent work is provided online via Google Classroom.

**Qualitative Summary**

In summary, the focus interview group session with the seven chronically absent students provided dialogue to further inform the analysis of the quantitative data. Out of the nine themes found within Chapter II: Review of Related Literature, six themes appeared within the student focus interview group. These six themes included physical ailments, socio-economic status, bullying (physical and electronic), parental influence, teacher influence, and social and learning disengagement. These six themes confirmed the literature review. Out of the seven interviewed students, each student made comments that had their dialogue and reasons for chronic absenteeism to include four categories or more. Furthermore, each theme, found within the focus interview group, had at a minimum of three or more students who have faced that category that has affected their chronic absenteeism. The three themes not found within the dialogue included binge drinking, substance abuse, and zero tolerance and delinquent behaviors. New themes that were not identified within the literature review included administrator influence and the 1:1 learning environment.
Summary

In order to appropriately answer both research questions, a quantitative study was conducted, and a qualitative focus interview session followed the statistical analysis to help further the findings of the quantitative study. For Research Question 1, the null hypothesis can be rejected as the p-value for best ACT scores was 0.048 (p<.05), and the p-value for student GPAs was 0.001 and less than .01 (p<.01). Both the ACT scores and GPAs also met the 90% confidence standard when analyzing the p-value of the two-tailed test with the p-value being less than .01 (p<.01) The sample size z-scores were also placed into QQ plots to determine the standard deviation. As the standard deviation was within two standard deviations for almost each figure, it can be determined that the stratified, random proportional sampling did not have any significant outliers that skewed the data. While Research Question 1 had a rejected hypothesis, Research Question 2 did not have the same statistical outcome. The p-value for Research Question 2 was 0.181 and greater than .05 (p>.05). Therefore, the null hypothesis must be accepted. This means that the best cumulative ACT scores and GPA values of non-chronically absent students for the 2017-2018 school year were statistically significant when compared to the best ACT scores and GPA values of the chronically absent students for the 2017-2018 academic year. While this statistical significance was able to be proven for Research Question 1, the second research question could not prove a statistical significance. Due to the previously mentioned p-value being larger than .05, it must be noted that the differences in best ACT scores for the 2017-2018 chronically absent seniors were not statistically significant to the best ACT scores of seniors who were chronically absent for the 2016-2017 and 2017-2018 school years.

Lastly, the qualitative data that was gathered through the focus interview group helped provide a deeper analysis to the quantitative data. When deductively compared to Chapter II:
Review of Related Literature, only six of the nine similar themes appeared between the literature review and the dialogue of the interview session. However, a continuously noted indicator that continued to appear was the need for positive relationships. Positive relationships were the underlying factor that the students continuously discussed throughout the interview. While the power of positive relationships is a larger theme amongst the nine found within the literature review, it must be noted that if educators build positive relationships with students, then they are much more likely to attend school. Chapter V will further explain and interpret the specific results and discuss new areas of research that should be investigated to further the findings of this research study and provide a better understanding of characteristics that lead to chronic absenteeism.
CHAPTER V

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Introduction

The purpose of the quantitative study with an additional support of qualitative data was to investigate how chronic absenteeism affects student achievement as measured by students’ best cumulative ACT score and GPAs. The quantitative study examined if there was a statistical significance between chronic absenteeism, best ACT scores, and GPA. The study also examined a second research question to determine if chronic absenteeism of consecutive academic years (2016-2017 and 2017-2018) or just one academic year (2017-2018) had a statistical significance on student achievement based on the students’ best ACT scores. Once these statistical tests were analyzed, a focus interview group occurred with seven chronically absent, eighteen-year-old students who agreed to participate in the study. This further informed the analysis of the qualitative data. This dialogue was deductively coded using the nine factors found throughout Chapter II: Review of Related Literature. Six of the nine themes were identified throughout the interview dialogue and were used to confirm the literature review. To investigate the quantitative portions of this study, the following research questions were analyzed:
Research Question 1: Is there a significant difference between ACT scores/GPA of non-chronically absent students and ACT scores/GPA of chronically absent students?

Research Question 2: Is there a significant difference between the ACT scores of students who are chronically absent for two consecutive years and those that are chronically absent one year and not chronically absent for two consecutive years?

