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The Impact of Principal Turnover on PBIS Success: A Quantitative Analysis

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by

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Abstract

The purpose of this study is to quantitatively analyze the impact of principal turnover in the principal's office on the successful maintenance indicators of Positive Behavioral Interventions and Supports (PBIS). The study sampled identified PBIS-utilizing, public, elementary and middle schools in the state of Minnesota. Research has helped established PBIS as an effective behavioral intervention in the United States. PBIS requires principals to understand not only the base principles of PBIS but also how best to establish and promote PBIS within a specific school setting. Scholars have also documented acceleration in the turnover of public school principals. Given the environment of rapid principal turnover and widespread PBIS implementation, educational leaders and other stakeholders are naturally interested in how well new principals can manage schools' existing cultures and programs. The study uses percent comparison analysis to present the findings. In multiple areas of the results, the importance of continuity in school administration as it relates to PBIS in particular and critical components to a thriving school environment in general are in evidence.

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Chapter 1: Introduction

Introduction to the Problem

The problem addressed in this study is turnover of principal leadership and the sustainability of intervention programs for at risk students. There is an extensive body of empirical literature (Adamski, Fraser, & Peiro, 2013; Adkins-Coleman, 2010; Bondy, Ross, Gallingane, & Hambacher, 2007; Bower, 2013; Durham, 2012; Gregory, Skiba, & Noguera, 2010; Hayes, 2012; Kinsler, 2013; Phillippo, 2012; Sprick, 2013; Xu, Coats, & Davidson, 2012) supporting the claim that the school environment plays an important role in enforcing or eroding discipline among students, which in turn impacts academic achievement and future socioeconomic outcomes. One response to this problem has been the development and implementation of evidence-based, school-wide behavioral and governance policies such as Positive Behavioral Intervention and Supports (PBIS) (Waasdorp, Bradshaw, & Leaf, 2012). Several empirical studies (Bradshaw, Koth, Bevans, Ialongo, & Leaf, 2008; Bradshaw, Mitchell, & Leaf, 2010; Horner et al., 2009; Waasdorp et al., 2012) have provided support for the claim that the implementation of PBIS is associated with positive outcomes such as improved academic achievement, reduced bullying and disciplinary incidents, and higher student and teacher engagement.

While studies exploring the value of PBIS have helped to establish the credibility thereof, there is little understanding of how turnover in the principal's office can impact PBIS. As such, educational leaders lack insight into how to manage PBIS while preparing for, and transitioning into, the tenure of a new principal, and new principals entering PBIS environments lack insight into which aspects of PBIS, if any, need to be managed more carefully at such times. The role of

the principal in terms of the performance of the students within the context of the program will likewise be factored into the consideration.

Research conducted by Mascall and Leithwood (2010) explored the sustainability of school programs when principal turnover is experienced. The researchers found that principal turnover can entail a significant negative impact upon the school, particularly in terms of the culture of the school. To address such issues, a coordinated approach to leadership distribution has been found to mitigate some of the negative repercussions of principal turnover, as discussed herein. Principals are broadly impactful upon the entirety of the institution in which they serve, with principal departure due to turnover often resulting in a decrease in school performance. The two years following the departure of a principal are characterized by high teacher turnover in concert with a drop in overall school performance (Miller, 2009). The principal plays a key adhesive role in terms of the structure of the school, with the loss of a principal destabilizing the structure of authority and thereby the culture of the educational setting in which turnover is experienced.

The departure of the principal is broadly detrimental to the mission of the school and its various inherent programs and endeavors. The sustainability of programs that are in place prior to the departure of a principal are imperiled due to the far reaching negative repercussions of principal turnover, particularly in relation to teacher turnover and performance levels of the school at large. According to Weinstein, Jacobowitz, Ely, Landon, and Schwartz (2009) the sustainability of school achievement gains is lessened by principal turnover, serving as a detriment to the future capacity of the school to perform or meet performance goals. This study is focused on the relationship of principal turnover on the indicators of successful maintenance of the ongoing PBIS programs in public elementary and middle schools in the state of Minnesota.

Background of the Study

PBIS is one of several school-wide, behavioral programs designed to give principals, teachers, and other school personnel an evidence-based blueprint for improving the disciplinary, academic, and motivational quality of a school (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012). The underlying societal and institutional support for PBIS initiatives in the United States' public education system is rooted largely in the growing rate of violent and disruptive behavior amongst American students. Disruptive and violent behavior has become such a significant issue that schools have implemented behavioral control initiatives to curb such activities. The key purpose of PBIS is "to prevent disruptive behavior and enhance the school's organizational climate by creating and sustaining a comprehensive system of behavioral support" (Bradshaw et al., 2008, p. 2). The importance of PBIS is due largely to the growing national trends related to student behavior, whether disruptive, violent, or otherwise detrimental to the academic environment.

PBIS is effective only insofar as it is supported, with prior measures to address disruptive behavior having proven to be unsustainable due to their inefficacy. Sugai and Horner (2006) noted that PBIS and the efficacy of the program are largely mitigated by sustainment efforts. The sustainability of PBIS efforts however has been limited by many factors, including decreasing resources, multiple competing and often overlapping initiatives, less time, and fewer qualified personnel. The preexisting approach to disruptive behaviors has been to escalate the response to the behaviors in order to proportionally increase the severity of the punishment to the severity of the negative behavior. Such strategies however have been found to be least effective for those students most likely to engage in disruptive behavior, leading to the development of alternatives,

such as PBIS (Sugai & Horner, 2006). PBIS is a means through which preexisting disciplinary strategies that have failed are being addressed.

Disruptive and violent student behavior is detrimental to the academic environment. The outcomes of PBIS are of value in highlighting the goals of the program. Effectively implemented PBIS programs have been found to reduce the number of suspensions, and decrease the number of office discipline referrals. A drop in such disciplinary measures achieved through PBIS has also been found to entail improvements in the academic performance of the students of the institution in which PBIS was implemented (Bradshaw et al., 2008). PBIS is meant to target student behaviors in order to support academic achievement, however, the position and role of the staff, whether teachers, administrators, or the principal, is central to the efficacy of such targeted measures to influence the students' performance levels.

Bradshaw et al. (2010) have explored the value of SWPBIS, Schoolwide Positive Behavioral Interventions and Supports. SWPBIS in contrast to PBIS is a schoolwide prevention strategy that has been implemented in over 9,000 schools across the United States to address the growing issues therein associated with disruptive and violent behavior. The purpose of SWPBIS is "to alter school environments by creating improved systems and procedures that promote positive change in student behavior by targeting staff behaviors" (Bradshaw et al., 2010, p. 133). The popularity of SWPBIS programs across the nation demonstrates the significance of disruptive and violent student behavior within the context of the American public education system.

The PBIS system emphasizes an integration of measurable outcomes, data-based decision making, evidence- based practices, and overt support systems for implementers (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012). PBIS is not a specific

program or curriculum, but rather, a systems change in how school personnel operate (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012). The implementation of PBIS is thereby relatively varied given that the staff of each school environment naturally varies, and thus the issues that are in place within the environment may also be limited or manifested in different ways.

PBIS is not a clearly delineated program that is rooted in specific concepts, rules, and procedures. Instead, PBIS and the procedures related to it are based in basic and generally understood social learning, behavioral, and organizational principles. Rooting the process in concepts that are 'generally understood' is quite risky. Oftentimes, given the perception of the general nature of the requisite knowledge needed for PBIS initiatives, schools will implement a schoolwide PBIS prior to receiving formal training into the procedures that are to govern the institution and implementation (Bradshaw et al., 2008). The lack of training within the context of school staff prior to the implementation of a PBIS program precludes the initiative from being effectively established or conducted, thereby limiting its potential to achieve the intended outcome of decreasing disruptive and violent student behaviors that are detrimental to school performance.

The successful implementation of a schoolwide PBIS initiative is supported through adequate pre-rollout training on behalf of the staff members who are to be tasked with engaging in and supporting the initiative. Bradshaw et al. (2008) noted that oftentimes PBIS programs are instituted before staff has had the requisite training to effectively do so. This is detrimental to the capacity of the PBIS effort to be successful. Factors that influence the success of PBIS are thereby highly important.

Bradshaw, Koth, Thornton, and Leaf (2009) considered factors that support or inhibit the success of PBIS programs. One of the key factors of influence behind the successful outcome of a PBIS program is that of training. Training supports the capacity of schools to implement the PBIS program and also entails the achievement of greater improvements through the program. Variables that have been found to positively influence the outcome of PBIS programs in trained schools include institutional integrity and collegial leadership (Bradshaw et al., 2009). Weinstein et al. (2009) found that principal turnover is highly impactful upon the organizational climate of a school and its culture, and thus principal turnover is detrimental to institutional integrity and collegial leadership, thereby inhibiting the success of PBIS efforts.

