AN ABSTRACT OF THE DISSERTATION OF

Deanna N. Valdez for the degree of Doctor of Philosophy in Counseling presented on February 28, 2019.

Title: Addressing Truancy and Dropout: An Assessment of a Case-Management Intervention

Abstract approved: _____

Gene A. Eakin

Truancy and dropout are two issues plaguing school districts across the nation. The short- and long-term consequences of both problems are complex and far reaching, affecting students, families, and communities. Once thought of as a problem at the secondary level only, truancy and absenteeism are increasing at the elementary school level, as well. Truants and dropouts experience trouble and struggles in the legal, social, and economic aspects of their lives. In the time of short budgets and a lack of resources, school districts and policy makers struggle to find solutions that are effective, easy to implement, economical, and directed to the elementary school-age population. Though there are many programs, initiatives, and approaches to address the issues, there has been little research conducted to evaluate their efficacy. The present studies involved an evaluation of a case-management intervention utilizing a within-subjects Analysis of Variance (ANOVA) and a time-series design analysis, one at the elementary school level and one at the secondary school level. The results of both tests showed that the intervention had no impact on attendance at the individual student level or at the whole-school level at either the elementary school level or secondary level. The short time frame of implementation and large caseloads for the coaches in addition to inadequate data collection and record keeping may have contributed to these results. Thus, continued implementation of the intervention with smaller

caseloads for the coaches and more sophisticated record keeping could result in the intervention showing positive results.

Keywords: truancy, dropout, intervention, attendance, absenteeism

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Addressing Truancy and Dropout: An Assessment of a Case-Management Intervention

by
Deanna N. Valdez

A DISSERTATION

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degree of

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APPROVED:

Major Professor, representing Counseling

Dean of the College of Education

Dean of the Graduate School

I understand that my dissertation will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my dissertation to any reader upon request.

Deanna N. Valdez, Author

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CONTRIBUTION OF AUTHORS

Dr. Gene Eakin contributed by providing ongoing formatting, revising, and editing. Dr. Cass Dykeman contributed by providing formatting, revising, and editing. J.J. DeSimone contributed by providing statistical analysis. Kaci Schmitt provided editing to the final dissertation document.

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Dissertation Overview

The purpose of this doctoral study is to demonstrate scholarly work by using the manuscript-style dissertation format as outlined by the Oregon State University Graduate School. In chapter one, the author provided an overview of how the two journal-formatted manuscripts found in chapters two and three are thematically connected. Chapter two is a manuscript entitled "Addressing Truancy and Dropout: An Assessment of a Case-Management Intervention in Elementary School" examining the outcomes of a school-based multifaceted intervention utilizing an adult advocacy, case-management approach to addressing truancy and ultimately dropout in a school district in the Southwest United States. Chapter three is an article entitled "Truancy and Addressing Truancy and Dropout: An Assessment of a Case-Management Intervention at the Secondary Level" investigating the outcomes related to an intervention utilizing school-based coaches as adult advocates to manage and provide support for truant students in a Southwestern school district in the United States. Chapter four presents a brief thematic summary and suggests directions for future research.

The foremost implication is to provide the school district with a program evaluation in order to move forward with program development at a state project level. There are currently several efforts in New Mexico to prevent students from becoming truant and dropping out, including the state's own early warning system, FosterEd's demonstration site in Lea County, and Carlsbad Municipal Schools' (CMS) community outreach and truancy prevention partnerships. In addition, New Mexico's Public Education Department offers funding for the support of truancy and dropout prevention coaches in eligible school districts and charter schools. In the 2016–2017 school year, 31 school districts were awarded funding and

participated in the initiative. The district being studied was one of those districts. Thus, the author and author's advisor entered into an agreement and were approved to receive data from the Belen Consolidated Schools school district to conduct this study to assess the efficacy of the truancy and dropout prevention coaches intervention.

Thematic Introduction

In these manuscripts, the author examines the importance of attendance in students' academic success, the landscape of the truancy and dropout problem across the United States, the link between truancy and dropout rates, and truancy and dropout interventions at the primary and secondary school levels. In an era of increased accountability for states, districts, and schools, the link between students' attendance and academic performance is being examined more than ever. By definition, a student is "absent" if he or she is "not physically present on school grounds and is not participating in instruction or instruction-related activities at an approved off-grounds location," and while teacher efficacy is the leading determinant of student success, student absences diminish even the best teacher's ability to provide effective learning opportunities (National Forum on Education Statistics, 2009). Students need to be in school to be successful in school. Standardized test scores and graduation are dependent on attendance. Achievement, especially in math, is very sensitive to attendance (National Forum on Education Statistics, 2009).

The current national trends in attendance and truancy are dismal. The U.S. Department of Education (2016) reported that thousands of students are truant each day. More specifically, approximately 5 to 7.5 million children miss at least one month of school each school year in the United States (Chang & Davis, 2015). Even more alarming, The National Center of Education Statistics (2016) reported that 19% of fourth graders and 20% of eighth graders missed at least

three school days in the past month. On average, 7% of fourth and sixth graders missed at least five school days per month. The outcomes of problematic absenteeism are two-fold with internalizing problems, such as anxiety and depression, and externalizing problems, such as disruptive behavior and poor academic achievement outcomes, including dropout rates (Kearny, 2008). In exploring the literature on truancy and prevention programs, the researcher identified four areas of interest: 1.) absenteeism and truancy, 2.) the distinction between truancy and chronic absenteeism, 3.) the link between truancy and dropout rates, and 4.) the truancy landscape in New Mexico.

Absenteeism and Truancy

Though there is a lack of continuity in definitions and terms regarding attendance, truancy is generally defined by each state as a specified number of unexcused absences from school over a specific length of time (Sutphen, Ford, & Flaherty, 2010). Reasons that students miss school vary but fall into three main categories: students cannot attend school, students will not attend school, and students do not attend school (Balfanz & Byrnes, 2012). Those who cannot attend school are prohibited from attending due to specific situations, such as illness, family responsibilities, instability in housing, the need to work, or matters with the law. Those who will not attend school avoid school due to bullying, harassment, or otherwise unsafe conditions. Finally, those who do not attend school do not because either they or their parents do not see value in being there, or they may see greater value in being somewhere other than school (Balfanz & Byrnes, 2012). Whether students miss school because they cannot attend, will not attend, or do not attend, the outcomes are the same for all, and they are outcomes that have negative effects in the short and long term. Because regular school attendance provides opportunities for development in academic, language, social, and work-related skills, regular

absenteeism can have detrimental effects in these areas, among others (Kearney & Graczyk, 2014). School attendance is the most fundamental necessity for academic and social success, yet school absenteeism and truancy have both been issues in the United States since compulsory education began in the late 19th century (Sutphen et al., 2010). Over time, educators, legal officials, and all stakeholders working to address school absenteeism and truancy have come to understand that most student absences are caused by more than simple laziness of either the parent or student. And schools themselves may exacerbate the problem inadvertently with rules, instructional strategies, teaching methods, and overall pedagogical practices that marginalize students, rather than engage them (Mueller & Stoddard, 2006). Yet in many school districts across the United States, truancy programs remain sanction oriented and punitive in nature. Resources are used to identify and manage truant youth back into their respective schools with sanctions and citations (Dembo & Gulledge, 2009). As officials in all arenas are seeing what truancy is and that its root causes are complex and multilayered, they are finding that solutions and approaches to address truancy must also be multilayered, individualized, and appropriate to specific students, families, and communities in order to be effective.

The Distinction Between Truancy and Chronic Absenteeism

Though there is a lack of continuity in the definition of truancy, there is also a misperception of the difference between truancy and chronic absence. Many times, the two terms are used interchangeably, but they are actually two different concepts. First, truancy usually refers to unexcused absences, and while states are required to track and address truancy, they are left to determine what that means. Chronic absenteeism, on the other hand, refers to all absences, including excused absences, unexcused absences, and suspensions. Many argue that this

comprehensive definition helps to address absenteeism in a less punitive but more effective way (Attendance Works, 2018).

The Link Between Truancy and Dropout

The latest report from the National Center for Education Statistics (2016) revealed that the national event dropout rate—that is, the number of 15–24-year olds in grades 10–12 who left school between the beginning of one school year and the beginning of the next without earning a high school diploma or alternative equivalent credential—is 4.7%. While this is cause for concern, even more concerning is the status dropout rate, which is the percentage of all 16–24-year-olds who are not enrolled in a school and do not have a high school credential. This is currently 6.8% of the 16–24-year-old population in the United States.

Addressing the attendance problems plaguing the nation is important in the fight against dropout. Data shows that not only is truancy detrimental to the educational and learning process, but it is many times a precursor to a student dropping out of school altogether. Mac Iver and Mac Iver (2009) claimed that intervening to increase attendance rates in middle school is important because absenteeism prior to a student reaching high school is highly predictive of eventual dropout. Course failure is also predictive of dropout, and course failure itself is linked to attendance.

Truancy Landscape in New Mexico

It is clear that the issue of truancy is a pervasive problem in the United States. It is a problem that, again, has short-term as well as long-term ramifications for students, families, and communities at large. New Mexico is not immune. In a 2013–2014 report, the Office of Civil Rights Data Collection, U.S. Department of Education, Office for Civil Rights reported that the national chronic absence rate was 13% and that New Mexico's rate in particular was 11%. In its

most recent report on habitual truancy, The New Mexico Public Education Department stated that an average of 14.29% students were habitually truant in the 2014–2015 school year.

Rationale

Despite the widespread attention to truancy and the increase in the number and variety of interventions available to address and reduce truancy, it remains a significant problem (Maynard, McCrea, Piggot, & Kelly, 2013). The apparent lack of methodologically sound, empirical studies conducted to determine truancy program effectiveness continues to impede our understanding of how to address the issue (Dembo & Gulledge, 2009). While there is no shortage of descriptive studies and articles describing programs to combat truancy, evidence-based practice is needed to effectively address the problem and to provide support and serve truant students (Sutphen et al., 2010). Though in recent years, policy makers have expressed interest in utilizing evidence-based strategies and programs, there are few rigorous studies evaluating the effects of targeted truancy programs (Klima, Miller, & Nunlist, 2009). Talented and caring individuals have designed creative interventions, but without research evaluations, little can be made of their effectiveness. Furthermore, researchers have employed poor research designs in evaluations that they have conducted thus far, thus making it difficult to prove that the intervention caused the measured outcomes (Klima et al., 2009). There have been a number of reviews that have synthesized knowledge on truancy and interventions to improve attendance, but most of these reviews have been narrative in nature, and the authors of these reviews did not present their findings systematically, thoroughly, and effectively. This makes it difficult to know what works, if anything, to impact truancy, and it also prevents those in charge of policy and budgets from making informed decisions about resources and funding (Maynard et al., 2013).