Focus Interview Group: To further advance the quantitative research analysis, a focus interview group was brought together to discuss reasons for their chronic absences during the 2018-2019 school year. Throughout the fifty-one minutes of audio, the interview guide (Appendix A) helped facilitate the student discussion.

**Discussion of Findings**

**Research Question 1**

Is there a significant difference between ACT scores/GPA of non-chronically absent students and ACT scores/GPA of chronically absent students?

In answering Research Question 1, stratified proportional sampling was implemented to be comparative with the school’s overall chronic absenteeism rate. Due to this, the same size for chronically absent students consisted of twenty-eight (n=28) randomly chosen students, and the seventy-two non-chronically absent students were randomly chosen to reach the one hundred student sample size. In both instances, the ANOVA and t-test data determined that the comparison between chronically absent and non-chronically absent students best cumulative ACT and GPAs were statistically significant for both the one and two-tailed t-tests. This significance was noted at the one-tail t-test with the p-value being less than .05 (p<.05) and with
the two-tail t-test with the p-value being less than .10 (p<.10). More specifically, the ACT p-value for the one-tail t-test was 0.048, and the ACT p-value for the two-tail t-test was 0.096.

Secondly, the GPAs of the chronically and non-chronically absent sample students was statistically significant. For the one-tail t-test the p-value was 0.001 which meets the standard of 99% confidence. Furthermore, the two-tail t-test provided a p-value of 0.003 which also meets the standard of 99% confidence. To ensure that there were not any significant outliers within the random sample sizes, QQ plots were constructed and illustrated that the four subgroups, chronically absent ACT scores (n=28), non-chronically absent ACT scores (n=72), chronically absent GPA scores (n=28), and non-chronically absent GPA scores (n=72) had an overwhelming amount of samples that fell within two standard deviations, so the sample groups fall within an acceptable standard deviation range and accurately represent the larger population. In conclusion, the p-values of both the best cumulative ACT scores and GPAs meet the necessary requirements to reject the null hypothesis. Therefore, there is a statistical significance between ACT scores and GPAs of chronically and non-chronically absent students.

**Research Question 2**

Is there a significant difference between the ACT scores of students who are chronically absent for two consecutive years and those that are chronically absent one year and not chronically absent for two consecutive years?

Due to the nature of the research question, the sampling procedures used for Research Question 1 could not be duplicated in Research Question 2. Each sample that met the qualifications for Research Question 2 was used to create groups of fourteen (n=14) for chronically absent students of the 2016-2017 and 2017-2018 school years and nineteen (n=19)
chronically absent students for only the 2017-2018 school year. A t-test determined that the best cumulative ACT scores of chronically absent students for only the 2017-2018 school year was not statistically significant when compared to chronically absent students of two consecutive school years (2016-2017 and 2017-2018). Due to the one-tail p-value being greater than .05 (p>.05), the null hypothesis must be accepted. Therefore, chronic absenteeism does have an effect when compared to chronically and non-chronically absent students, but there is no statistical significance between the students’ ACT scores if they were chronically absent for one or two consecutive academic years.

**Qualitative Findings**

Of the seven students who were interviewed, six of the seven students were chronically absent for the 2017-2018 school year, and four of those six were chronically absent for the 2016-2017 and 2017-2018 school years. The group’s best cumulative ACT score average was 15.57, and the group’s GPA average was 2.74. The students agreed and signed the informed consent form (Appendix C) and were interviewed using the focus interview guide (Appendix A) on February 1, 2019. It is also worth mentioning that the participants were comfortable and open about discussing reasons that affect their attendance. After transcribing the fifty-one minutes of dialogue from the seven participating students, the focus interview group’s responses were deductively coded to compare the focus interview group findings with previous research found within Chapter II: Review of Related Literature. By deductively coding the dialogue with the findings of the literature review, six themes were identified and helped confirm the findings within the literature review. The six themes identified through deductively coding the dialogue were physical ailments, socio-economic status, bullying (physical and electronic), parental influence, teacher influence, and disengagement (learning and social). The dialogue provided six
identifiable themes; however, a large portion of the conversation revolved around the overarching effect that positive student-teacher relationships could have in helping increase the attendance rates of chronically absent students. While six of the nine themes within the literature review were found and identified through deductively coding the dialogue, the three themes of zero tolerance or delinquent behaviors, substance abuse, and binge drinking were not noted by any of the seven focus interview group students.