The organizational health of a school is highly influential upon the efficacy of a PBIS endeavor (Bradshaw et al., 2009). When principal turnover is experienced, the organizational culture of a school is damaged (Weinstein et al., 2009). The capacity of a PBIS initiative to produce positive changes in terms of student behavior, staff behavior must also be shifted. It is the responsibility of the staff within the context of PBIS efforts to clearly articulate positive behavioral expectations (Bradshaw et al., 2009). For a teacher or other school staff member to clearly articulate their expectations to students in terms of their behavior, these expectations must be clearly known and understood.

Staff training is absolutely essential to provide support for PBIS initiatives. It is through the teachers and school staff that students are made aware of the behavioral expectations that the program is placing upon them. It is then the prerogative of school staff to provide incentives to students to engage in the desired behavioral shifts or changes. Decisions made on behalf of teachers and staff are meant to be based upon relevant data (Bradshaw et al., 2009). For PBIS to be effective, teachers and other school staff members must be effectively trained and

knowledgeable on the program and its tenets, as otherwise the primary means of enforcement and reinforcement of the PBIS initiative is lacking, and thus the potential of success is drastically curtailed.

Horner et al. (2009) conducted a randomized, wait-list controlled trial to determine the effects of a schoolwide PBIS at elementary schools in Hawaii and Illinois. The researchers found that training and technical assistance were functionally linked to improved implementation of universal-level schoolwide PBIS practices. Improvements in the utilization SWPBIS "was functionally related to improvements in the perceived safety of the school setting and the proportion of third graders meeting or exceeding state reading assessment standards" (Horner et al., 2009, p. 1). Training and ongoing technical assistance to staff members in the educational institutions studied were found to be of value, highlighting the importance of providing staff members with sufficient training prior to rolling out the PBIS, and providing ongoing support to ensure the effective functioning of the initiative.

A key goal underlying the application of PBIS is the reduction of disciplinary problems. Disciplinary problems are addressed through the application of social learning, organizational behavioral, and social learning principles. The aim of PBIS is to shift the environment of the target school through the creation of improved systems and procedures through which positive change in student behavior is facilitated through the targeting of staff behaviors (Bradshaw et al., 2008). Central to PBIS is the link between the aims and objectives of the program, and the behavior of school staff in either facilitating or inhibiting the realization of such aims and objectives.

Miller (2009) noted that the experience of principal turnover results in a negative shift in the culture of the school. Weinstein et al. (2009) likewise found that principal turnover

destabilizes the culture that was in place, with the new principal often encountering resistance rather than support when engaging with a new school environment and its inherent culture. Effective PBIS initiatives oftentimes entail the realization of benefits in terms of organizational health, supported through the targeting of staff behaviors (Bradshaw et al., 2008). The strong link between principal turnover, school culture, and organizational health illustrates the clear link between PBIS and culture, and the importance of noting the significant and detrimental side-effects of teacher turnover when assessing PBIS initiatives and their capacity to continue viably following an experience of principal turnover.

The importance of involving the family in PBIS measures is due to the recognition of the increasingly central role held by parents and families in the educational achievement of their children. Family members are recommended to be incorporated into the decision-making process surrounding their children. This is due to the fact that family members are in effect experts on their own children, and thus, should be allowed, encouraged, and supported to participate in the decision-making process surrounding their child (Muscott et al., 2010). The influence of parents upon the educational achievement of the children exhibits the value of incorporating them into the support of the PBIS.

Muscott et al. (2010) noted the value in the creation of home-school partnerships to support the efficacy and outcomes of PBIS initiatives undertaken in the schools, highlighting the potential value of parental involvement. The link between families and schools has the potential to reinforce the effectiveness of PBIS programs. However, there are many barriers that must first be overcome prior to parents and families having the capacity to contribute. Research has found that parents are often uncomfortable holding leadership roles in their children's educations, while teachers are generally uncomfortable with parents holding leadership roles. These two shared

perspectives reduce the capacity of families to take a proactive role in reinforcing PBIS initiatives from the school in the home (Muscott et al., 2010). The efficacy of family involvement is mitigated by family and teacher perceptions concerning their level of involvement and behaviors that are appropriate within the context thereof.

Within the context of the PBIS initiative, teachers play a central role. It is through teachers that the students are directly taught, provided frequent opportunities to practice, and receive regular and contingent acknowledgements of prosocial skills when they are exhibited. These behaviors, undertaken on behalf of teachers, serve to reinforce the targeted behavioral shifts and interventions that are established via the PBIS effort. Not only is the individual student central to the effort, but also the classroom, and school at large (Sugai & Horner, 2006). The engagement of all members of the institution's staff is necessary to support PBIS, with the departure of the principal disrupting the environment of the school, thereby damaging the potential of success for PBIS.

PBIS requires principals to understand not only the base principles of PBIS but also how best to establish and promote PBIS within a specific school setting (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012). It appears that a principal with substantial experience of a specific school might be better suited to ensuring the success of PBIS over a sustained period of time. This assertion has not previously been empirically tested by measuring the impact of principal turnover on PBIS success.

Statement of the Problem

The problem is that the impact of principal turnover on the success of ongoing PBIS programs is unknown. Principal turnover is a significant issue in the modern educational context of the United States. In fact, research conducted by Weinstein et al. (2009) found that during the

first 10 years of a new school's existence, principal turnover is particularly high. Of the schools assessed by researchers, just 16% had the same principal over the course of 10 years, while 48% experienced one change, and 36% experienced two or more changes in the principal during just a 10-year period. The prevalence of principal turnover highlights the broad significance of the problem. In the absence of this knowledge, incoming principals lack evidence-based guidance for how to manage an ongoing PBIS program. The transitional period between principals is particularly impactful upon their capacity to continue forward successfully with pre-existing programs. Oftentimes, new principals encounter an informal transition period in which support systems are informal, and oftentimes, resistance is present (Weinstein et al., 2009). Due to the significant issues associated with principal turnover, and the ongoing level of research on the subject given its lack of understanding, clearly, educational leaders lack insight into the impact of principal turnover on PBIS-utilizing schools.

Purpose of the Study

The purpose of this study is to determine the impact of the independent variable of principal turnover on the dependent variable of PBIS program success according to the indicators of maintenance of the PBIS system. The implementation-training program supported by the Minnesota Department of Education is a three-year process. The sample size of the study will focus on those schools that have completed the training program and have been identified as a PBIS school for three years or longer.

Rationale

PBIS has been implemented by larger numbers of schools (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012). Scholars have also documented an acceleration in the turnover of public school principals in the 2000s and 2010s

(Béteille, Kalogrides, & Loeb, 2012; Miller, 2013; Ronfeldt, Loeb, & Wyckoff, 2013). Given the environment of rapid principal turnover and widespread PBIS implementation, educational leaders and other stakeholders are naturally interested in how well new principals can manage schools' existing cultures and programs (Béteille et al., 2012; Miller, 2013; Ronfeldt et al., 2013), including PBIS. In the absence of empirical tests of the impact of principal turnover on PBIS success, stakeholders lack vital information about an important management challenge confronting new principals of PBIS-utilizing schools.

Research Questions

RQ1: What is the relationship between principal turnover on the indicators of successful maintenance of the PBIS program in post-PBIS training public elementary and middle schools in the state of Minnesota?

This research question was divided into several sub-research questions to address the indicators of successful maintenance, as follows:

RQ1a: What is the relationship between principal turnover on the indicator of using data to make decisions regarding additional training for public elementary schools in the state of Minnesota?

RQ1b: What is the relationship between principal turnover on the indicator of using data to make decisions regarding additional training for public middle schools in the state of Minnesota?

RQ1c: What is the relationship between principal turnover on the indicator of providing professional development to staff for public elementary schools in the state of Minnesota?

RQ1d: What is the relationship between principal turnover on the indicator of providing professional development to staff for public middle schools in the state of Minnesota?

RQ1e: What is the relationship between principal turnover on the indicator of using data to inform and update the action plan for public elementary schools in the state of Minnesota?

RQ1f: What is the relationship between principal turnover on the indicator of using data to inform and update the action plan for public middle schools in the state of Minnesota?

RQ1g: What is the relationship between principal turnover on the indicator of having documentation to support ongoing use of PBIS for public elementary schools in the state of Minnesota?

RQ1h: What is the relationship between principal turnover on the indicator of having documentation to support ongoing use of PBIS for public middle schools in the state of Minnesota?