Research Question

The specific research question of this study was the following: What is the impact of truancy and dropout prevention coaches utilizing the New Mexico case-management approach on student attendance?

Hypothesis

H1: Truancy and dropout prevention coaches decrease truancy.

Ho: Truancy and dropout prevention coaches have no impact on truancy.

Research on the impact of truancy and dropout prevention coaches has not been conducted, nor have evidenced-based practices in addressing truancy and school dropout been established. Chapter two adds to the current body of knowledge by effectively evaluating a multilayered non-punitive approach to truancy at the elementary school level. Chapter three will contribute to the body of knowledge by effectively evaluating a multilayered non-punitive approach to truancy at the secondary school level.

Target Journal for Manuscript #1: *Children and Youth Services Review* is an interdisciplinary forum for critical scholarship regarding service programs for children and youth. It serves as an international multidisciplinary review of the welfare of young people.

Target Journal for Manuscript #2: *The American Educational Research Journal (AERJ*) is the flagship journal of the American Educational Research Association. It features articles that advance the empirical, theoretical, and methodological understanding of education and learning.

Glossary of Terms

Truancy: a specified number of unexcused absences from school over a specific length of time (Sutphen et al., 2010)

Absence: when a student is not physically present on school grounds and is not participating in instruction or instruction-related activities at an approved off-grounds location (National Forum on Education Statistics, 2009)

Dropout: quitting school before graduating

Chronic absenteeism: A constant or habitual nonattendance in school. It incorporates all absences: excused, unexcused, and suspensions (Attendance Works, 2018)

Chapter 2: A Research Manuscript

Addressing Truancy and Dropout: An Assessment of a Case-Management Intervention in Elementary School

Deanna N. Valdez and Gene Eakin

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Abstract

Truancy and dropout are two issues plaguing school districts across the nation. The short- and long-term consequences of both problems are complex and far reaching, affecting students, families, and communities. Once thought of as a problem at the secondary level only, truancy and absenteeism are increasing at the elementary school level. Truants and dropouts experience trouble and struggles in the legal, social, and economic aspects of their lives. In a time of short budgets and a lack of resources, school districts and policy makers struggle to find solutions that are effective, easy to implement, economical, and directed to the elementary school-age population. Though there are many programs, initiatives, and approaches to address the issues, there has been little research conducted to evaluate their efficacy. The present study involved an evaluation of a case-management intervention at the elementary school level utilizing a within-subjects Analysis of Variance (ANOVA) and a time-series design analysis. The results of both tests showed that the intervention had no impact on attendance at the individual student level or at the whole-school level. The short time frame of implementation and large caseloads for the coaches in addition to inadequate data collection and record keeping may have contributed to these results. Thus, continued implementation of the intervention with smaller caseloads for the coaches and more sophisticated record keeping could result in the intervention showing positive results.

Keywords: truancy, dropout, intervention, attendance, absenteeism

Addressing Truancy and Dropout: An Assessment of a Case-Management Intervention in Elementary School

Overview

School absenteeism and truancy are problems that trouble educators, policy makers, and legal officials across the United States. Chang, Russell-Tucker, and Sullivan (2016) reported that approximately 5 to 7.5 million children in the United States miss at least one month of school each year. The U.S. Department of Education and the Office for Civil Rights (2016) released data on chronic absenteeism stating that missing too much school is a national crisis that affects more than 6.5 million students. Although attendance issues are more prevalent at the secondary level, more and more attention is being called to the increase in attendance issues in the primary grades.

A report from the National Center for Children in Poverty (2007) depicted the current landscape of absenteeism in the early grades. On average, children in the United States missed 5 days in kindergarten, 4.5 days in first grade, and 3.7 days in both third and fifth grades. However, almost 14% of kindergartners, 12% of first graders, 11% of third graders, and 10% of fifth graders were at-risk absentees: they missed an average of 12 to 18 days during the school year. Over 11% of kindergartners, almost 9% of first graders, 6% of third graders, and 5% of fifth graders were chronic absentees: they missed 18 days or more of the school year. In total, one-quarter of all kindergarten children were either at-risk or chronic absentees.

The district that the researcher studied fairs no better. It had a district habitual truancy rate of 37.55% for the 2014–2015 school year. This compares to the state rate of 31.4% in the same year. This reflects an increase of 4.17% from the 2013–2014 school year. In regard to

dropout, BCS had a district dropout percentage rate of 4.72% for the 2013–2014 school year. In addition, the district dropout percentage rate was 4% for the 2014–2015 school year.

Connolly and Olson (2012) found that chronic absence in the early grades leads to weaker reading skills, higher retention rates, and lower attendance rates in later grades. One Baltimore study found a strong relationship between 6th grade attendance and the percentage of students graduating on time. When a student has excessive absences in elementary school, he or she has less of a chance to stay on target to graduate on time (Balfanz & Byrnes, 2012). Epstein and Sheldon (2002) found that early absenteeism is an important predictor of dropping out altogether. Chronic absenteeism during the elementary years is not only a significant problem in and of itself but also one that sets the stage for future academic and social difficulties (McCluskey, Bynum, & Patchin, 2004; Webb-Landman, 2012). Intervening in middle school and high school is not early enough to make a difference in high school graduation rates; therefore, it is essential to examine interventions that improved attendance during the elementary school years (McConnell & Kubina, 2014).

Among the younger students, absences are often excused; parents are aware of the absence and call in to excuse it. Absences are oftentimes linked to health factors, learning disabilities, or mental health issues related to trauma in the home or community. Regardless of the reason, absences undermine educational opportunities for students to gain the fundamental and necessary academic and social skills that they need to be successful in their educational endeavors (Chang, Russell-Tucker, & Sullivan, 2016).

Given the increase of the problem and what we know about the ramifications of absenteeism, stakeholders and policy makers are increasingly coming to the table to discuss and find ways to address the issue. At the federal level, the Obama Administration, along with other

entities, including the U.S. Department of Education, implemented an initiative to help eliminate absenteeism at all levels called Every Student, Every Day (U.S. Department of Education, 2015). This initiative calls for states and school districts to better track absences to promote attendance and decrease absenteeism (Gottfried & Kirksey, 2017). Understanding the different types of absenteeism (excused, unexcused, and partial day), the degree of absenteeism (the amount of instructional time lost), and patterns such as class cutting because of bullying or conflicts with teachers can be useful in individualizing service or interventions (Rogers et al., 2017).

The Importance of Attendance

Students need to attend school daily to be successful in school. Achievement in math, standardized test scores, and graduation rates and dropout rates are all very sensitive to attendance. Chronic absenteeism in kindergarten leads to lower academic performance in first grade, and the impact is even greater for low-income families (Balfanz & Byrnes, 2012). Missing school seems to severely impact students' math skills, as fewer numeracy activities to supplement in-school instruction occur at home than literacy activities (Gottfried & Kirksey, 2017). The consequences of absenteeism are not just academic. Students who are absent have fewer opportunities to interact with peers and teachers and to develop bonds to the school itself (Kauh, 2011).

Truancy Problems

Truancy is a legal term that is generally defined by each state as a specified number of unexcused absences from school over a designated period of time (Sutphen et al., 2010). Sometimes labeled as the "kindergarten of crime," truancy is often viewed as the gateway to more deviant behavior, such as delinquency and violence (McCluskey et al., 2004). There is no debate that valuable resources are drained by early absenteeism and that it contributes to

educational deficits, but deeming it unacceptable has yet to happen because young children are not committing a crime by being truant (Kerr et al., 2011).

Absenteeism is associated with a variety of risky behaviors. Students who are absent with or without permission were more likely to engage in behaviors related to unintentional injuries and violence; risky sexual behaviors; and the use of tobacco, alcohol, marijuana, and other drugs (Eaton, Brener, & Kann, 2008). Engaging in these risky health related behaviors can negatively impact a person's overall quality of life, both in the short and long term. Much research has linked truancy to many debilitating problems for students later in life, including unemployment, welfare dependency, low salary, and imprisonment (Lindstadt, 2005).

Link Between Truancy and Dropout

The problem of dropping out of school has received more attention from educators and education researchers than truancy. Although it is technically defined as a single event, dropping out reflects a long process of disengagement from school (Epstein & Sheldon, 2002). There is a direct relationship between truancy and dropout as well as dropout and unemployment, welfare, low salary, and imprisonment (Lindstadt, 2005). When students consistently miss school, it is a sign that they are disengaged and on the path to dropping out, even from the early grades. It is necessary for researchers to examine early-warning indicators such as chronic absenteeism, behavior problems, and course failure at the elementary level (Mac Iver & Mac Iver, 2009). School initiatives to address dropout should provide students with opportunities to interact and connect with adults, participate in school activities, take relevant courses, and receive interventions that address academic and behavioral needs (Wilkins & Bost, 2016).

Types of Interventions

The span of truancy interventions reflects an evolution from one-dimensional, punitive models to multidimensional, court plus community-based service models (Fantuzzo, Grim, & Hazan, 2005). New alternative hybrid models have evolved to emphasize flexible and multidisciplinary approaches (Kearney & Graczyk, 2014). Truancy intervention programs today are typically grouped by setting and include school-based, community-based, and family-based interventions (Dembo & Gulledge, 2009). Other interventions involve community courts and/or court diversion programs (Gandy & Schultz, 2007). Police–school partnerships could also be part of a potential model for reducing truancy beyond the usual approaches (Mazerolle, Antrobus, Bennett, & Eggins, 2017). Even efforts that utilize school-based health centers have shown to have positive effects on attendance (Webber et al., 2003). Attendance improves when schools take comprehensive approaches to having families and communities involved in attendance efforts.

Elementary school officials who want to improve or maintain good attendance will benefit from utilizing a comprehensive approach that includes not only students but educators, parents, and community members (Epstein & Sheldon, 2002). Parental interventions are valued because they involve the parent-to-school linkage (McConnell & Kubina, 2014). Individualizing approaches and strategies and personalizing interactions with students can lead to significantly fewer negative behaviors in students, including truancy (Haight, Chapman, Hendron, Loftis, & Kearney, 2014). Webb-Landman (2012) found also that interventions such as group counseling with elementary students can have positive effects on attendance. Webber et al.'s (2003) findings supported the efficacy of school-based health centers for inner-city elementary students. Medical services for common child illnesses such as asthma are easily monitored and treated on campus

so that children do not have to miss school. Furthermore, utilizing a school nurse to help monitor absences and provide targeted primary and secondary prevention at the elementary level may help achieve the goal of improving students' attendance and by extension student performance (Kerr et al., 2011). Peek (2009) found that at the elementary level, increasing parent and community knowledge of attendance policies through an intervention called the Truancy Arbitration Program improves attendance. Through the implementation of adult volunteer reading partners for elementary students, Volkmann and Bye (2006) showed that involving the community is indeed efficacious. Furthermore, Thomas, Lemieux, Rhodes, and Vlosky (2011) found that combating absenteeism at the elementary school level could be effective by systematically assessing and focusing on psychosocial indicators of truancy and incorporating a family-focused approach along with referrals to needed services.