These themes not being seen within the data is understandable due to the focus interview group structure. Zero tolerance or delinquent behaviors were both unlikely to be identified within the seven participants’ dialogue as the ex-post facto data did not note any suspension days for any of the interviewed students except for one student who transferred to the high school during the 2019 spring semester. The transfer student, whose attendance records noted delinquent behaviors at his prior high school, had not been suspended since he had transferred to his new school setting. Secondly, the interview session did not provide evidence of substance abuse or binge drinking as this is likely due to a teacher being present during the interview process. With an authoritative figure in the room, students are not likely to discuss illegal behaviors as they may feel that the teacher may report them to administration and seek punishment. Due to this simplistic understanding, it is likely that if a student did struggle with one of these unidentifiable themes, then he would not share those inappropriate behaviors in that specific social setting.

**Limitations and Delimitations**

Within the research study, there are four delimitations or boundaries found within the study that limit the results, and four limitations that place a hindrance on the study’s methodology and outcomes.
Delimitations

There are four specific delimitations found within the study that revolve around data choice. The first is that the best cumulative ACT score was analyzed. To eliminate this delimitation, each subtest of the ACT (reading, math, English, and science) should also be used to further identify if there is a specific subtest that is affected more by chronic absenteeism when compared to the other three subtests. The other three delimitations revolve around the focus interview group. At the beginning of the study, there were thirteen, eighteen-year-old students who were identified as meeting Tennessee’s chronic absenteeism definition. Eleven of these thirteen students agreed and signed the consent form to participate in the study (Appendix C). However, when the focus interview group occurred, only seven of the eleven students were present on the day of February 1, 2019. This met the study’s requirements as a minimum of six students were required. While this criterion was met, attempting to interview the other five remaining students may have furthered the quantitative analysis further. If the other five had been interviewed, there may have been more of the Chapter II: Review of the Related Literature themes, pertaining to chronic absenteeism, mentioned within the dialogue.

A third delimitation includes how a focus interview group of seven students allowed three to four students to take control of the conversation. The possibility of having two separate groups of the same seven students may have brought about more specific dialogue and provided the individual students more openness to further their explanations without another peer interrupting. The fourth and final delimitation involves the focus interview group methodology itself. While seven chronically absent students were interviewed, a second interview did not occur with any non-chronically absent students used within the quantitative sample group. Implementing this second interview may have provided identifiable themes for why students do
come to school. If these two separate interview groups would have occurred, it would have been likely that the non-chronically absent students could have identified inverse reasons for regular attendance to that of the chronically absent students.

**Limitations**

While the delimitations were chosen for this research study, there were also several limitations. These limitations are overwhelmingly tied to data access. The first limitation is that only one grade level from the high school was compared from within the school district. Therefore, school to school comparisons are limited due to the data access given for the study. Secondly, the study was only limited to one school district within Tennessee. This is a limitation as large generalizations are not accepted based on the one population and small sample size. Furthermore, the third limitation dealt with sample size. Based on the nature of the sample size and sampling procedures of stratified proportional sampling, the sample size was not as large as possible. More specifically and due to the nature of the research questions, larger sample sizes for chronically absent students cannot be created. If chronic absenteeism was not an identified problem within the high school, then the research study would have involved another student population from another school. With a chronically absent, random sampling size of twenty-eight for Research Question 1, and sample sizes of fourteen and nineteen for Research Question 2, the generalizations that can be made about chronic absenteeism and its affect on student achievement becomes somewhat limited. Lastly, the qualitative focus group was a limitation as it only provided dialogue for only one high school from one school district and not various settings. While six of the nine literature review themes were found within this focus interview group, the possibility of using students from various school settings who meet the chronic absenteeism definition could have strengthened or broadened the qualitative findings. However,
due to the nature of the study and the limited accessibility to other school populations, the seven interviewed students and their dialogue was enough to further inform the analysis of the quantitative data.