RQ1i: What is the relationship between principal turnover on the indicator of establishing links with the community to provide incentives for students and staff for public elementary schools in the state of Minnesota?

RQ1j: What is the relationship between principal turnover on the indicator of establishing links with the community to provide incentives for students and staff for public middle schools in the state of Minnesota?

RQ1k: What is the relationship between principal turnover on the indicator of sustaining morale among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions for public elementary schools in the state of Minnesota?

RQ1l: What is the relationship between principal turnover on the indicator of sustaining morale among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions for public middle schools in the state of Minnesota?

RQ1m: What is the relationship between principal turnover on the indicator of parent involvement in the PBIS-related activities, programs, and/or services for public elementary schools in the state of Minnesota?

RQn: What is the relationship between principal turnover on the indicator of parent involvement in the PBIS-related activities, programs, and/or services for public elementary schools in the state of Minnesota?

Significance of the Study

By providing an empirical model of the relationship between principal turnover and PBIS program success, the study will provide educational leaders, principals, and other stakeholders in the state of Minnesota with an evidence-based understanding of the impact of new principals on the successful maintenance indicators for PBIS. These data will, in turn, provide incoming principals with foreknowledge about which aspects of a PBIS program require more careful management under their tenure. School district leaders can also use these data to brief and prepare principals entering PBIS-utilizing schools.

Definition of Terms

PBIS or SWPBIS: PBIS, or Positive Behavioral Intervention and Supports, or School-Wide Positive Interventions and Supports is an evidence-based, school-wide behavioral and governance policy designed to improve academic achievement, reduced bullying and disciplinary incidents, and higher student and teacher engagement (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012).

Assumptions and Limitations

One key limitation of the study is the so-called third variable problem (McClure et al., 2014). PBIS effects attributed to a change in principals could be conceptually related to some other variable not measured in the study. The risks surrounding this limitation have been addressed by attempting to control for other variables, as described in Chapter 3. The risk of the third-variable problem cannot be completely mitigated.

Nature of the Study

The nature of the study is quantitative, quasi-experimental, survey-design and post-positivistic . The study is quantitative in that its variables, and the relationships between them, are mathematically defined and governed by objective rules of statistical deduction and inference, thus meeting the main criteria of quantitative studies (Balnaves & Caputi, 2012; Creswell, 2009, 2012; B. Johnson, 2001). The study is quasi-experimental insofar as it contains a treatment (principal turnover) and an effect (PBIS program success) that were not administered by the researcher in a controlled setting, but that occurred naturally, thus meeting the criteria for quasi-experimental studies (Leary, 2011; McNabb, 2010). The study incorporates a survey design in that principal turnover and maintenance score data will be collected using a web-based questionnaire. The study is post-positivistic in that there is no assumption that the mathematically defined results of the study represent the sole possible reality pertaining to the relationship between variables, thus meeting the main criterion of post-positivistic studies (Creswell, 2009).

Organization of the Remainder of the Study

The remainder of the study has been organized as follows. Chapter 2, the review of literature, contains an overview of (a) the theories of coordinated behavioral change that underlie PBIS and similar programs; (b) the empirical findings in previous studies of PBIS program

success and (c) the role a principal plays in the success of systemic change. The main literature gap established in Chapter 2 is the absence of empirical testing of the impact of principal turnover on PBIS program success. Chapter 3 contains a description and defense of every relevant aspect of research design and methodology of the study. Chapter 4 contains a presentation of results. Chapter 5 contains the conclusion, comprising a summary of findings, a discussion of findings with relevant to past theories and empirical findings, a presentation of recommendations for schools, a presentation of recommendations for future scholarship, and a summative conclusion.

Chapter 2. Literature Review

Introduction

The literature review has been divided into three sections. The first section of the literature review contains an exposition of the background of PBIS. The second section of the literature review discusses some of the theories related to PBIS along with an integrated overview and critical appraisal of existing empirical studies of PBIS. The third and final section of the literature review contains an overview of the role of principals on the success of interventions such as PBIS.

Background of PBIS

For the latter part of the 20th century, public school districts have concentrated their efforts on school reform and improvement (Borg, Mary, & Harriet, 2012; Bower, 2013; Griner & Stewart, 2013; Hampden-Thompson, Guzman, & Lippman, 2013; Hartney & Flavin, 2014; Kaniuka, 2012; Meyers, 2012; Shuffelton, 2013; Stacer & Perrucci, 2013). Congress and other educational policy makers have provided and continue to provide funding sources for schools to implement evidenced-based school reform practices. One of the first programs established in 1998 and amended after No Child Left Behind (NCLB) Act of 2001 was the Comprehensive School Reform (CSR) program followed by the "Race to Top" program in 2009 (M. A. Johnson & Stephens, 2012).

The Comprehensive School Reform Program (CSRP), formerly known as the Comprehensive School Demonstration Program (CSDP), was authorized as Title I, Part F, of the Elementary and Secondary Education Act (Slavin & Madden, 2013). This was signed into law on January 8, 2002. The program provided grants to schools to adopt Comprehensive School

Reform (CSR) models. In general, a CSR model was and continues to be a school-wide system of evidenced based practices adopted to improve or promote everything from curriculum to school management (Slavin & Madden, 2013). The funding sources from the US government were targeted to the schools most in need of reform and improvement. Proponents of CSR contended that instead of adding one program on top of another, the holistic approach of CSR transforms the way an entire school functions, leading to the ultimate goal of greater student achievement (Slavin & Madden, 2013). Rather than creating individual programs targeted at specialized student populations without a vulgar thread connecting them, CSR affects all students, teachers, curricula, and school management (ECS, 1999). The last CSR funding was appropriated in 2008 (Slavin & Madden, 2013).

President Barack Obama and Secretary of Education, Arne Duncan announced a program called "Race to the Top" on July 24, 2009. The program was funded by the ED Recovery Act as part of the American Recovery and Reinvestment Act of 2009. The "Race to the Top" (also abbreviated R2T, RTTT, or RTT) was, and continues to be, a specific United States Department of Education competitive grant created to spur and reward innovation and reforms in state and local district K-12 education (M. A. Johnson & Stephens, 2012). The initiative offers incentives to states willing to implement systemic reform to improve teaching and learning in America's schools (M. A. Johnson & Stephens, 2012). The goal of the program is to drive states nationwide to pursue higher standards, improve teacher effectiveness, use data effectively in the classroom, and adopt new strategies to help low performing schools (M. A. Johnson & Stephens, 2012).

While comprehensive evaluation of the "Race to the Top" program is being conducted, results are not going to be available for several years (Glazer & Peurach, 2013). With that said, the US Department of Education's fifth year report evaluating the Comprehensive School

Reform (CSR) program after it establishment by No Child Left Behind (NCLB) found no significant impact associated with schools awarded CSR funding and wide-spread achievement gains in reading and math (Glazer & Peurach, 2013). The US Department of Education believed possible reasons for the status might have been linked to implementation issues. Specifically, the report suggested that many new professional development and effective school initiatives positioned by leadership changes may have impacted the implementation and development of new school reform programs (Glazer & Peurach, 2013).

The US Department of Education recommended the need for schools to continue to implement scientifically researched-based practices while congruently documenting the effectiveness of those practices in order for schools to understand what programs and/or systems may work for their intended outcomes (Hamilton, Heilig, & Pazey, 2014). Therefore, various schools across the United States are continuing with these recommendations and are seeking assistance from external resources. For example, over 10,000 schools across the United States have or are in the process of implementing the evidenced-based practice (EBP) known as Positive Behavioral Interventions & Supports (PBIS) or also known as School Wide Positive Behavioral Interventions & Support (SWPBIS) (Bradshaw et al., 2008; MPBIS, 2015). For the purpose of this study, PBIS will be used to represent the evidenced based practice model.

PBIS is defined as "an operational framework for the implementation of evidenced-based instructional and behavioral practices" (OSEP Center on Positive Behavioral Interventions & Supports, 2010). School districts are able to apply for "Race to the Top" funding for implementing PBIS. Schools adopting the PBIS framework organize a leadership team with representation from key stakeholders (e.g., general education, special education, families, mental health, and administration). The PBIS leadership team then participates in a three-year

implementation process with support and training from the Positive Behavioral Intervention and Support (PBIS) organization. Thus far, implementation of PBIS has produced a number of evaluation studies indicating initial effectiveness (within the first three years) of either improved academic performance and/or reductions in office discipline referrals (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012). However, while there are many studies providing promising evidence to support initial effectiveness of PBIS, there is a continuing need to evaluate the sustainability of the program (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012).