Interventions addressing school attendance are diverse and fall into different categories, target a variety of risk factors and levels, are implemented in different settings, and are delivered in various modalities; therefore, it seems reasonable for schools and communities to choose an intervention based on the ease of implementation, resources available, and degree of stakeholders' investment in the outcomes (Maynard et al., 2013). Whether an intervention is school based, community based, or court based, there are challenges in providing truancy services. Family mobility makes it difficult to maintain correct contact information. Ineffective communication and cooperation among staff, parents, and community members also lead to a lack of continuum of care, which is a critical limitation of truancy services (Dembo & Gulledge, 2009). In a study released by the Institute of Education Sciences' National Center for Education Evaluation and Regional Assistance and the U.S. Department of Education (2017), the authors explained that communicating with guardians about attendance reduces student absences and can

be a powerful tool for all stakeholders working to address and combat truancy (Institute of Education Sciences, 2017). Having a concrete process with parent knowledge and involvement is critical to decreasing unnecessary student absences (Peek, 2009).

The specific research question of this study was as follows: What is the impact of truancy and dropout prevention coaches utilizing the New Mexico case-management approach on student attendance?

Methodology

Research Design

The elementary truancy and dropout prevention coaches served 115 students during the 2016–17 academic year and served 235 students in the 2017–18 academic year.

1. The district had pre-intervention data and post-intervention data on 46 students for the 2016–17 academic year. The researcher computed a within-subjects ANOVA to determine if the students receiving the intervention had fewer absences post-intervention than they did during the prior year.
2. The district had pre-intervention data and post-intervention data on 42 students collected at the end of the second semester for the 2017–2018 academic year. The researcher computed a within-subjects ANOVA to determine if the students receiving the intervention had fewer absences than they did during the prior year.
3. The researcher also used a time-series analysis, a design characteristic of multiple observations over time. In an interrupted time-series design, the intervention is administered at some point in the observation sequence. Thus, the researcher will make observations before and after treatment, and if the treatment has an effect, there will be a difference in the observations. This type of design can be especially useful in determining

the efficacy of new and innovative programs (Heppner, Wampold, & Kivlighan, 2008). The district had average attendance percentages for each school at 40-, 80-, and 120-day counts for the 2014–2015, 2015–2016, 2016–2017, and 2017–2018 school years. These observation points included before and after treatment, which made a time-series analysis appropriate to use to determine the efficacy of the truancy and dropout prevention coaches intervention.

School District Information

The district being studied is a small school district in the Southwest United States serving approximately 4,000 students with the following demographics: 61% Hispanic, 24% Caucasian, 10% American Indian, and 5% Other. The school district encompasses two high schools, one middle school, one K–8 school, and seven elementary schools. Additional key demographic information includes the following: 74% of students are considered economically disadvantaged, as determined by eligibility for the free and reduced lunch program; 14% are English language learners; and 16% are students with disabilities (this does not include students who are in the gifted program). State and federal law mandates districts to be given a letter grade to hold districts accountable. The school district's grade is currently a C.

Intervention

On March 14, 2016, the New Mexico Public Education Department released a request for applications (RFA) for funding to provide truancy and dropout prevention coaches in schools. The National Center for School Engagement (NCSE) provided the training for the coaches through the state's public education department. Coaches received two two-day trainings. The trainings included informational sessions on relevant topics, lessons learned, and a look at

successful, established programs. NCSE also provided guest speakers, networking sessions, and a look at current, relevant research.

It is vital that comprehensive community- and school-based strategies be set in place to overcome the barriers to school attendance faced by students of all ages and in all communities. Therefore, the purpose of the truancy and dropout prevention coaches program is to establish a cohort of truancy and dropout prevention coaches placed in elementary, middle, and high schools across the state whose role is to work with students, families, communities, schools, and districts to improve attendance for habitually truant students, as well as to decrease the number of students who drop out of school.

The truancy and dropout prevention coaches intervention began at the elementary school level in the 2016–2017 school year. Three coaches were hired and assigned to seven elementary schools. Individuals selected to serve as coaches for the intervention had to meet specific qualifications and criteria, including holding a current state-level social work, counseling, or teaching license; having a minimum of a bachelor's degree in education, social work, counseling, criminal justice, or a related field; and being fluent in English and Spanish. In addition, the individual had to demonstrate responsibility for utilizing multiple student data sources to obtain an accurate number of students who drop out and those at risk of doing so, as well as implement research-based strategies to address the diverse needs of students at risk of dropping out or who were identified as truant.

The essential duties and responsibilities of the individuals assigned to the position were varied, and the coaches provided both direct and indirect services to students. Actual duties and responsibilities varied depending on outside factors but included exemplifying the six components of effective truancy and dropout reduction programs outlined in the Truancy

Reduction, Research, Policy and Practice resource guide: gathering, analyzing, and synthesizing data; making data-related recommendations; and leading parent meetings and conferences to address student attendance or other related issues.

The focus of the direct work and services with students was also varied and contingent on individual needs and circumstances. Relationship building was the foundation and key to the process. Once the coaches were able to build trust and rapport with students, they would initiate interventions, including meeting one-on-one with students, setting and monitoring short-term goals, making appropriate referrals for services and resources, and communicating with parents/guardians.

Procedures

The school district collected data in two ways. First, the school district obtained demographic and attendance data utilizing PowerSchool, a student information system, for the 2016–2017 school year and the first semester of the 2017–2018 school year. In addition, each of the program coaches also kept a program service log. All the coaches logged information and services for each student on their caseload for the 2016–2017 school year and for the first semester of the 2017–2018 school year.

Data Analysis

The research question can be addressed by looking at individual students' performances and school-level data. Thus, the researcher conducted a series of statistical tests in order to assess the research question from as many perspectives as possible. Focusing first on the individual student data, the researcher conducted a within-subjects one-way ANOVA test. This test allowed the researcher to determine if the intervention program was successful in decreasing the truancy rate across time (pre-intervention, post-intervention 1, post-intervention 2). Unfortunately, issues

associated with quasi-experimental studies across time are participant fallout (due to the family moving or a host of other factors) and incomplete data collection. Because several students lack data for post-intervention at time 2, the researcher also conducted a linear mixed-model test. This test estimates missing data values, allowing for comparisons across time using more of the dataset, increasing the chances of detecting a smaller effect size.

Continuing to the school-level component of the research, the research question can be addressed via an analysis of school-level data. To determine whether the intervention had any effect on school truancy rates across time, the researcher conducted a linear time-series analysis. This allowed the researcher to determine whether the intervention was effective at the school level, as well as for the researcher to conduct forecasting values to determine the staying power of the intervention in the future.

Returning to the student data analyses, the researcher conducted a power analysis to determine if the dataset collected for this dissertation included enough observations to observe an effect. Based on a meta-analysis of effect sizes in education research (Fisher, Frey, & Hattie, 2016), the average effect size captured by studies looking at the efficacy of an intervention was large (Cohen's d = 1.07). To be safe, this research attempted to capture a medium effect size. G*Power is a free statistical tool that allows researchers to determine the sample size necessary to detect effect sizes of different magnitudes. This research utilized the standard input parameters associated with this type of study.

1) A medium effect size or larger is desired (effect size f = .25).
2) The alpha value of .05 was utilized.
3) A power value of .8 was utilized.
4) There was only one group in the study.

5) Enough data existed for three repetitions to be compared.
6) It was assumed that a relative correlation value of .5 existed among the repeated measure.

Based on these input parameters and assumptions, data from 28 students was needed. The dataset included 42 students. Thus, enough data was present in order to conduct the within-subjects one-way ANOVA test. Again, the researcher also conducted a linear mixed-model test to utilize the entire dataset (N = 46).

Of course, there are assumptions associated with the three tests that the researcher employed. For the repeated-measures ANOVA, there are five assumptions that ought to be considered. First, the dependent variable should be continuous. The dependent variable used in this research is the truancy rate, which is inherently a continuous variable. The second assumption is that subjects must have more than one score across time. The dataset used for this research had three observations. The third assumption is that significant outlier data points are not present, as they could skew the analysis. Before conducting this analysis, the researcher generated a box plot in the statistical software, Statistical Package for the Social Sciences (SPSS), with the interquartile range. Any values that fell significantly outside the interquartile range were removed from the analysis. The fourth assumption is that the dependent variable will be approximately or somewhat normally distributed. Before conducting the analysis, the researcher conducted a Shapiro-Wilk test of normality to verify a normal distribution. The ANOVA test is quite robust to normality violations, so if the dependent variable is somewhat normal, the conclusions from the test should be sound. Finally, the ANOVA assumes sphericity among the groups. To test this, the researcher conducted Mauchly's test for sphericity. The researcher used the F statistic p-value from the Greenhouse-Geisser correction.

Because the within-subjects ANOVA test is inherently conservative, as it removes cases when just one observation is missing, it may be prudent to conduct a test that is inclusive of the entire dataset regardless of missing observations. The linear mixed model includes the entire dataset regardless of missing observations. Like the ANOVA, there are assumptions associated with the linear mixed model that should be considered and tested. First, it is assumed that the predictor variable is linearly associated with the outcome variable. To test that this assumption is satisfied, the residuals were plotted against the predictor variable; assuming there is no pattern with the plot, the assumption of linearity is satisfied. Next, the linear mixed-model test assumes that the errors have constant variance. To check for this, the residuals were plotted in sequence; a noticeable trend indicated an autocorrelation. Third, it is assumed that the errors are independent of one another. One can plot the residuals against the predicted fitted values to determine that there is non-constant error variance. If the residuals fan out in the plot as the estimated values increase, it may be prudent to transform the data. Finally, the linear mixed model assumes that the residuals are normally distributed. Like the ANOVA assumption of normality, a Shapiro-Wilk test of normality tested this assumption on the produced residuals.

Finally, the data was analyzed in aggregate at the school level to fit a time-series model for the purpose of forecasting. A time-series model is simply an extrapolation of a linear regression test, but it is modified to apply to data that are correlated with one another because they occur in a sequence across time; these instances are referred to as shocks.

According to Tabachnick and Fidell (2012), an appropriate time-series modeling technique is the auto-regressive, integrated, moving average (ARIMA p, d, q). This is described as the following: “The auto-regressive element, p, represents the lingering effects of preceding scores. The integrated element, d, represents trends in the data, and the moving average element,

q, represents the lingering effects of preceding random shocks" (pp. 18–20). To fit a model, the researcher followed four steps. First, the researcher identified the autocorrelation and partial autocorrelation functions to determine the pattern that the data formed. Again, it is expected that the pattern will be linear in nature; however, given the iterative nature of this step, other patterns were considered (e.g., quadratic). The second step in an ARIMA modeling process is an estimation "in which the estimated size of a lingering auto-regressive or moving average effect is tested against the null hypothesis that is zero" (Tabachnick & Fidell, 2012, pp. 18–20). Third, the model was diagnosed. In this step, the researcher examined the residual scores in an attempt to identify if underlying patterns, albeit slight, still existed in the data; a residual is the difference between a predicted value and the actual value. All three steps produced acceptable outcomes. Finally, the researcher undertook the last step of the modeling process—forecasting. In this stage the mathematic model produced by the model to determine hypothesized future values was applied.