**Implications for Practice**

As previously noted, GPA and ACT scores are affected by attendance. Due to this understanding, schools should work towards identifying the themes that increase and decrease absenteeism among their students. Positive relationships with students by all school personnel should be at the core of this investigative research and intervention implementation. As illustrated by the focus interview group, when students can freely speak about their troubles that affect attendance, they become very honest. In order to have all students speak up about their attendance, school faculty and staff should work diligently to create positive faculty and staff-student relationships. If these relationships are not established, then it may be very difficult to accurately identify reasons for chronic absenteeism. Therefore, an accurate and attainable intervention that meets the students’ needs is completely reliant on building positive relationships where students are not afraid to express themselves in a productive manner.

**Recommendations for Future Research**

Given the statistical significance found for Research Question 1 and the effect of chronic absenteeism on GPA and best cumulative ACT scores, further research should be conducted to further explain this significance. More specifically, the ACT subtests could be researched to determine if a statistical significance is found or more noticeable in one subtest when compared to the other subtests. Analyzing the quantitative significance of the ACT subtests of Reading,
Math, English, and Science could provide a more detailed analysis of which achievement measure is more positively or negatively influenced by students with chronic absenteeism.

As discussed earlier within the delimitations and limitations of the research study, there are several recommendations regarding the qualitative methodology. Two very specific and new outcomes of the focus interview group were the effects of the 1:1 learning environment and the influence of administration on student attendance. Finding similar schools with and without 1:1 technology would likely be difficult, but it could be possible to determine if the 1:1 learning environment truly affects attendance rates. Comparing the attendance rates of each student that attends a 1:1 school with students of a non-1:1 school of similar characteristics and students might provide further insight on student attendance, teacher influence, and student engagement. Lastly, the literature review did not note or find any previous research studies involving the effects of administrator influence. However, this was a theme identified within the focus interview group’s dialogue. Within the interview setting, Student 6 specifically asked when the group would discuss the administration. After that point, several students discussed how the administration has struggled to build relationships with these seven students and any conversation among the two groups was typically negative. Due to these qualitative findings, further research should be conducted to determine if administrator influence affects chronic absenteeism rates.

**Conclusion**

The purpose of this quantitative study with a qualitative portion (to inform the analysis of the quantitative data) was to examine how or if chronic absenteeism may negatively affect students’ best cumulative ACTs and GPAs. Research Question 1 provided a statistically significant p-value of less than .05 (p<.05) between chronically absent students’ best cumulative
ACT and GPA to that of non-chronically absent students’ best cumulative ACT and GPA. Therefore, the null hypothesis can be rejected entirely, and it can be noted that the data provided enough statistical significance to suggest that chronic absenteeism negatively affects one’s ACT score and GPA. However, Research Question 2 did not provide the same statistical significance. The p-value between chronically absent students’ ACT for one year and chronically absent students for two consecutive years (2016-2017 and 2017-2018) was greater than .05 (p>.05) at both the one-tail t-test and the two-tail t-test. Due to this statistical analysis, the null hypothesis must be accepted. Therefore, there is not enough of a statistical significance that the conclusion must be made that being chronically absent does affect GPA scores but not when comparing chronically absent students for one year to chronically absent students for two consecutive years.

While the study was quantitative, there was also a qualitative piece that helped analyze the statistical tests. A focus interview group was recorded and analyzed based on the dialogue of seven chronically absent eighteen-year-old students. After the fifty-one minutes of audio were transcribed, deductive coding was used to identify themes within the dialogue to themes found within the literature review. From this deductive coding, six literature review themes were identified in the dialogue. These six themes were physical ailments, socio-economic status, bullying (physical and electronic), parental influence, teacher influence, and disengagement (learning and social). Furthermore, two new themes were found within the dialogue. The effect of the 1:1 learning environment and the influence of administrators should be researched further to see if the same themes can be found within future qualitative studies. A larger theme identified throughout the dialogue was positive student-teacher relationships. Over and over again, students related their chronic absenteeism to relationships. Due to this importance, educators should work
to ensure every student feels welcome and comfortable so that potentially this theme may not occur again if the study was repeated.

In high schools within the tri-state area, educators can use these results to emphasize the importance of attendance and how it can negatively affect two major college entrance requirements, a student’s ACT score and GPA. If a high school looks to provide interventions to students similar to this sample size, then the faculty should be quick to analyze the importance of student-teacher relationships. As exemplified by the focus interview group, students are usually willing to explain their problems if they feel comfortable enough with the person and if their reasons will not be held against them, so educators should genuinely and straightforwardly ask. While some of the chronic absenteeism themes cannot be changed by administrators, faculty, and staff, these stakeholders focus on what is controllable: positive relationships.
References


http://doi.org/10.5281/zenodo.376841


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Appendices
Appendix A

Student Focused Interview Guide
Student Focused Interview Guide

1.) How many days do you think you missed during the 1st semester of this school year (18-19 school year)?