PBIS effectiveness & sustainability efforts. Over 40 years of research has helped to establish PBIS as an effective behavioral intervention system in the United States (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012). PBIS has been linked to both a positive school climate and an increase in student achievement in certain academic subjects (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012). Some research has also shown that PBIS has helped to increase teacher motivation or satisfaction; however, there is a need for additional research in this area (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012).

Many rigorous studies have indicated that schools implementing PBIS had significant reductions in Office Discipline Referral (ORD) data (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Luiselli, Putnam, & Handler, 2001; McIntosh, Horner, & Sugai, 2009; Todd, Haugen, Anderson, & Spriggs, 2002; Waasdorp et al., 2012; Wasilewski, Gifford, & Bonneau, 2008). Luiselli et al. found a 69% reduction in ODRs and a 62% reduction in Out of School Suspensions (OSS) in a quantitative study of the impact of PBIS implementation on disciplinary outcomes. Todd et al. found an 80% reduction in ODRs in the first year of PBIS

implementation and a 76% reduction in the second year in their article in the Journal of Positive Behavior Supports. Bradshaw & Leaf (2008) indicated reduced ODR data as well as improved perceptions of school safety among teachers and staff in a Maryland school system. In 2005, the New Hampshire Center for Effective Behavior Interventions and Supports reported that in one study there was a 28% decrease in ODRs with significant decreases also noted in OSSs (Muscott et al., 2008) Most of these studies were included in peer reviewed journals or 33 involved schools that had strong state-level PBIS leadership teams. Similar results have been obtained from less rigorous studies. In a dissertation research study involving PBIS in two Alabama elementary schools, Palovlich (2008) indicated a reduction in of ODRs, and teachers reported few incidents of problem behavior. Wasilewski et al. researched eight elementary schools in North Carolina that used PBIS and noted that the overall school climate was positive, and teachers indicated that they supported the implementation of PBIS.

Bradshaw et al. (2010) conducted a 5-year longitudinal randomized controlled effectiveness trial of PBIS conducted in 37 elementary schools to examine the impact of training in PBIS on implementation fidelity as well as student suspensions, office discipline referrals, and academic achievement. School-level longitudinal analyses indicated that the schools trained in PBIS implemented the model with high fidelity and experienced significant reductions in student suspensions and office discipline referrals.

Upon having implemented a PBIS measure, it is important that its effectiveness is tracked. During the early adoption period of a new measure, whether pilot-tested or rooted in evidence-based practices, ongoing evaluation is essential. It is through the ongoing evaluation of the practices that have been implemented that their effectiveness is ensured, or should it be lacking, opportunities in place to identify and address any shortcomings (Sugai & Horner, 2006).

The ongoing management of PBIS is essential to ensure that staff is sufficiently performing their end of the equation to in turn produce the desired shifts in behavior.

Mclntosh et al. (2009) presented sustainability strategies related to school-wide and individual positive behavior support. When faced with administrator turnover, team members can enhance sustainability in general by: (1) Ensuring that teams are representative of the whole school; (2) Plan proactively for sustainability (3) Ensure that many individuals understand and have the skills needed to maintain effective practices when key team members (such as the principal) leave; (4) Create a practice handbook which includes detailed descriptions of procedures and protocols. (5) Collect and show data documenting effectiveness and acceptability; (5) Meet with the incoming principal to determine the best way to present current practices as they relate to high-priority initiatives; and (6) Recruit district support.

Within the context of the educational environment, it is essential that organizational or school-wide decisions be based on factors that are relevant to the effectiveness of a particular practice or intervention. In practice however, oftentimes such decisions are not based upon relevant factors, exhibiting mismanagement that serves to curtail the potential of success. To support the capacity of a school to maintain a PBIS initiative, behavior is affected through environmental manipulations, with such manipulations having to be based upon evidence-based data to be of any practical value (Sugai & Horner, 2006). The ongoing management of a PBIS initiative depends on the alignment between the decision-making process and the goals of the intervention.

The IPI Instrument. Positive behavioral interventions and supports (PBIS) are becoming increasingly popular with schools across the country to help create safer learning environments for students. An important aspect of PBIS is the ongoing monitoring and evaluation of implementation fidelity. The School-Based PBIS Implementation Phases Inventory (IPI) is a survey that measures districts support and their investment in PBIS at the following phases: preparation, initiation, implementation, and maintenance. Although a few measures have been created to assess the degree to which schools are implementing the key aspects of PBIS, there remains a need for a tool to categorize a school's overall phase of implementation and document the schools' progression toward sustainability of PBIS.

Bradshaw et al. (2008) found the IPI to be an internally consistent measure with adequate test—retest reliability, interrater reliability, and concurrent validity. These findings provide preliminary evidence that supports the use of the IPI to assess phase of PBIS implementation. The IPI was created by the PBIS Maryland Statewide Initiative to document a school's specific phase or stage of PBIS implementation. The IPI is based in part on Prochaska and DiClemente's (1982) stages-of-change transtheoretical model (Velicer, Prochaska, Fava, Norman, & Redding, 1998), which describes the behavior-change process as occurring across a series of five successive stages (precontemplation, contemplation, preparation, action, and maintenance). Each stage in the model is characterized by a set of attitudes, behaviors, and tasks that need to be fulfilled before one can advance to the next stage. The length of time spent in each stage will vary, and "relapses" to previous stages may occur (Prochaska & Norcross, 2001).

The stages-of-change model has been applied to a variety of health- and mental health–related behavior changes (see Archie et al., 2007; Cohen, Glaser, Calhoun, Bradshaw, & Petrocelli, 2005; Wee, Davis, & Phillips, 2005). Similar stage models have been proposed to

describe the general program implementation process (see Fixsen et al., 2005, for a review). The IPI was developed to serve as both an instrument to monitor schools' implementation and a tool to guide coaches in helping schools complete the tasks typically required of schools that are beginning to implement PBIS.

The IPI includes specific start-up activities that are intended to be completed during initial implementation of the model's critical features. Similarly, the IPI also includes more advanced activities that focus on maintaining and sustaining PBIS and developing secondary and tertiary supports for nonresponders. The information from the IPI can help coaches and technical assistance providers focus on the schools' zone of proximal development and guide their support efforts to meet the schools' immediate and long-term implementation goals (Fixsen et al., 2005; Scott & Martinek, 2006).

The IPI was created through a series of six meetings of the PBIS Maryland State Leadership Team, during which the SET, TIC, and other measures of PBIS (e.g., Effective Behavior Support Survey, Sugai, Todd, & Horner, 2000; and Benchmarks of Quality, Cohen, et al., 2007) were reviewed for commonalities and to create an exhaustive list of key features to include in the IPI. During this iterative process, key features were systematically ordered and clustered into four "phases" based on the PBIS implementation experiences of schools in Maryland.

The final version of the IPI included 44 questions regarding PBIS critical features, routine start-up activities, materials developed for the program, and more formal policies and procedures related to the PBIS program. The questions were grouped into the following four successive phases of PBIS implementation: preparation (school is preparing to implement PBIS; sample items include "School has a coach," "PBIS team has been established"), initiation (school

is beginning to implement PBIS, e.g., “A strategy for collecting discipline data has been developed,” “New personnel have been oriented to PBIS”), implementation (school is actively implementing the core components of the program, e.g., “Discipline data are summarized and reported to staff,” “PBIS team uses data to make suggestions regarding PBIS implementation”), and maintenance (core features of PBIS are in place and the emphasis is on sustaining the program, e.g., “A set of materials has been developed to sustain PBIS,” “Parents are involved in PBIS related activities”). The IPI was pilot-tested by the PBIS coaches working with 21 Maryland elementary schools trained in PBIS and found to be user friendly to administer and (e) multivariate analyses on the IPI data by the number of years implementing PBIS. Data for this study come from a statewide evaluation of PBIS in Maryland public schools and information collected specifically to examine the reliability of the IPI.

Role of Principals on the Success of Interventions such as PBIS

The aspect of school climate theory most relevant to the current study is the theory of principal-driven support. Researchers have described a number of factors that affect the sustainability of evidence-based practices in school settings. For example, they have identified contextual relevance, staff buy-in, professional development and ongoing technical support, data-based decision making, and a shared vision of expectations and desired outcomes among school personnel as critical features of sustained innovation (Baker, Cersten, Dimino, .& Grifflths, 2004; Coffey & Horner, 2012). The factor that has received the most focus in the literature is administrator support. School personnel perceive that the role of the building administrator is singularly important to the sustained implementation of effective programs and practices (Mclntosh et al., 2013).