Results

The first step in the testing process for the individual student-level analyses was to create the dependent variables (i.e., student absentee rates during each academic year). To do this, the total days attended field was added with the total days absent field for each academic year. Then, total days absent was divided by the total number of school days for each student to calculate the student's rate of absenteeism for each academic year. Because some students began or ended each school year at different periods in the calendar year, it was deemed appropriate to account for this consideration in order to make an appropriate comparison. Because the ANOVA and linear mixed-model tests require some semblance of dependent variable distribution normality in order to work properly, the researcher decided to remove any absentee percentage values that

scored below the mean value of each year's total quantity of days. In other words, the average values for the total quantity of days per school year were calculated. Table 1 presents these mean values. Any student who attended fewer than that year's mean quantity of days for each sample had his/her absentee rate removed from the two analyses. In the case of the ANOVA, this further reduced the sample size available for analysis. Unfortunately, this necessary decision reduced the listwise data for the dataset (N = 24). This value is just slightly below the necessary threshold for detecting a medium effect size; thus, if an effect is present, based on the available data, the effect size would need to be medium to large.

First, it is assumed the predictor variable is linearly associated with the outcome variable. To test whether this assumption was satisfied, the residuals were plotted against the predictor variable; there was no pattern with the plot, so the assumption of linearity was satisfied. Next, the linear mixed-model test assumes that the errors have constant variance. To check for this, the residuals were plotted in sequence; no noticeable trend was determined, satisfying this consideration. Third, it is assumed that the errors are independent of one another. The residuals against the predicted fitted values were plotted to determine that there was non-constant error variance. The residuals did not fan out in the plot as the estimated values increased; this assumption was satisfied. Finally, the linear mixed model assumes that the values are normally distributed. Like the ANOVA, the assumption of normality of data is violated.

To check the normality of the distribution, typically, the interquartile range would be calculated for each level of the dependent variable, with cases that have values outside that range being eliminated from all analyses. However, given the somewhat skewed nature of the calculated dependent variables, removing values that fall outside the interquartile range would drastically reduce the size of the available data. Because the ANOVA test (and its cousin, the

linear mixed model) is sufficiently robust when it comes to handling normality threats, it was deemed appropriate to remove values for students who attended fewer than the mean of the total quantity of school days each year. Taking this first step did normalize the distribution of absentee rates for both datasets somewhat.

For the within-subjects ANOVA of the dataset, Mauchly's Test of Sphericity test statistic (.98) was not significant ($p = 0.77$). Thus, it was not necessary to use the Greenhouse-Geisser corrected statistic, as sphericity can be assumed; $F(2, 46) = 1.22$, $p = 0.30$. Because the omnibus test was not statistically significant, there was no reason to interpret the post hoc pairwise comparison tests (though the mean absentee rates were 9.3%, 11.0%, and 10.6% in 2015, 2016, and 2017, respectively). In other words, there was no statistically significant effect of the absentee intervention program across time. That is, primary students who were enrolled in the intervention program did not demonstrate a decrease or increase in their absenteeism rates across time.

It was somewhat expected that the ANOVA test would support the hypothesis, even though the sample size is most likely insufficient to determine an effect. Because the researcher anticipated that the sample size would not be large enough to support the hypothesis, it was deemed prudent to also conduct a linear mixed model. Again, this procedure is a cousin of the ANOVA test; however, the linear mixed model does not consider cases that do not have valid entries for every measurement. That is, even if an individual has missing data from at least one measurement period, his or her data are still included in the overall model for estimation purposes. Given this, the linear mixed model is an inherently a more liberal within-subjects testing procedure compared to the ANOVA. The same assumption criteria and data-handling

procedures were employed for the ANOVA as for the linear mixed model in an attempt to allow for consistency when comparing between the two tests.

For the primary dataset, the Type III Test of Fixed Effects was marginally significant, $F(1, 2) = 2.74$, $p = .07$. That marginal difference was manifested from the first year compared to each subsequent year; $t(65.74) = -1.73$, $p = .09$, as no other Estimates of Fixed Effects t-tests were significant. Delving into the pairwise comparisons illustrates where those differences lie. The absenteeism percentage was lower in 2015 ($\mu = 9.36\%$) compared to both 2016 ($\mu = 11.49\%$) and 2017 ($\mu = 11.13\%$) figures; the mean difference from 2015 to 2016 was significant, and the difference from 2015 to 2017 was marginally significant (2015 – 2016 μ difference = -2.12%, $p = .03$; 2015 – 2017 μ difference = -1.77%, $p = .09$). In other words, absenteeism rates were lowest in 2015 compared to 2016 and 2017; however, 2016 did not differ from 2017. This conclusion is contradictory to the hypothesis in that the rate of absence was lowest in the first year the intervention was implemented compared to the other two yeas. However, given the fact that these tests were marginally significant (i.e. $p < .1$), these conclusions should only be considered directional at best.

At this point, two separate but related tests were conducted to determine if the intervention had a positive effect in reducing absenteeism across time. Based on the conservative, within-subjects ANOVA, there was no evidence that the absentee rates decreased across time; that is, the null hypothesis was retained. However, the linear mixed model provided a different picture. For the dataset, the linear mixed model indicated that despite the intervention efforts, absentee rates increased from 2015 to 2016 and then remained flat in 2017, though the results were only marginally significant. Because the linear mixed model is more sensitive to data outliers compared to the within-subjects ANOVA, it seems logical to put more credence

into the results of the ANOVA. In other words, the intervention did not seem to have the effect of reducing absentee rates across time.

Finally, the data was analyzed in aggregate at the school level to fit a time-series model for the purpose of forecasting. School data were collapsed into one measure (the dataset included school data from kindergarten through eighth grade). Weighted and unweighted metrics of absentee rates across time were calculated. The weighted rate included the size of each school, while the unweighted rate was only the average of the schools. Thus, the weighted average is an inherently more accurate metric for monitoring change in absenteeism rates across time.

For the weighted dataset, the algorithm assigned the data an ARIMA (0, 0, 0) model. This model indicates the data exhibit white noise—that there is no autocorrelation between the time points. As such, the fitted values and the forecasted values lie along a flat, horizontal line that does not deviate. For the unweighted absentee rates, the algorithm assigned an ARIMA (0, 0, 0) model. Moreover, because there are so few data points, it is not possible to calculate the Ljung-Box Q test statistic, as 18 degrees of freedom are required. As a result, this dataset is not sufficient for properly fitting a time-series model for determining the efficacy of the intervention at the school level. The following graph displays the various fit and forecasted values across time and into the future for the weighted and unweighted metrics.

In sum, analyzing student level data demonstrated that, across time, students enrolled in the attendance intervention program did not decrease their absence issues. Looking at school-level data, a similar story is told. That is, schools that utilize the intervention program have not seen any sort of change (positive or negative) in overall attendance rates across time. Thus, based on the three tests employed in this dissertation, it does not seem that the absence-reducing intervention program was effective in its goal of reducing student absenteeism.

Discussion

This study examined the implementation of case management in the education setting to address truancy and dropout. Specifically, researchers examined the truancy and dropout prevention coaches intervention, which utilized trained individuals to work as attendance coaches who managed attendance for students who were truant or chronically absent. More specifically, this study addressed the research question: What is the impact of truancy and dropout prevention coaches utilizing the New Mexico case-management approach on student attendance? Next, results are presented and discussed. Toward the end of the section, limitations and implications of the findings are presented.

The research question was first addressed on a small scale by examining the effect of the intervention on individual student attendance. An ANOVA and a linear mixed model were the statistical tests used to examine individual attendance for students who were in the intervention program. The findings showed that the NM TDOP did not have an impact on student attendance on an individual student level. The main reason there may have not been an impact on student attendance is that the intervention was still in its first years at the time of the intervention. Coaches had only worked with their assigned students for one school year at the time. Another reason the findings may show that there was not an impact on student attendance is that the caseload for the coaches is large and the time that coaches can spend with each student on their caseload is limited. In sum, the short time frame of implementation and large caseloads for the coaches resulted in the intervention having no impact on attendance at the individual level. The results indicate that there was no impact, which means that there could be benefits and positive impacts if the intervention is continued and coaches are given smaller caseloads.

The research question was also addressed on a larger scale by examining attendance at the whole-school level utilizing a time-series analysis. This statistical test also found that there was no impact on student attendance at the whole-school level. This outcome could be attributed to the fact that there were not enough individual students in the intervention program for there to be an "overflow" effect of the intervention to other students in the school. There could also be no impact because the intervention is still fairly new and in its infancy. The program mission and efforts have not had time to become fully part of the school system and its culture. There has not been time to create staff buy-in and utilization of the strategies.

Limitations

There are several limitations to this study that should be noted. First, because this study was a quasi-experimental, observational experiment, researchers were not able to control important parts of the study such as data collection and record keeping. Matching data from an excel spreadsheet to the district's student information system was difficult. Having one data-collection tool for the coaches to enter information could help streamline the process to improve the quality of the data. Second, missing data made it difficult to have consistency for all students involved in the intervention. Thus, not all students who received the intervention were accounted for in the study. Having all the data for all the students is imperative to get a complete picture of the impact of the intervention. Third, the scope of this study was limited to whether the intervention had an impact or not. It did not assess which activities within the intervention (e.g., referrals to services, calling home, parent meetings) had the most impact on student attendance.

Implications

Despite the limitations, there are implications for both research and practice. Regarding research, datasets utilized should be complete, and the quality of the data should be assessed

prior to the beginning of the study. Researchers should assess whether a school or school district's ability to effectively collect, log, and store data at a school, district, or state level is appropriate for the rigor expected for outcome-based research.

Regarding implications for practice, educators must understand the importance of collecting, logging, and storing date accurately and completely. Also, in a case-management intervention, the individual and their specific needs are important, but there also needs to be consistency as much as possible in the quality of data kept and reported. Finally, educators who are not using chronic absenteeism as their measure of attendance should consider utilizing it. Chronic absenteeism, which accounts for unexcused as well as excused absences, paints a more accurate picture of student attendance than truancy at the individual, school, district, and state level. Having a clearer picture of student attendance can improve interventions, approaches, and programs that address attendance as a whole.