2.) In which grade did you begin missing lots of days of school?

3.) Why did you start missing school during that time?

4.) When you think about this school year, what are the reasons that you miss school?

5.) What does your family think about your attendance?

6.) Do your teachers care about you and your attendance?

7.) Is there a link between your attendance and your grades? If so, how?

8.) What could the school do to help improve your attendance?
Appendix B

District Permission to Conduct Research
December 7, 2018
Mr. Matthew Smith,

We are pleased to inform you that your request for data from Hamilton County Department of Education has been approved by the Research Approval Committee.

The research division of the Accountability and Research team will begin work on the data you have requested, taking into account the requested due date listed on your application, and will reach out to you through email once the request has been completed.

If you have any specific questions, please reach out to Gayle Patterson (Patterson_G@hcde.org) with any questions and she can direct you to the most appropriate contact within our office.

We look forward to receiving a final copy of your findings, sent by email to Gayle Patterson, once your work is complete.

Sincerely,

[Signature]
Appendix C

Student Informed Consent Form
Student Informed Consent Form

Title of Study: Chronic Absenteeism and Its Effect on Student’s Grade Point Average and ACT Scores

Principal Investigator:
Matthew Smith
Carson-Newman University
Email: mgsmith@cn.edu, matthewgsmth@gmail.com

You are being asked to take part in a research study. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. Please read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information.

Information and Purpose: The purpose of this study is to determine whether chronic absenteeism (17 days or more per school year) affects student ACT and GPA scores. Furthermore, chronically absent students will be interviewed to determine the factors that have influenced their attendance to see if these match up with the previously completed research studies.

Your Participation in Study Procedures: Your participation in this study will consist of one focused group interview. Your participation is strictly voluntary. There is no penalty for discontinuing participation.

Participants will complete:

1. Focus group interview

The duration of the interviews will be completed over a two-week period. Audio taping will be used throughout the research. These recordings will be kept confidential. Each participant will be given a pseudonym for the duration of the research. All recorded material will be kept secure and private.

Benefits and Risks: There will be no direct benefit to you for your participation in this study. However, the benefit of your participation is to contribute to helping Hamilton County Schools and Red Bank High School determine factors relating to chronic absenteeism and how those factors effect ACT and GPA scores. There are also no risks associated with this study as your name will not be associated with your response. If necessary, I will refer to you as student 1, student 2, student 3, student 4, student 5, student 6, student 7, or student 8.
Confidentiality: Your responses on the participation student survey will be anonymous. Every effort will be made by the researcher to preserve your confidentiality including the following:

- Assigning code names/pseudonyms for participants that will be used on all research notes and documents.
- Keeping notes, interview transcriptions, and any other identifying participant information in a locked file cabinet in the personal possession of the researcher.

Participant data will be kept confidential except in cases where the researcher is legally obligated to report specific incidents. The researcher will not share your individual responses with anyone other than the research supervisor.

If you have any questions or concerns, please contact Matthew Smith, mgsmith@cn.edu or his dissertation supervisor, Dr. Dean at bdean@cn.edu.

Subject’s Understanding

- I agree to participate in this study that I understand will be submitted in partial fulfillment of the requirements for the Doctor of Education degree in Educational Leadership at Carson-Newman University.
- I understand that my participation is voluntary.
- I understand that all data collected will be limited to this use or other research-related usage as authorized by the Carson-Newman University.
- I understand that I will not be identified by name in the final product.
- I am aware that all records will be kept confidential in the secure possession of the researcher.
- I acknowledge that the contact information of the researcher and her advisor have been made available to me along with a duplicate copy of this consent form.
- I understand that the data I will provide are not be used to evaluate my performance in my classes.
- I understand that I may withdraw from the study at any time with no adverse repercussions.

By signing below, I acknowledge that I have read and understand the above information. I am aware that I can discontinue my participation in the study at any time.

Signature__________________________________________________________

Date______________________________