Building administrators are in a unique position to improve the likelihood of sustained implementation because they can do the following: play a key role in creating a school culture in which staff members share common values and work together to achieve common goals; Provide clear staff expectations; Ensure accountability by routinely asking staff to report on outcome data; and creatively allocate limited resources to help ensure that personnel have access to necessary supports (e.g., data systems needed for decision making, time available to meet regularly). Administrators can thereby help ensure the high levels of fidelity of implementation that are associated with sustained success (Bambara, Coh, Kern, & Caskie, 2012).

Particular theoretical attention has been paid to the importance of the principal as a leader. Leadership is about establishing widely agreed upon and worthwhile directions for the organization and doing whatever it takes to support people to move in those directions. Stability is the goal of what is often called management. Improvement is the goal of leadership. It is clear that both are very important (Leithwood, K., Jantzi, D., & McElheron-Hopkins, C., 2006).

Leadership is considered to be vital to the successful functioning of many aspects of a school. In simple terms, **"**Leadership is the guidance and direction of instructional improvement" (Elmore, 2000, p. 14). Marzano (2005) examined 69 studies involving 2,802 schools, approximately 1.4 million students, and 14,000 teachers. The results indicated that school leadership has a substantial effect on student achievement. Furthermore, Leithwood et. al. (2004) explained there are virtually no documented instances of troubled schools being turned around without intervention by a powerful leader. Many other factors may contribute to such turnarounds, but leadership is the catalyst (Leithwood, Louis, Anderson, & Wahlstrom, 2004, p. 5). While today's school leader is encompassed by various roles including not just the principal but also deputy and assistant principals, leadership teams, school governing boards, and school

staff involved in leadership positions, the building principal continues to be viewed as the highest authority and given the prime responsibility for the organization (Pont, Beatriz, Nusche, Deborah, Moorman, & Hunter, 2008).

Since the so-called effective schools research of the 1980s, which identified the importance of principals who function as strong instructional leaders in improving academic achievement (Hallinger & Murphy, 1986), several lines of research identified the critical role of principals in recruiting, developing, and retaining teachers; creating a learning culture within the school; and supporting improvements in student learning (Leithwood & Duke, 1999; Leithwood et al., 2004; Pounder, Ogawa, & Adams, 1995). Research continues to highlight the importance of principal leadership. "A principal can impact the lives of anywhere from a few hundred to a few thousand students during a year" (Schmidt-Davis & Bottoms, 2011, p. 2). The Wallace Foundation (2011) explained that the principal's role has become all the more essential as the U.S. Department of Education and state education agencies embark on transforming the nation's 5,000 most troubled schools, a task that depends on the skills and abilities of thousands of current and future school leaders. In a recent report The Wallace Foundation identified five key functions of principal leadership:

- Shaping a vision of academic success for all students, one based on high standards.
- Creating a climate hospitable to education in order that safety, a cooperative spirit and other foundations of fruitful interaction prevail.
- Cultivating leadership in others so that teachers and other adults assume their part in realizing the school vision.
- Improving instruction to enable teachers to teach at their best and students to learn at their utmost.

- Managing people, data and processes to foster school improvement.

(Wallace_Institute, 2015, p. 4).

A report from Mid-Continent Research for Education and Learning (McREL) spoke to the importance of the vision set by the principal: Effective school leaders know how to focus the work of the school on the essential. They have a clear mission or purpose for the school and identify goals that align with that mission. They communicate the purpose and goals in a meaningful way such that all stakeholders understand what they need to do (McIver, Kearns, Lyons, & Sussman, 2009).

School leadership plays a major role in school reform. Successful implementation of school improvement activities requires leadership at the school level. An effective school leader finds a way to make new initiatives meaningful to all school-level stakeholders (Clayton & Johnson, 2011). Elmore argued that "standards-based reform poses problems of the deepest and most fundamental sort about how we think about the organization of schooling and the function of leaders in school systems and schools" (Elmore, 2009, p. 35). Large scale, sustained, and continuous improvement is the path to carry out best practices in public schools today. Consequently, unless school leaders take ownership in the reform and agree with its purpose, they are unlikely to engage school staff and students in the reform's objectives (Caldarella, Shatzer, Gray, Young, & Young, 2011).

In one of several recent studies identifying school leadership as a key factor in schools that outperform others with similar students, researchers found that achievement levels were higher in schools where principals undertake and lead a school reform process; act as managers of school improvement; cultivate the school's vision; and make use of student data to support instructional practices and to provide assistance to struggling students (Grissom & Loeb, 2011;

Peterson & Heywood, 2007). With the increased attention on educational reform and the added pressures for higher student achievement on mandated tests primarily brought on by the adoption of the No Child Left Behind Act of 2001, effective leadership plays a critical part in the success of the school and has a substantial impact on the lives of the students (Mascall & Leithwood, 2010).

Grissom and Loeb (2009) argued that:

Principals devoting significant time and energy to becoming instructional leaders in their schools are unlikely to see improvement unless they increase their capacity for organizational management as well. Effective instructional leadership combines an understanding of the instructional needs of the school with an ability to target resources where they are needed, hire the best available teachers, provide teachers with the opportunities they need to improve, and keep the school running smoothly. (Grissom & Loeb, 2011, p. 1100)

After an intensive qualitative study involving over 200 interviews, supplemental observations, and a review of archival data from the 1980's to early 2000's, Hargreaves & Goodson discovered a change in leadership has the most significant impact on provoking a shift in direction in the life of a school. "Leadership succession is, in this sense, almost always an emotionally intense episode in the life of a school. It is a critical event that calls for careful management" (Hargreaves & Goodson, 2006, p. 19).

Hargreaves (2009) identified five challenges or obstacles that stand in the way of effective leadership succession: (a) succession is poorly planned; (b) succession transitions are badly managed; (c) succession is often on the wrong frequency; (d) succession planning fails to consider the emotional aspects; and (e) succession is not treated as a systematic problem.

Instability is one of the most powerful explanations for the failure of most school improvement initiatives and it takes many forms. One of the most obvious and arguably the most frequent is instability of leadership in the form of frequent head and deputy head turnover. It has devastating effects on a school's improvement efforts (Hargreaves, 2009; Mascall & Leithwood, 2010). Building administrators (i.e. principal, assistant principal, dean of students) play a vital role in the sustained use of effective programs and practices. Administrator turnover can pose a significant threat to the sustainability of these programs and practices. When a committed leader leaves his or her position, staff may quickly lose momentum, particularly if the administrator leaves during the early stages of adoption of a new practice (Bradshaw, Koth, Thornton, & Leaf, 2009). District policies sometimes require that: principals rotate among schools on an arbitrary schedule regardless of whether a new practice is being instilled and exemplary administrators quickly rotate to different schools, leaving less experienced leaders to oversee continuing implementation of practices.

The continuous push to improve educational practices by adopting new trends, incoming principals often neglect existing practices or attempt to leave their mark by instituting new policies and practices (Clayton & Johnson, 2011). These policies and practices can impede attempts to sustain effective practices and can decrease the likelihood of the long-term positive outcomes of those practices for students. Various empirical findings confirm the theoretical importance of principal leadership to salutary school outcomes.

Gaps in the Literature

Although numerous empirical studies (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Luiselli et al., 2001; Todd et al., 2002; Waasdorp et al., 2012) have supported the thesis that PBIS implementation is associated with desired outcomes including

improved academic achievement, reduced bullying and disciplinary incidents, and higher student and teacher engagement, the literature does not appear to have addressed the question of how principal turnover impacts PBIS. There are no empirical studies measuring the impact of principal change on the direct measure of IPI maintenance. A methodology for closing these observed gaps in the literature will be described in the third chapter of the study.

Summary

The literature review contained an exposition of the background of PBIS, a discussion of theories and empirical findings related to PBIS, and an overview of the role a principal plays in the success of a school. The overall conclusion of the literature was that, while there is substantial evidence that PBIS is effective, PBIS also appears to be reliant on the experience and expertise of principals, which in turn supports the inference that principal turnover could disrupt the success of PBIS. The validity of this theoretical conclusion will be tested by the methods described and defended in Chapter 3 of the study.

Chapter 3. Methodology

Philosophy & Justification

The problem identified in this study was that the impact of principal turnover on the success of ongoing PBIS programs was unknown; accordingly, the purpose of the study was defined as modeling the impact of the independent variable of principal turnover on the dependent variable of PBIS program success based on data collected from post-training PBIS-utilizing elementary and middle schools in the state of Minnesota. As conceived, the purpose of the study involved measuring change in one variable associated with change in another variable, which Creswell (2009) defines as the basic hallmark of all quantitative research.