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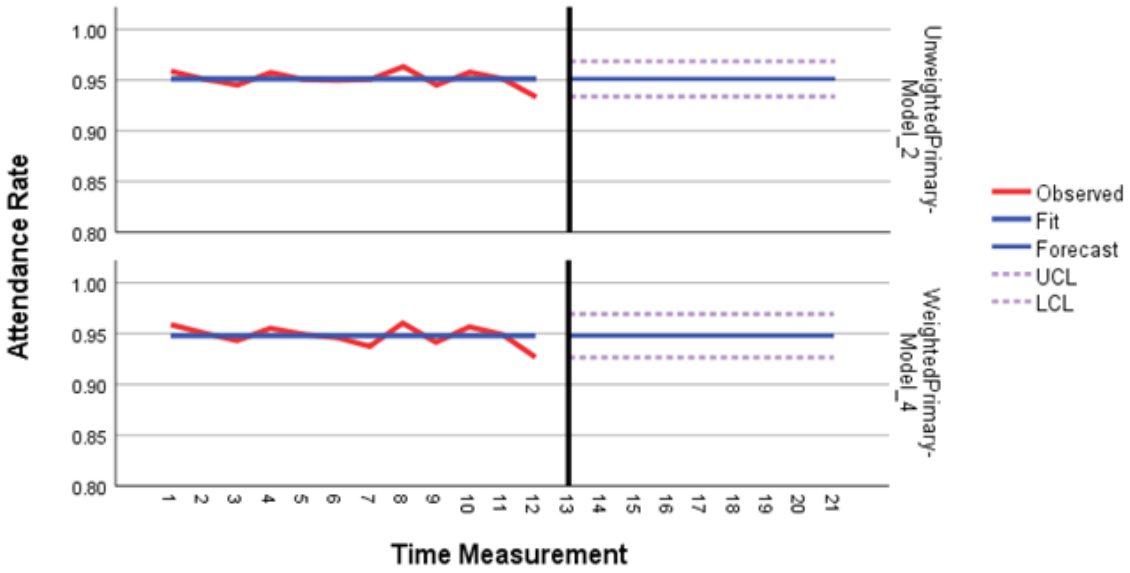
Table 2.1

Mean Quantity of Days per School Year

School Year	Elementary (n)
2015–2016	191 (46)
2016–2017	194 (46)
2017–2018	158 (39)

Note: The above table demonstrates the average quantity of school days per academic year, along with the quantity of students that comprised that average calculation.

Figure 2.1. ARIMA model observed and predicted attendance rate values



Note: The following figure demonstrates the overall attendance rate at each time measurement, with the top graph showing the unweighted average, while the bottom graph showing the weighted average; the red line represents the actual value, while the blue line on the left portion of the graph represents the fitted average. The blue line on the right represents the predicted value based on the model fit.

Chapter 3: A Research Manuscript

Addressing Truancy and Dropout:
An Assessment of a Case-Management Intervention at the Secondary Level

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Abstract

Truancy and school dropout are issues affecting school districts across the country. The two problems are closely linked and are more complex issues than just missing or not completing school. Both truancy and dropout have long-term consequences that are pervasive and affect students, families, and communities. Students who become truant or who drop out experience troubles and struggles not only in academic areas but in the legal, social, and economic aspects of their lives, as well. Society as a whole spends time and money related to unemployment, crime, and welfare associated with truancy and dropout. Policy makers and educators at the federal, state, and district levels struggle to find solutions that are efficient and effective. Due to today's overall shortage in education budgets and resources, it is important for interventions, programs, and initiatives to be efficient and economical. Though there are many programs, initiatives, and approaches that have been utilized to address the issues, there has been little research conducted to evaluate their efficacy. The present study involved an evaluation of a case-management intervention at the secondary level using a within-subjects ANOVA and time-series analysis. The results of both tests showed that the intervention had no impact on attendance at the individual student level or at the whole-school level. The short time frame of implementation and large caseloads for the coaches in addition to inadequate data collection and record keeping may have contributed to these results. Thus, continued implementation of the intervention with smaller caseloads for the coaches and more sophisticated record keeping could result in the intervention showing positive results

Keywords: truancy, dropout, intervention, attendance, absenteeism

Addressing Truancy and Dropout:

An Assessment of a Case-Management Intervention at the Secondary Level

Overview

School absenteeism and truancy are problems troubling educators, policy makers, and legal officials across the United States. Chang, Russell-Tucker, and Sullivan (2016) reported that that approximately 5 to 7.5 million children in the United States miss at least one month of school each year. The U.S. Department of Education and the Office for Civil Rights (2016) released data on chronic absenteeism stating that missing too much school is a national crisis that affects more than 6.5 million students. Furthermore, the U.S. Department of Education (2016) revealed that almost 20% of high school students and more than 12% of middle school students are chronically absent, and chronic absenteeism spikes in high school for every race and ethnicity with the highest being among American Indians. In the same report, it was found that the strong overall attendance seen among English learners decreases over grade levels; in fact, in high school, the rates of chronic absenteeism are higher for English learners than for their non-English learner peers.

The district that the researcher studied fairs no better. The school district had a district habitual truancy rate of 37.55% for the 2014–2015 school year. This reflects an increase of 4.17% from the 2013–2014 school year. In regard to dropout, BCS had a district dropout percentage rate of 4.72% for the 2013–2014 school year. In addition, the BCS district dropout percentage rate was 4% for the 2014–2015 school year.

Absences are often linked to health factors, learning disabilities, or mental health issues related to trauma in the home or community. Despite the reason, absences undermine educational

opportunities for students to gain the fundamental and necessary academic and social skills that they need to be successful in their educational endeavors (Chang, Russell-Tucker, & Sullivan, 2016).

Given the increase of the problem and what we know about the ramifications of absenteeism, stakeholders and policy makers are increasingly coming to the table to discuss and find ways to address the issue. At the federal level, the Obama Administration, along with other entities, including the U.S. Department of Education, implemented an initiative to help eliminate absenteeism at all levels called Every Student, Every Day (U.S. Department of Education, 2015). This initiative calls for states and school districts to better track absences to promote attendance and decrease absenteeism (Gottfried & Kirksey, 2017). Understanding the different types of absenteeism (excused, unexcused, and partial day), the degree of absenteeism (the amount of instructional time lost), and patterns such as class cutting because of bullying or conflicts with teachers can be useful in individualizing service or interventions (Rogers et al., 2017).

The Importance of Attendance

Students need to attend school daily to be successful in school. Achievement in math, standardized test scores, graduation rates and dropout rates are all very sensitive to attendance. Missing school seems to severely impact students' math skills, as fewer numeracy activities to supplement in-school instruction occur at home than literacy activities (Gottfried & Kirksey, 2017). The consequences of absenteeism are not just academic. Students who are absent have fewer opportunities to interact with peers and teachers and to develop bonds to the school itself (Kauh, 2011). Dahl (2016) found that for many adolescents, specifically, truancy encompasses a favorable social context, and social connectivity plays an important role in the reason that students are truant at the secondary level.

Truancy Problems

Truancy is a legal term that is generally defined by each state as a specified number of unexcused absences from school over a designated period of time (Sutphen et al., 2010). Sometimes labeled as the "kindergarten of crime," truancy is often viewed as the gateway to more deviant behavior such as delinquency and violence (McCluskey, Bynum, Patchin, & 2004). There is no debate that valuable resources are drained by early absenteeism and that it contributes to educational deficits, but deeming it unacceptable has yet to happen because young children are not committing a crime by being truant (Kerr et al., 2011).

Absenteeism is associated with a variety of risky behaviors at the secondary level. Students who are absent with or without permission were more likely to engage in behaviors related to unintentional injuries and violence; risky sexual behaviors; and the use of tobacco, alcohol, marijuana, and other drugs (Eaton, Brener, & Kann, 2008). Dahl (2016) found that the most common prohibited activity that occurred during truancy for adolescents is smoking marijuana. This and other risky behaviors associated with health can be linked to overall short- and long-term quality of life. In addition, research has linked truancy to many debilitating problems for students later in life, including unemployment, welfare dependency, low salary, and imprisonment (Lindstadt, 2005).

Link Between Truancy and Dropout

The problem of dropping out of school has received more attention from educators and education researchers than truancy. Although it is technically defined by a single event, dropping out reflects a long process of disengagement from school (Epstein & Sheldon, 2002). There is a direct relationship between truancy and dropout as well as dropout and unemployment, welfare,

low salary, and unemployment (Lindstadt, 2005). When students consistently miss school, it is a sign that they are disengaged and on the path to dropping out, even from the early grades. It is necessary for researchers to examine early warning indicators such as chronic absenteeism, behavior problems, and course failure at the elementary level (Mac Iver & Mac Iver, 2009). School initiatives to address dropout should provide students opportunities to interact and connect with adults, participate in school activities, take relevant courses, and receive interventions that address academic and behavioral needs (Wilkins & Bost, 2016). Strand and Lovrich (2014) suggested that the most effective approach to assisting truant students with staying in and completing high school is one that is multisystemic and guided by restorative justice practices and social supports principles to juvenile delinquency.

Types of Interventions

The span of truancy interventions reflects an evolution from one-dimensional, punitive models to multidimensional, court plus community-based service models (Fantuzzo, Grim, & Hazan, 2005). New alternative hybrid models have evolved to emphasize flexible and multidisciplinary approaches (Kearney & Graczyk, 2014). Truancy intervention programs today are typically grouped by setting and include school-based, community-based, and family-based interventions (Dembo & Gulledge, 2009). Other interventions involve community courts and/or court diversion programs implemented more commonly at the secondary level (Gandy & Schultz, 2007). Police–school partnerships at the secondary level could also be part of a potential model for reducing truancy beyond the usual approaches (Mazerolle, Antrobus, Bennett & Eggins, 2017). In an assessment of 16 interventions, Sutphen et al. (2010) found beneficial effects of using positive and negative contingency management to improve attendance at the high school level. Examples of this included utilizing token economies, tangible rewards,

behavioral contracts, group guidance, and parental notification. Attendance improves when schools take comprehensive approaches to having families and community involved in attendance efforts. Parental interventions are valued because they involve the parent-to-school linkage (McConnell & Kubina, 2014). Individualizing approaches and strategies and personalizing interactions with students can lead to significantly fewer negative behaviors in students, including truancy (Haight, Chapman, Hendron, Loftis, & Kearney, 2014). Rodríguez and Conchas (2009) found that advocacy by adults on behalf of students involves supporting and encouraging adolescents to voice their concerns, which can be a powerful tool as an intervention. They also found that students themselves see case management as an important and positive aspect of changing the behaviors of truant students.

Interventions addressing school attendance are diverse and fall into different categories, target a variety of risk factors and levels, are implemented in different settings, and are delivered in various modalities; therefore, it seems reasonable for schools and communities to choose an intervention based on the ease of implementation, resources available, and degree of stakeholders' investment in the outcomes (Maynard et al., 2013). Whether an intervention is school based, community based, or court based, there are challenges in providing truancy services. Family mobility makes it difficult to maintain correct contact information. Ineffective communication and cooperation among staff, parents, and community members also lead to a lack of continuum of care, which is a critical limitation of truancy services (Dembo & Gulledge, 2009). In a study released by the Institute of Education Sciences' National Center for Education Evaluation and Regional Assistance and the U.S. Department of Education (2017), the authors explained that communicating with guardians about attendance reduces student absences and can be a powerful tool for all stakeholders working to address and combat truancy (Institute of

Education Sciences, 2017). Having a concrete process with parent knowledge and involvement is critical to decreasing unnecessary student absences (Peek, 2009).

The specific research question of this study was the following: What is the impact of truancy and dropout prevention coaches utilizing the New Mexico case-management approach on student attendance?

Methodology

Research Design

The secondary truancy and dropout prevention coaches served 203 students during the 2015–2016 and 2016–2017 academic years and served 70 students in the 2017–2018 academic year.

1. The district had pre-intervention data and post-intervention data on 49 students for the 2016–2017 academic year. A within-subjects ANOVA was computed to determine if the students receiving the intervention had fewer absences post-intervention than they did the prior year.
2. The district had pre-intervention data and post-intervention data on 37 students collected at the end of the second semester of the 2017–2018 academic year. A within-subjects ANOVA was computed to determine if the students receiving the intervention had fewer absences than they did the prior year.
3. The researcher also used a time-series analysis, a design characteristic of multiple observations over time. In an interrupted time-series design, the intervention is administered at some point in the observation sequence. Thus, observations are made before and after treatment, and if the treatment has an effect, there will be a difference in the observations. This type of design can be especially useful in determining the efficacy

of new and innovative programs (Heppner, Wampold, & Kivlighan, 2008). The district had average attendance percentages for each school at 40-, 80-, and 120-day counts for the 2014–2015, 2015–2016, 2016–2017, and 2017–2018 school years. These observation points included before and after treatment, which made a time-series analysis appropriate to use to determine the efficacy of the truancy and dropout prevention coaches intervention.

School District Information

The district being studied is a small school district in the Southwest United States serving approximately 4,000 students with the following demographics: 61% Hispanic, 24% Caucasian, 10% American Indian, and 5% Other. The school district encompasses two high schools, one middle school, one K–8 school, and seven elementary schools. Additional key demographic information includes the following: 74% of students are considered economically disadvantaged, as determined by eligibility for the free and reduced lunch program; 14% are English language learners; and 16% are students with disabilities (this does not include students who are in the gifted program). State and federal law mandates districts to be given a letter grade to hold districts accountable. The school district's grade is currently a C.

Intervention

On March 14, 2016, the New Mexico Public Education Department released a request for applications (RFA) for funding to support the implementation of truancy and dropout prevention coaches in schools. Training for the coaches was provided by the National Center for School Engagement (NCSE) through the state's Public Education Department. Coaches received two two-day trainings. The trainings included informational sessions on relevant topics, lessons

learned, and a look at successful, established programs. NCSE also provided guest speakers, networking sessions, and a look at current, relevant research.

It is vital that comprehensive community- and school-based strategies be set in place to overcome the barriers to school attendance faced by students of all ages and in all communities. Therefore, the purpose of the truancy and dropout prevention coaches program is to establish a cohort of truancy and dropout prevention coaches placed in elementary, middle, and high schools across the state whose role is to work with students, families, communities, schools, and districts to improve attendance for habitually truant students, as well as to decrease the number of students who drop out of school.

The truancy and dropout prevention coaches intervention began at the secondary school level in the 2015–2016 school year. One coach was hired and assigned to two high schools and one middle school. Individuals selected to serve as coaches for the intervention had to meet specific qualifications and criteria, including holding a current state-level social work, counseling, or teaching license; having a minimum of a bachelor's degree in education, social work, counseling, criminal justice, or a related field; and being fluent in English and Spanish. In addition, the individual had to demonstrate responsibility for utilizing multiple student data sources to obtain an accurate number of students who drop out and those at risk of doing so, as well as implement research-based strategies to address the diverse needs of students at risk of dropping out or who were identified as truant.

Finally, the essential duties and responsibilities of the individuals assigned to the position were varied, and they provided both direct and indirect services to students. Actual duties and responsibilities varied depending on outside factors but included exemplifying the six components of effective truancy and dropout reduction programs outlined in the Truancy

Reduction, Research, Policy and Practice resource guide: gathering, analyzing, and synthesizing data; making data-related recommendations; and leading parent meetings and conferences to address student attendance or other related issues.

The focus of the direct work and services with students was also varied and contingent on individual needs and circumstances. Relationship building was the foundation and key to the process. Once the coaches were able to build trust and rapport with the students, they would initiate interventions, including meeting one-on-one with students, setting and monitoring short-term goals, making appropriate referrals for services and resources, and communicating with parents/guardians.

Procedures

The school district collected data in two ways. First, the school district obtained demographic and attendance data utilizing PowerSchool, a student information system, for the 2016–2017 and 2017–2018 school years. In addition, each of the program coaches also kept a program service log. Each coach logged information and services for each student on their caseload for the 2015–2016, 2016–2017, and 2017–2018 school years.

Data Analysis

The research question can be addressed by looking at individual students' performances and school-level data. Thus, the researcher conducted a series of statistical tests in order to assess the research question from as many perspectives as possible. Focusing first on the individual student data, the researcher conducted a within-subjects one-way ANOVA test. This test allowed the researcher to determine if the intervention program was successful in decreasing the truancy rate across time (pre-intervention, post-intervention 1, post-intervention 2). Unfortunately, issues associated with quasi-experimental studies across time are participant fallout (due to the family

moving or a host of other factors) and incomplete data collection. Because several students lack data for post-intervention at time 2, the researcher also conducted a linear mixed-model test. This test estimates missing data values, allowing for comparisons across time using more of the dataset, increasing the chances of detecting a smaller effect size.

Continuing to the school-level component of the research, the research question can be addressed via an analysis of school-level data. To determine whether the intervention had any effect on school truancy rates across time, the researcher conducted a linear time-series analysis. This allowed the researcher to determine whether the intervention was effective at the school level, as well as for the researcher to conduct forecasting values to determine the staying power of the intervention in the future.

Returning to the student data analyses, the researcher conducted a power analysis to determine if the dataset collected for this dissertation included enough observations to observe an effect. Based on a meta-analysis of effect sizes in education research (Fisher, Frey, & Hattie, 2016), the average effect size captured by studies looking at the efficacy of an intervention was large (Cohen's d = 1.07). To be safe, this research attempted to capture a medium effect size. G*Power is a free statistical tool that allows researchers to determine the sample size necessary to detect effect sizes of different magnitudes. This research utilized the standard input parameters associated with this type of study.

7) A medium effect size or larger is desired (effect size f = .25).
8) The alpha value of .05 was utilized.
9) A power value of .8 was utilized.
10) There was only one group in the study.
11) Enough data existed for three repetitions to be compared.

12) It is assumed that a relative correlation value of .5 exists among the repeated measure.

Based on these input parameters and assumptions, data from 28 students was needed. The student dataset included 34 students. Thus, enough data was present in order to conduct the within-subjects one-way ANOVA test. Again, the researcher also conducted a linear mixed-model test to utilize the entire dataset (N = 49).

Of course, there are assumptions associated with the three tests that the researcher employed. For the repeated-measures ANOVA, there are five assumptions that ought to be considered. First, the dependent variable should be continuous. The dependent variable used in this research is the truancy rate, which is inherently a continuous variable. The second assumption is that subjects must have more than one score across time. The dataset used for this research has three observations. The third assumption is that significant outlier data points are not present, as they could skew the analysis. Before conducting this analysis, the researcher generated a box plot in the statistical software, Statistical Package for the Social Sciences (SPSS) with the interquartile range. Any values that fell significantly outside the interquartile range were removed from the analysis. The fourth assumption is that the dependent variable will be approximately or somewhat normally distributed. Before conducting the analysis, the researcher conducted a Shapiro-Wilk test of normality to verify a normal distribution. The ANOVA test is quite robust to normality violations, so if the dependent variable is somewhat normal, the conclusions from the test should be sound. Finally, the ANOVA assumes sphericity among the groups. To test this, the researcher conducted Mauchly's test for sphericity. The researcher used the F statistic p-value from the Greenhouse-Geisser correction.

Because the within-subjects ANOVA test is inherently conservative, as it removes cases when just one observation is missing, it may be prudent to conduct a test that is inclusive of the

entire dataset regardless of missing observations. The linear mixed model includes the entire dataset regardless of missing observations. Like the ANOVA, there are assumptions associated with the linear mixed model that should be considered and tested. First, it is assumed that the predictor variable is linearly associated with the outcome variable. To test that this assumption is satisfied, the residuals were plotted against the predictor variable; assuming there is no pattern with the plot, the assumption of linearity is satisfied. Next, the linear mixed-model test assumes that the errors have constant variance. To check for this, the residuals were plotted in sequence; a noticeable trend indicated an autocorrelation. Third, it is assumed that the errors are independent of one another. One can plot the residuals against the predicted fitted values to determine that there is non-constant error variance. If the residuals fan out in the plot as the estimated values increase, it may be prudent to transform the data. Finally, the linear mixed model assumes that the residuals are normally distributed. Like the ANOVA assumption of normality, a Shapiro-Wilk test of normality tested this assumption on the produced residuals.

Finally, the data was analyzed in aggregate at the school level to fit a time-series model for the purpose of forecasting. A time-series model is simply an extrapolation of a linear regression test, but it is modified to apply to data that are correlated with one another because they occur in a sequence across time; these instances are referred to as shocks.

According to Tabachnick and Fidell (2012), an appropriate time-series modeling technique is the auto-regressive, integrated, moving average (ARIMA p, d, q). This is described as the following: “The auto-regressive element, p, represents the lingering effects of preceding scores. The integrated element, d, represents trends in the data, and the moving average element, q, represents the lingering effects of preceding random shocks” (pp. 18–20). To fit a model, the researcher followed four steps. First, the researcher identified the autocorrelation and partial

autocorrelation functions to determine what pattern the data form. Again, it is expected that the pattern will be linear in nature; however, given the iterative nature of this step, other patterns were considered (e.g., quadratic). The second step in an ARIMA modeling process is an estimation "in which the estimated size of a lingering auto-regressive or moving average effect is tested against the null hypothesis that is zero" (Tabachnick & Fidell, 2012, pp. 18–20). Third, the model was diagnosed. In this step, the researcher examined the residual scores in an attempt to identify if underlying patterns, albeit slight, still existed in the data; a residual is the difference between a predicted value and the actual value. All three steps produced acceptable outcomes. The final step of the modeling process was done—forecasting. In this stage the mathematic model produced by the model to determine hypothesized future values was applied.