While the impact of new principals can also be studied in the subjective, inductive, and context-laden manner associated with qualitative methods (Balnaves & Caputi, 2012; Creswell, 2009, 2012; Creswell & Plano Clark, 2011; Denzin & Lincoln, 2011; Klenke, 2008; McNabb, 2010; Merriam, 2012), the orientation of the current study was solely suited to quantitative research. The specific research design for the study was quasi-experimental. These aspects of the study are further defined in the section on research design strategy appearing subsequently in the chapter.

Theoretical Framework

According to Henderikus, a theory "is normally aimed at providing explanatory leverage on a problem, describing innovative features of a phenomenon or providing predictive utility" (Henderikus, 2010, p. 1498). PBIS is not itself a theory; rather, PBIS can be considered a practical embodiment of theories of school climate (Adamski et al., 2013; Ashkanasy, Vilderom, & Peterson, 2011; Bondy et al., 2007; Caldarella et al., 2011; Leadbeater, Sukhawathanakul,

Smith, & Bowen, 2015; MacKinnon, 2000; Ross, Bondy, Gallingane, & Hambacher, 2008) that focus on the role of overall behavioral change among school personnel and students as drivers of desired results such as academic performance and improved discipline. Assorted theories of school climate thus predict that a behavioral change program such as PBIS is likely to be successful, and these theories have been previously verified by empirical studies (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012) of the success of PBIS. Without these school climate theories and their empirical verifications, there would be no rationale for the present study.

School climate theories go beyond predicting that behavioral interventions can result in improved outcomes for a school. Such theories (Adamski et al., 2013; Ashkanasy et al., 2011; Bondy et al., 2007; Caldarella et al., 2011; Leadbeater et al., 2015; MacKinnon, 2000; Ross et al., 2008) also suggest that successful behavioral changes require dedicated and knowledgeable school personnel. If so, then there is a sound theoretical reason to believe that principal turnover could disrupt the kinds of improvements realized by a PBIS program implemented under a previous principal. This theoretical prediction was empirically tested by the methods described and defended in this chapter.

Variables

The independent variable of the study was principal turnover. The main dependent variable of the study was PBIS success, which, for the purpose of this study, was measured as a score (0, 1 or 2) on each maintenance phase indicator of the Implementation Phases Inventory for Assessing Fidelity of School-Wide Positive Behavior Supports (IPI), an instrument that measures the success of PBIS. IPI score was considered a direct measurement of PBIS success.

The impact of a new principal on PBIS was measured by the direct response variable of change in maintenance phase indicators of the IPI. One group being the public elementary and middle schools that have experienced principal turnover compared to the other group of public elementary and middle schools that have not experienced principal turnover. The measurement scale of the IPI maintenance indicators was individually scored as 0, 1 or 2. In addition to the independent variable and direct response variable, it was also necessary to include the control variable of type of school.

Research Questions and Hypotheses: Question 1 with 7 sub-research questions

Research questions	**Hypotheses (related to the research questions)**	**Alternative hypotheses**	**Statistic tool used**	**Sub-category maintenance phase scores on the IPI**
RQ1: What is the relationship between principal turnover on the indicators of successful maintenance of the PBIS program in post-PBIS training public elementary and middle schools in the state of Minnesota?	H*1*0: There is no significant relationship between principal turnover on the indicators of successful maintenance of the PBIS program in post-PBIS training public elementary and middle schools in the state of Minnesota.	H*1*A: There is a significant relationship between principal turnover on the indicators of successful maintenance of the PBIS program in post-PBIS training public elementary and middle schools in the state of Minnesota.	Percentage Analysis	
RQ1a: What is the relationship between principal turnover on the indicator of using data to make decisions regarding additional training for public	H*1*0: There is no significant relationship between principal turnover on the indicator of	H*1*A: There is a significant relationship between principal turnover on the indicator of using data to make decisions regarding	Percentage analysis of each data table.	Data are used to make decisions regarding additional training

elementary schools in the state of Minnesota?	using data to make decisions regarding additional training for public elementary schools in the state of Minnesota.	additional training for public elementary schools in the state of Minnesota.		
RQ1b: What is the relationship between principal turnover on the indicator of using data to make decisions regarding additional training for public middle schools in the state of Minnesota?	H*1*0: There is no significant relationship between principal turnover on the indicator of using data to make decisions regarding additional training for public middle schools in the state of Minnesota.	H*1*A: There is a significant relationship between principal turnover on the indicator of using data to make decisions regarding additional training for public middle schools in the state of Minnesota.	Percentage analysis of each data table.	Data are used to make decisions regarding additional training
RQ1c: What is the relationship between principal turnover on the indicator of providing professional development to staff for public elementary schools in the state of Minnesota?	H*1*0: There is no significant relationship between principal turnover on the indicator of providing professional development to staff for public elementary schools in the state of Minnesota.	H1A: There is a significant relationship between principal turnover on the indicator of providing professional development to staff for public elementary schools in the state of Minnesota.	Percentage analysis of each data table.	Professional development is provided to staff
RQ1d: What is the relationship between principal turnover on the indicator of providing professional	H*1*0: There is no significant relationship between principal	H1A: There is a significant relationship between principal turnover on the indicator of	Percentage analysis of each data table.	Professional development is provided to staff

development to staff for public middle schools in the state of Minnesota?	turnover on the indicator of providing professional development to staff for public middle schools in the state of Minnesota.	providing professional development to staff for public middle schools in the state of Minnesota.		
RQ1e: What is the relationship between principal turnover on the indicator of using data to inform and update the action plan for public elementary schools in the state of Minnesota?	H*1*0: There is no significant relationship between principal turnover on the indicator of using data to inform and update the action plan for public elementary schools in the state of Minnesota.	H1A: There is a significant relationship between principal turnover on the indicator of using data to inform and update the action plan for public elementary schools in the state of Minnesota.	Percentage analysis of each data table.	Data are used to inform and update the action plan
RQ1f: What is the relationship between principal turnover on the indicator of using data to inform and update the action plan for public middle schools in the state of Minnesota?	H*1*0: There is no significant relationship between principal turnover on the indicator of using data to inform and update the action plan for public middle schools in the state of Minnesota.	H1A: There is a significant relationship between principal turnover on the indicator of using data to inform and update the action plan for public elementary schools in the state of Minnesota.	Percentage analysis of each data table.	Data are used to inform and update the action plan
RQ1g: What is the relationship between principal turnover on the indicator of having documentation to support ongoing use	H*1*0: There is no significant relationship between principal turnover on the	H*1*A: There is a significant relationship between principal turnover on the indicator of having	Percentage analysis of each data table.	There is documentation to support the ongoing use of PBIS

of PBIS for public elementary schools in the state of Minnesota?	indicator of having documentation to support ongoing use of PBIS for public elementary schools in the state of Minnesota.	documentation to support ongoing use of PBIS for public elementary schools in the state of Minnesota.		
RQ1h: What is the relationship between principal turnover on the indicator of having documentation to support ongoing use of PBIS for public middle schools in the state of Minnesota?	H*1*0: There is no significant relationship between principal turnover on the indicator of having documentation to support ongoing use of PBIS for public middle schools in the state of Minnesota.	H*1*A: There is a significant relationship between principal turnover on the indicator of having documentation to support ongoing use of PBIS for public middle schools in the state of Minnesota?	Percentage analysis of each data table.	There is documentation to support the ongoing use of PBIS
RQ1i: What is the relationship between principal turnover on the indicator of establishing links with the community to provide incentives for students and staff for public elementary schools in the state of Minnesota?	H*1*0: There is no significant relationship between principal turnover on the indicator of establishing links with the community to provide incentives for students and staff for public elementary schools in the state of Minnesota.	H*1*A: There is a significant relationship between principal turnover on the indicator of establishing links with the community to provide incentives for students and staff for public elementary schools in the state of Minnesota.	Percentage analysis of each data table.	Links with community are established to provide incentives for students and staff
RQ1j: What is the relationship between principal turnover on	H*1*0: There is no significant relationship	H*1*A: There is a significant relationship between	Percentage analysis of each data	Links with community are established to

the indicator of establishing links with the community to provide incentives for students and staff for public middle schools in the state of Minnesota?	between principal turnover on the indicator of establishing links with the community to provide incentives for students and staff for public middle schools in the state of Minnesota.	principal turnover on the indicator of establishing links with the community to provide incentives for students and staff for public middle schools in the state of Minnesota.	table.	provide incentives for students and staff
RQ1k: What is the relationship between principal turnover on the indicator of sustaining morale among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions for public elementary schools in the state of Minnesota?	H*1*0: There is no significant relationship between principal turnover on the indicator of sustaining morale among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions for public elementary schools in the state of Minnesota?	H1A: There is a significant relationship between principal turnover on the indicator of sustaining morale among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions for public elementary schools in the state of Minnesota?	Percentage analysis of each data table.	Morale is sustained among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions
RQ1l: What is the relationship between	H*1*0: There is no significant	H*1*A: There is a significant	Percentage analysis of	Morale is sustained