Results

The first step in the testing process for the individual student-level analyses was to create the dependent variables (i.e., student absentee rates during each academic year). To do this, the total days attended field was added with the total days absent field for each academic year. Then, total days absent was divided by the total number of school days for each student to calculate the student's rate of absenteeism for each academic year. Because some students began or ended each school year at different periods in the calendar year, it was deemed appropriate to account for this consideration in order to make an appropriate comparison. Because the ANOVA and linear mixed-model tests require some semblance of dependent variable distribution normality in order to work properly, the researcher decided to remove any absentee percentage values that scored below the mean value of each year's total quantity of days. In other words, the average values for the total quantity of days per school year were calculated. Table 1 presents these mean values.

Any student who attended fewer than that year's mean quantity of days for each sample had his/her absentee rate removed from the two analyses. In the case of the ANOVA, this further reduced the sample size available for analysis. Unfortunately, this necessary decision reduced the listwise data for the datasets (N = 22). This value is just slightly below the necessary threshold for detecting a medium effect size; thus, if an effect is present, based on the available data, the effect size would need to be medium to large.

Both the ANOVA and linear mixed-model tests require several assumptions to be tested. For the repeated-measures ANOVA, there are five assumptions that ought to be considered. First, the dependent variable should be continuous. The dependent variable used in this research is truancy rate, which is inherently a continuous variable. The second assumption is that subjects must have more than one score across time. The dataset used for this research has three observations. The third assumption is that significant outlier data points are not present, as they could skew the analysis. The fourth assumption is that the dependent variable will be approximately or somewhat normally distributed. The data do violate the third and fourth assumption. Fortunately, the ANOVA test is quite robust to normality violations. Therefore, if the dependent variable is somewhat normal, the conclusions from the test should be sound. Finally, the ANOVA assumes sphericity among the groups. Mauchly's test for sphericity was conducted for both datasets and was not significant; thus, this assumption was satisfied.

Because the within-subjects ANOVA test is inherently conservative, as it removes cases when just one observation is missing, it was prudent to conduct a test that is inclusive of the entire dataset regardless of missing observations. The linear mixed model does just that. Like the ANOVA, there are assumptions associated with the linear mixed model that should be considered and tested. First, it is assumed that the predictor variable is linearly associated with

the outcome variable. To test whether this assumption is satisfied, the residuals were plotted against the predictor variable; there was no pattern with the plot, so the assumption of linearity is satisfied. Next, the linear mixed-model test assumes that the errors have constant variance. To check for this, the residuals were plotted in sequence; no noticeable trend was determined, satisfying this consideration. Third, it is assumed that the errors are independent of one another. The residuals against the predicted fitted values were plotted to determine that there was non-constant error variance. The residuals did not fan out in the plot as the estimated values increased; this assumption was satisfied. Finally, the linear mixed model assumes that the values are normally distributed. Like the ANOVA, the assumption of normality of data is violated.

To check the normality of the distribution, typically, the interquartile range would be calculated for each level of the dependent variable, with cases that have values outside that range being eliminated from all analyses. However, given the somewhat skewed nature of the calculated dependent variables, removing values that fall outside the interquartile range would drastically reduce the size of the available data. Because the ANOVA test (and its cousin, the linear mixed model) is sufficiently robust when it comes to handling normality threats, it was deemed appropriate to remove values for students who attended fewer than the mean of the total quantity of school days each year. Taking this first step did normalize the distribution of absentee rates for both datasets somewhat.

For the within-subjects ANOVA of the dataset, Mauchly's Test of Sphericity test statistic (.94) was not significant ($p = 0.49$). Thus, it was not necessary to use the Greenhouse-Geisser corrected statistic, as sphericity can be assumed; $F(2, 42) = 2.40$, $p = 0.10$. Because the omnibus test was not statistically significant, there was no reason to interpret the post hoc pairwise comparison tests (though the mean absentee rates were 11.4%, 14.1%, and 15.2% in 2015, 2016,

and 2017, respectively). In other words, there was no statistically significant effect of the absentee intervention program across time. That is, secondary students who were enrolled in the intervention program did not demonstrate a decrease or increase in their absenteeism rates across time.

It was somewhat expected that the ANOVA test would support the hypothesis, even though the sample size is most likely insufficient to determine an effect. Because the researcher anticipated that the sample size would not be large enough to support the hypothesis, it was deemed prudent to also conduct a linear mixed model. Again, this procedure is a cousin of the ANOVA test; however, the linear mixed model does not consider cases that do not have valid entries for every measurement. That is, even if an individual has missing data from at least one measurement period, his or her data are still included in the overall model for estimation purposes. Given this, the linear mixed model is an inherently a more liberal within-subjects testing procedure compared to the ANOVA. The same assumption criteria and data-handling procedures were employed for the ANOVA as for the linear mixed model in an attempt to allow for an apples-to-apples comparison between the two tests.

For the dataset, the Type III Test of Fixed Effects was significant, $F(1, 2) = 6.75$, $p < .01$. That difference manifested from the first year compared to each subsequent year; $t(73.45) = -2.30$, $p = .02$, as no other Estimates of Fixed Effects t-tests were significant. Delving into the pairwise comparisons illustrates where those differences lie. The absenteeism percentage was lower in 2015 ($\mu = 11.26\%$) compared to both 2016 ($\mu = 16.14\%$) and 2017 ($\mu = 14.78\%$) figures; the mean differences from 2015 to 2016 and 2015 to 2017 were both significant (2015–2016 μ difference = -4.91%, $p = .001$; 2015–2017 μ difference = -3.56%, $p = .02$). In other words, the absenteeism rates were lowest in 2015 compared to 2016 and 2017; however, 2016

did not differ from 2017. This conclusion is contradictory to the hypothesis, in that the rate of absence was lowest in the first year the intervention was implemented, compared to the other two years. According to this test, then, the intervention was not only ineffective but possibly deleterious to absence rates.

At this point, two separate but related tests were conducted to determine if the intervention had a positive effect in reducing absenteeism in students across time. Based on the conservative, within-subjects ANOVA, there was no evidence that the absentee rates decreased across time; that is, the null hypothesis was retained. However, the linear mixed model provided a different picture. For the student dataset, the linear mixed model indicated that despite the intervention efforts, absentee rates increased from 2015 to 2016 and then remained flat in 2017. Because the linear mixed model is more sensitive to data outliers compared to the within-subjects ANOVA, it seems logical to put more credence into the results of the ANOVA. In other words, there did not seem to be any effect of the intervention in reducing absentee rates across time for students.

Finally, the data was analyzed in aggregate at the school level to fit a time-series model for the purpose of forecasting. A time-series model is simply an extrapolation of a linear regression test but is modified to apply to data that are correlated with one another because they occur in a sequence across time; these instances are referred to as shocks. Various patterns can be gleaned from a time-series analysis; however, it was expected that the data would exhibit a linear pattern. That is, because attendance data exist for schools before the intervention began and throughout the intervention period, it was hypothesized that absentee rates would steadily decrease through time.

SPSS, a statistical analysis software, algorithmically fits time-series models based on available data. For the weighted dataset, the algorithm assigned the data an ARIMA (0, 0, 0) model. This model indicates that the data exhibit white noise—that there is no autocorrelation between the time points. As such, the fitted values and the forecasted values lie along a flat, horizontal line that does not deviate. For the unweighted absentee rates, the algorithm assigned an ARIMA (0, 1, 0) model to the high school data. The ARIMA (0, 1, 0) model indicates a linear trend—that is, absentee rates are improving across time for the high school data. Because the two high schools are of sufficiently different sizes (High School X has over 1,000 students in a given year, while High School Y has fewer than 100 students), it does not make sense to interpret this model as indicative of an improving the absentee rate across time. Moreover, because there are so few data points, it is not possible to calculate the Ljung-Box Q test statistic, as 18 degrees of freedom are required. As a result, these data are not sufficient for properly fitting a time-series model for determining the efficacy of the intervention at the school level. Figure 1 displays the various fit and forecasted values across time and into the future for the weighted and unweighted metrics.1

In sum, analyzing student-level data demonstrated that, across time, students enrolled in the attendance intervention program did not decrease their absence issues. Looking at school-level data, a similar story is told. That is, schools that utilize the intervention program have not seen any sort of change (positive or negative) in overall attendance rates across time. Thus, based on the three tests employed in this study, it does not seem that the absence-reducing intervention program was effective in its goal of reducing student absenteeism.

Discussion

This study examined the implementation of case management in the education setting to address truancy and dropout. Specifically, researchers examined the truancy and dropout prevention coaches intervention, which utilized trained individuals to work as attendance coaches who managed attendance for students who were truant or chronically absent. More specifically, this study addressed the following research question: What is the impact of truancy and dropout prevention coaches utilizing the New Mexico case-management approach on student attendance? Next, results are presented and discussed. Toward the end of the section, limitations and implications of the findings are presented.

The research question was first addressed on a small scale by examining the effect of the intervention on individual student attendance. An ANOVA and a linear mixed model were the statistical tests used to examine individual attendance for students who were in the intervention program. The findings showed that the NM TDOP did not have an impact on student attendance on an individual student level. The main reason that there may have not been an impact on student attendance is that the intervention was still in its infancy at the time of the intervention. Coaches had only worked with their assigned students for one school year prior to that time. Another reason the findings may show that there was not an impact on student attendance is that the caseload for the coaches is large, and the time that coaches can spend with each student on their caseload is limited. In sum, the short time frame of implementation and large caseloads for the coaches resulted in the intervention having no impact on attendance at the individual level. The results indicate that there was no impact which means that there could be benefits and positive impacts if the intervention is continued and coaches are given smaller caseloads.

The research question was also addressed on a larger scale by examining attendance at the whole-school level utilizing a time-series analysis. This statistical test also found that there was no impact on student attendance at the whole-school level. This outcome could be attributed to the fact that there were not enough individual students in the intervention program for there to be an "overflow" effect of the intervention to other students in the school. There could also be no impact because the intervention is still fairly new and in its infancy. The program mission and efforts have not had time to become fully part of the school system and its culture. There has not been time to create staff buy-in and utilization of the strategies.

Limitations

There are several limitations to this study that should be noted. First, because this study was a quasi-experimental, observational experiment, researchers were not able to control important parts of the study such as data collection and record keeping. Matching data from an Excel spreadsheet to the district's student information system was difficult. Having one data-collection tool for the coaches to enter information could help streamline the process to improve the quality of the data. Second, missing data made it difficult to have consistency for all students involved in the intervention. Thus, not all students who received the intervention were accounted for in the study. Having all the data for all the students is imperative to get a complete picture of the impact of the intervention. Third, the scope of this study was limited to whether the intervention had an impact or not. It did not assess which activities within the intervention (e.g., referrals to services, calling home, parent meetings) had the most impact on student attendance.

Implications

Despite the limitations, there are implications for both research and practice. Regarding research, datasets utilized should be complete, and the quality of the data should be assessed

prior to the beginning of the study. Researchers should assess whether a school or school district's ability to effectively collect, log, and store data at a school, district, or state level is appropriate for the rigor expected for outcome-based research.

Regarding implications for practice, educators must understand the importance of collecting, logging, and storing date accurately and completely. Also, in a case-management intervention, the individual and their specific needs are important, but there also needs to be consistency as much as possible in the quality of data kept and reported. Finally, educators who are not using chronic absenteeism as their measure of attendance should consider utilizing it. Chronic absenteeism, which accounts for unexcused as well as excused absences, paints a more accurate picture of student attendance at the individual, school, district, and state level. Having a clearer picture of student attendance can improve interventions, approaches, and programs that address attendance as a whole.

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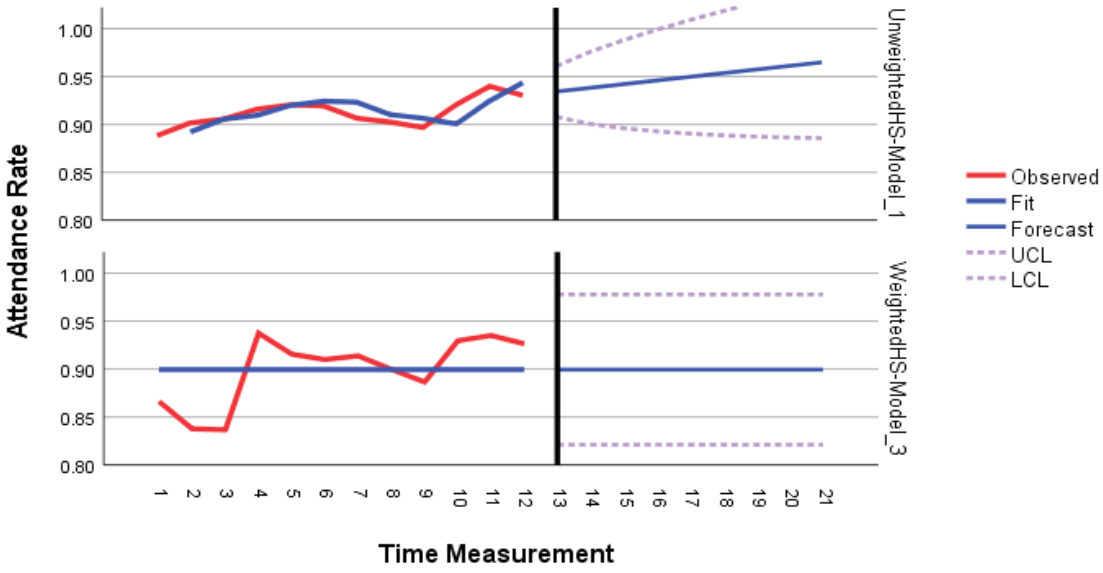
Table 3.1

Mean Quantity of Days per School Year

School Year	Secondary (n)
2015–2016	161 (49)
2016–2017	172 (49)
2017–2018	145 (37)

Note: The above table demonstrates the average quantity of school days per academic year, along with the quantity of students that comprised that average calculation.

Figure 3.1. RIMA model observed and predicted attendance rate values.



Note: The following figure demonstrates the overall attendance rate at each time measurement, with the top graph showing the unweighted average, while the bottom graph showing the weighted average; the red line represents the actual value, while the blue line on the left portion of the graph represents the fitted average. The blue line on the right represents the predicted value based on the model fit.

Chapter 4: General Conclusion

General Conclusion

Overview

This dissertation sought to explore school attendance and effective approaches in dealing with poor attendance and its consequences. Specifically, the studies assessed the efficacy of a case-management approach to address truancy and dropout. This chapter will conclude this dissertation by discussing four main areas: a summary of chapter 2, a summary of chapter 3, a presentation and discussion of the link between the two manuscripts and how together they contribute to the knowledge base regarding school attendance, and a presentation and discussion of knowledge gaps when the two manuscripts are considered individually and an articulation of an agenda for future research in relation to this manuscript.

Summary of Manuscript #1

Manuscript #1 explored a case-management intervention used to address truancy and dropout at the elementary school level. The research question was as follows: what is the impact of the truancy and dropout prevention coaches utilizing the NM case-management approach on student attendance at the elementary school level? The researchers used three different tests to assess the intervention being studied. They were a within-subjects ANOVA, a linear mixed model, and a time series analysis. The ANOVA and linear mixed model were used to examine the impact of the intervention at an individual student level, while the time series analysis was utilized to assess the same intervention at a whole-school level.

The findings showed that at both the individual and school level, the case-management intervention did not have an impact thus far. These findings were most likely a result of incomplete data, as well as because the intervention is still in its infancy and will likely need

several more years of implementation and data collection to be able to assess the impact of the intervention.

There were limitations to this study. First, because this study was a quasi-experimental, observational experiment, researchers were not able to control important parts of the study, such as data collection and record keeping. Matching data from an Excel spreadsheet to the district's student information system was difficult. Having one data-collection tool for the coaches to enter information could help streamline the process to improve the quality of the data. Second, missing data made it difficult to have consistency for all students involved in the intervention. Thus, not all students who received the intervention were accounted for in the study. Having all the data for all the students who receive the intervention is imperative to get a complete picture of the impact of the intervention. Third, the scope of this study was limited to whether the intervention had an impact or not. It did not assess which activities within the intervention (e.g., referrals to services, calling home, parent meetings) had the most impact on student attendance.

Despite the limitations, there are implications for both research and practice. Regarding research, datasets utilized should be complete, and the quality of the data should be assessed. Researchers should assess whether a school or school district's ability to effectively collect, log, and store data at a school, district, or state level is appropriate for the rigor expected for outcomes-based research.

Regarding implications for practice, educators must understand the importance of collecting, logging, and storing data accurately and completely. Also, in a case-management intervention, individuals and their specific needs are important, but there needs to be consistency as much as possible in the quality of data kept and reported. Finally, educators who are not using chronic absenteeism as their measure of attendance should consider utilizing it. Chronic

absenteeism, which accounts for unexcused as well as excused absences, paints a more accurate picture of student attendance at the individual, school, district, and state level. Having a clearer picture of student attendance can improve interventions, approaches, and programs that address attendance.

Summary of Manuscript #2

Manuscript #2 also explored the use of a case-management intervention to address attendance, specifically truancy, at the secondary level. The research question was the following: what is the impact of truancy and dropout prevention coaches utilizing the NM case-management approach on student attendance at the secondary school level? The researchers utilized the same three tests to assess the intervention being studied. Again, they were a within-subjects ANOVA, a linear mixed model, and a time series analysis. The ANOVA and linear mixed model were used to examine the impact of the intervention at an individual student level, while the time series analysis was employed to assess the same intervention at a whole-school level.

The findings for this manuscript showed that at the secondary level and at both the individual and school levels, the case-management intervention did not have an impact thus far. These findings were most likely a result of incomplete data, as well as because the intervention is still in its infancy and will likely need several more years of implementation and data collection to be able to assess the impact of the intervention.

There were limitations to this study. First, because this study was a quasi-experimental, observational experiment, researchers were not able to control important parts of the study such as data collection and record keeping. Matching data from an Excel spreadsheet to the district's student information system was difficult. Having one data-collection tool for the coaches to enter information could help streamline the process to improve the quality of the data. Second, missing

data made it difficult to have consistency for all students involved in the intervention. Thus, not all students who received the intervention were accounted for in the study. Having all the data for all the students is imperative to get a complete picture of the impact of the intervention. Third, the scope of this study was limited to whether the intervention had an impact or not. It did not assess which activities within the intervention (e.g., referrals to services, calling home, parent meetings, etc.) had the most impact on student attendance.

Despite the limitations, there are implications for both research and practice. Regarding research, datasets utilized should be complete, and the quality of the data should be assessed. Researchers should assess whether a school or school district's ability to effectively collect, log, and store data at a school, district, or state level is appropriate for the rigor expected for outcomes-based research.

Regarding implications for practice, educators must understand the importance of collecting, logging, and storing date accurately and completely. Also, in a case-management intervention, individuals and their specific needs are important, but there needs to be consistency as much as possible in the quality of data kept and reported. Finally, educators who are not using chronic absenteeism as their measure of attendance should consider utilizing it. Chronic absenteeism, which accounts for unexcused as well as excused absences, paints a more accurate picture of student attendance at the individual, school, district, and state level. Having a clearer picture of student attendance can improve interventions, approaches, and programs that address attendance as a whole.

Thematic Linkage of the Two Manuscripts

The two studies in this dissertation shared some common themes. The first study assessed a case-management approach to truancy at the elementary school level and elementary school-

aged children. The second study also assessed a case-management approach but at the secondary level and with secondary age level students. While school is the setting for both studies and both populations studied are students, there are differences in those populations, such as age and mode of transportation to school. These factors could impact outcomes differently. The setting is also different at the elementary in comparison to the secondary level. These differences could easily affect implementation of the intervention.

Though their findings did not show an impact—either positive or negative—on student attendance, the studies in this dissertation have continued research in an area regarding attendance that is new and that is a case-management approach. Case management has long been utilized in the health and medical fields but not in the education setting. Research on case-management approaches can continue in areas regarding attendance in school-based interventions, as well as community-based and court-based interventions. Research can also be done to assess which specific activities within the larger intervention are more effective.

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Appendices

Appendix A

IRB Determination of Non-Human Subjects

Oregon State University
Research Office

Human Research Protection Program
& Institutional Review Board
B308 Kerr Administration Bldg, Corvallis OR 97331
(541) 737-8008
IRB@oregonstate.edu
http://research.oregonstate.edu/irb

Date of Notification	11/09/2018	Study Number	8850
Notification Type	Oversight Determination		
Principal Investigator	Gene Eakin		
Study Team Members	Deanna Valdez		
Study Title	Addressing Truancy and Dropout: An Assessment of a Case Management Intervention		
Funding Source	None	Cayuse Number	N/A

DETERMINATION: RESEARCH, BUT NO HUMAN SUBJECTS

It has been determined that your project, as submitted, does meet the definition of research but **does not** involve human subjects under the regulations set forth by the Department of Health and Human Services 45 CFR 46 because it involves a secondary analysis of de-identified, pre-exisiting data, not collected for the current project.

Additional review is not required for this study.

Please do not include HRPP contact information on any of your study materials.

Note that amendments to this project may impact this determination. Please submit a *new* request if there are changes (e.g., funding, data sources, access to individual identifiers, interaction with research subjects, etc.).

The federal definitions and guidance used to make this determination may be found at the following link: Human Subject