principal turnover on the indicator of sustaining morale among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions for public middle schools in the state of Minnesota?	relationship between principal turnover on the indicator of sustaining morale among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions for public middle schools in the state of Minnesota?	relationship between principal turnover on the indicator of sustaining morale among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions for public middle schools in the state of Minnesota?	each data table.	among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions
RQ1m: What is the relationship between principal turnover on the indicator of parent involvement in the PBIS-related activities, programs, and/or services for public elementary schools in the state of Minnesota?	H10: There is no significant relationship between principal turnover on the indicator of parent involvement in the PBIS-related activities, programs, and/or services for public elementary schools in the state of Minnesota?	H1A: There is a significant relationship between principal turnover on the indicator of parent involvement in the PBIS-related activities, programs, and/or services for public elementary schools in the state of Minnesota?	Percentage analysis of each data table.	Parents remain involved in PBIS-related activities, programs, and / or services
RQn: What is the	H10: There is	H1A: There is	Percentage	Parents remain

relationship between principal turnover on the indicator of parent involvement in the PBIS-related activities, programs, and/or services for public middle schools in the state of Minnesota?	no significant relationship between principal turnover on the indicator of parent involvement in the PBIS-related activities, programs, and/or services for public middle schools in the state of Minnesota?	significant a relationship between principal turnover on the indicator of parent involvement in the PBIS-related activities, programs, and/or services for public middle schools in the state of Minnesota?	analysis of each data table.	involved in PBIS-related activities, programs, and / or services

Research Design Strategy

The purpose of the study was to quantitatively model the impact of the independent variable of principal turnover on the overall dependent variable of PBIS program success, which included 7 dependent variables as sub-categories. The study also included a control variable of type of school: elementary and middle school.

Data Analysis

Percentage analysis of each data table was used to examine the research question and sub-category research questions for this study. The chi-square analysis tool was originally proposed; however, after application of the chi-square analysis statistical tool, many of the cells resulted in a frequency of less than 5 and an expected frequency of less than one. Statistical Solutions (2013) describes this parameter as a limitation for using chi square analysis; therefore, it was determined that percentage analysis was a better option for this study.

Measures

The only scale-based measure in the current study was the maintenance phase scores on the IPI. The maintenance phase was scored on the following 7 items, each of which has scored as 0 for *no*, 1 for *partial*, and 2 for *full*.

1. Data are used to make decisions regarding additional training
2. Professional development is provided to staff
3. Data are used to inform and update the action plan
4. There is documentation to support the ongoing use of PBIS
5. Links with community are established to provide incentives for students and staff
6. Morale is sustained among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions
7. Parents remain involved in PBIS-related activities, programs, and / or services

There are 7 items in the maintenance scale associated with the IPI. The measurement scale of the IPI maintenance indicators were individually scored as 0, 1, or 2. The maintenance phase scale of the IPI were obtained through a web-based survey given to the principal or PBIS coach. There did not appear to be reliability or validity measurements in the empirical literature (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012) pertaining solely to the maintenance phase scale. The maintenance phase scale is part of the larger, 44-item IPI scale, for which Cronbach's α scores reported in the literature (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012) from 0.77 to 0.85, represented a high level of internal reliability.

In terms of construct validity, the key concern related to the maintenance sub-scale was whether the items genuinely measured PBIS-related items having to do with maintenance rather than the 3 prior phases of preparation, initiation, and implementation. These 3 prior phases were in the conceptual and statistical model of the study, held to have been affected by the old principal, whereas the new principal's impact on PBIS was delimited to maintenance-related items. The choice of the maintenance sub-scale as the sole measure of an incoming principal's impact on PBIS appeared appropriate; the sub-scale had construct validity for this purpose. No psychometric measures other than the maintenance sub-scale were used in this study.

Sampling Design

According to the Minnesota Department of Education (MDE, 2015), there are 960 elementary schools (grades PK-6) and 212 middle schools (grades 5-8) in the state of Minnesota. However, these 1,172 schools were not considered the population for the study, as the population consisted solely of PBIS-using schools. Furthermore, in order to capture sustainability, it was important to study those schools that have implemented PBIS for more than 3 years. Minnesota PBIS (MPBIS, 2015) provides data on the number of schools in Minnesota that use PBIS. In 2015, there were 199 elementary schools, 57 middle schools, and 4 combination elementary/middle schools that use PBIS (MPBIS, 2015). The combination schools were eliminated and the sample size was narrowed down to the schools that completed MDE training and PBIS implementation at least three years ago or more. There were 158 elementary schools and 48 middle schools in the sample size.

Data Collection Procedures

Step One: Obtained names and email addresses of all principals in sample size by searching school websites by January 4, 2016.

Step Two: Sent email to principals including: introduction of study; expected time to complete the survey; confidentiality statement and consent by March 14, 2016 (see Appendix A for Introductory Consent Agreement).

Step Three: Accumulated a list of participating elementary and middle schools and sent survey on March 24, 2016 (see Appendix B for survey).

Step Four: Compiled the data into contingency tables for Chi Square Test of Independence on April 11, 2016.

Step Five: Once it was determined that Chi Square Test was not appropriate for analyzing the data, the decision was made to use percentage analysis to present the findings on April 13, 2016.

Limitations of Methodology

One of the main limitations of the methodology was that it did not test the effects of more than one principal turnover. The study was incapable of measuring multiple effects, that is, the effects on IPI maintenance scores frequency imputable to more than one new principal. Given that schools might have experienced more than one principal turnovers, the results of the study was not used to model the impact of more than one new principal on the response variables of the study, which was an important limitation.

Ethical Considerations

The study sought informed consent and respected the confidentiality and anonymity of the research respondents. It ensured that participation in the study was voluntary and avoided harm to the participants. The research was independent and impartial, and the study ensured quality and integrity of the research.

Chapter 4: Results

Review of Study

The purpose of this study was to determine the impact of the independent variable of principal turnover on the dependent variable of PBIS program success according to the indicators of successful maintenance of the PBIS system. The main research question stated:

What is the relationship between principal turnover on the indicators of successful maintenance of the PBIS program in post-PBIS training public elementary and middle schools in the state of Minnesota?

This research question was divided into several sub-research questions to address the indicators of successful maintenance from the Implementation Phases Inventory (IPI). This chapter is organized around those research questions. It first presents the overall findings. It also includes a frequency analysis followed by a cross tabulation percentage analysis to present the findings for each sub-research question.

Overall Findings

To gather the data, a survey was sent to 158 elementary school principals and 48 middle school principals. The survey resulted in 59 responses, 18 middle schools and 41 elementary schools. Using Qualtrics software, versions 2016, cross tabulations were calculated comparing principal turnover to the 7 successful maintenance indicators. A total of 14 contingency tables were produced-7 for the elementary and 7 for the middle schools.

Frequency Analysis

Of the 59 responses, 18 were identified as middle schools and 41 as elementary schools. Looking at the 18 middle schools in the sample size, 9 schools experienced principal turnover

post PBIS implementation and 9 did not experience principal turnover. Data gathered from the elementary schools indicated 23 experienced principal turnover while 18 did not experience principal turnover.

Percentage Analysis

The following section is divided into 14 tables that address the 14 sub research questions described in chapter 1 and again in the research and hypothesis table in chapter 3. A percentage analysis for each table is provided.

Table 1

RQ1a: What is the relationship between principal turnover on the indicator of using data to make decisions regarding additional training for public elementary schools in the state of Minnesota?		
	Principal Turnover	No Principal Turnover
No (0)	1 4.35%	0 0.00%
Partial (1)	10 43.48%	8 44.4%
Full (2)	12 52.17%	10 55.56 %
Total	23 100%	18 100%

Summary of findings: Among the elementary schools in the state of Minnesota examined that experienced principal turnover, there was slightly less of a likelihood that the available data was used for decisions regarding training than among those that did not experience principal turnover. All elementary schools in the sample with no principal turnover demonstrated partial or full indicator of using data to make decisions regarding training while at least 1 school or 4.35% of the elementary schools that experienced principal turnover identified no use of data to make

decisions regarding training. Just 43.48% of schools that experienced principal turnover made partial use of data to make decisions regarding training, while 44.4% of schools with no principal turnover made partial use of data in making training-related decisions. Altogether, 52.17% of elementary schools with principal turnover made training decisions fully using data; 55.56% of elementary schools with no principal turnover fully used data to make decisions regarding additional training.

Table 2

RQ1b: What is the relationship between principal turnover on the indicator of using data to make decisions regarding additional training for public middle schools in the state of Minnesota?		
	Principal Turnover	No Principal Turnover
No (0)	0 0.00%	0 0.00%
Partial (1)	4 44.44%	4 44.4%
Full (2)	5 55.56%	5 55.56 %
Total	9 100%	9 100%

Summary of findings: The use of data to make decisions regarding additional training for public middle schools in the state of Minnesota was identical in schools with no principal turnover and with principal turnover. In both groups of schools, there were no instances where data was not used to make decisions regarding training. Both school types also made partial use of data to make training decisions in 44.44% of cases. In 55.56% of instances, both groups of Minnesotan public middle schools fully made use of data in order to make decisions regarding additional training.

Table 3

RQ1c: What is the relationship between principal turnover on the indicator of providing professional development to staff for public elementary schools in the state of Minnesota?		
	Principal Turnover	No Principal Turnover
No (0)	0 0.00%	0 0.00%
Partial (1)	9 39.13%	8 44.4%
Full (2)	14 60.87%	10 55.56%
Total	23 100%	18 100%

Summary of findings: All public elementary schools in the study provided professional development for staff. Schools without principal turnover were more likely to provide partial professional training, with 44.4% of such schools doing so. Just 39.13% of the schools with principal turnover provided partial training. Of the schools without principal turnover, 55.56% provided full professional training. Altogether, 60.87% of the elementary schools with principal turnover provided full professional training.

Table 4

RQ1d: What is the relationship between principal turnover on the indicator of providing professional development to staff for public middle schools in the state of Minnesota?		
	Principal Turnover	No Principal Turnover
No (0)	1 11.11%	0 0.00%
Partial (1)	3 33.33%	3 33.33%
Full (2)	5 55.56%	6 66.67%

Total	9 100%	9 100%

Summary of findings: None of the middle schools where there was not principal turnover failed to provide professional development, while 11.11% of schools where there was principal turnover did fail to provide professional development. For both types of schools, 33.33% provided partial professional development. Among middle schools that did not have principal turnover, 66.67% provided full professional development, while 55.56% of schools where principal turnover took place provided full professional development

Table 5

RQ1e: What is the relationship between principal turnover on the indicator of using data to inform and update the action plan for public elementary schools in the state of Minnesota?		
	Principal Turnover	No Principal Turnover
No (0)	0 0.00%	0 0.00%
Partial (1)	10 43.48%	5 27.78%
Full (2)	13 55.52%	13 72.22%
Total	23 100%	18 100%

Summary of findings: All of the elementary schools in the study used data to some extent to inform and update the PBIS action plan for their school. Among those where principal turnover took place, 43.48% made partial use of data to inform and update the action plan, while among those where principal turnover did not take place, 27.78% made partial use of the data. Of the elementary schools where there was principal turnover, 55.52% fully made use of the data for the action plan, while 72.22% of the schools with no principal turnover did the same.

Table 6

RQ1f: What is the relationship between principal turnover on the indicator of using data to inform and update the action plan for public middle schools in the state of Minnesota?		
	Principal Turnover	No Principal Turnover
No (0)	0 0.00%	0 0.00%
Partial (1)	2 22.22%	1 11.11%
Full (2)	7 77.78%	8 88.89%
Total	9 100%	9 100%

Summary of findings: None of the middle schools investigated in this study failed to use data to inform and update the action plan for the school in a way that was related to principal turnover status. Just 11.11% of the schools where there was no principal turnover made partial use of the data to inform and update the action plan in a way that was related to principal turnover status, while 22.22% of the schools where there was principal turnover did so. Among those schools with principal turnover, 77.78% fully made use of the data to inform and update the action plan for the school, while among those without principal turnover, 88.89% did the same in a way that was related to principal turnover status.

Table 7

RQ1g: What is the relationship between principal turnover on the indicator of having documentation to support ongoing use of PBIS for public elementary schools in the state of Minnesota?		
	Principal Turnover	No Principal Turnover

No (0)	6 26.09%	1 5.56%
Partial (1)	4 17.39%	6 33.33%
Full (2)	13 56.52%	11 61.11%
Total	23 100%	18 100%

Summary of findings: Among the public elementary schools studied where principal turnover took place, 26.09% did not have documentation to support ongoing use of PBIS for their school in a way that was related to principal turnover status. Among those where principal turnover did not take place, 5.56% did not have documentation. Fully 33.33% of elementary schools with no principal turnover had partial documentation to support ongoing use of PBIS; 17.39% of schools with a principal turnover also just had partial documentation. While 56.52% of schools with principal turnover had full documentation supporting ongoing use of PBIS in the school, 61.11% of schools without principal turnover had full documentation supporting ongoing use of PBIS in a way that was related to principal turnover status.

Table 8

RQ1h: What is the relationship between principal turnover on the indicator of having documentation to support ongoing use of PBIS for public middle schools in the state of Minnesota		
	Principal Turnover	No Principal Turnover
No (0)	0 0.00%	0 0.00%
Partial (1)	5 55.56%	3 33.33%
Full (2)	4 44.44%	6 66.67%

Total	9 100%	9 100%

Summary of findings: No middle schools, either with or without principal turnover, were altogether without documentation to support ongoing use of PBIS in the school. Just 33.33% of schools without principal turnover had partial documentation, but 66.67 of schools with no principal turnover had full documentation in a way that was related to principal turnover status. Altogether, 55.56% of middle schools where there was principal turnover had partial documentation supporting the ongoing use of PBIS in the school, while 44.44% of those schools with principal turnover had full documentation in a way that was related to principal turnover status.

Table 9

RQ1i: What is the relationship between principal turnover on the indicator of establishing links with the community to provide incentives for students and staff for public elementary schools in the state of Minnesota?		
	Principal Turnover	No Principal Turnover
No (0)	7 30.43%	4 22.22%
Partial (1)	12 52.17%	8 44.44%
Full (2)	4 17.39%	6 33.33%
Total	23 100%	18 100%

Summary of findings: Among elementary schools with principal turnover, 30.43% had no indication that they attempted to establish links with the community to provide incentives for students and staff, while 22.22% of schools with no principal turnover also had no indication of

links for incentives in a way that was related to principal turnover status. Fully 52.17% of schools where there was principal turnover showed partial establishment of links with the community for incentives for students and staff; 44.44% of elementary schools with no principal turnover did the same. Just 17.39% of elementary schools with principal turnover fully established links for the above purposes. Altogether, 33.33% of schools without principal turnover fully established links with the community to provide incentives for students and staff in a way that was related to principal turnover status.

Table 10

RQ1j: What is the relationship between principal turnover on the indicator of establishing links with the community to provide incentives for students and staff for public middle schools in the state of Minnesota?		
	Principal Turnover	No Principal Turnover
No (0)	2 22.22%	1 11.11%
Partial (1)	6 66.67%	6 66.67%
Full (2)	1 11.11%	2 22.22%
Total	9 100%	9 100%

Summary of findings: Of middle schools studied where principal turnover did not take place, just 11.11% reported that they did not establish links with the community to provide incentives for students and staff in a way that was related to principal turnover status. Altogether, 22.22% of middle schools with principal turnover did not report that they established links. Partial linkage for the purpose of providing incentives to students and staff took place among 66.67 % of both schools with and without principal turnover. Just 11.11% of schools with principal

turnover reported providing full linkage; 22.22% of schools without principal turnover reported fully providing links with the community to provide incentives for students and staff in a way that was related to principal turnover status.

Table 11

RQ1k: What is the relationship between principal turnover on the indicator of sustaining morale among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions for public elementary schools in the state of Minnesota?		
	Principal Turnover	No Principal Turnover
No (0)	1 4.35%	0 0.00%
Partial (1)	15 65.22%	11 61.11%
Full (2)	7 30.43%	7 38.89%
Total	23 100%	18 100%

Summary of findings: When measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions among elementary schools in Minnesota in this study, 4.35% of those schools with principal turnover had no indication of sustaining morale among students and staff. None of the schools without principal turnover failed by this indicator. Judging by these same measures, 65.22% of schools with principal turnover showed partial indication of sustaining morale in a way that was related to principal turnover status, while 30.43% showed full indication. Again, by these measures, 61.11% of elementary schools without principal turnover had indication of

partial morale sustenance, while 38.89% had full indication in a way that was related to principal turnover status.

Table 12

RQ1l: What is the relationship between principal turnover on the indicator of sustaining morale among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions for public middle schools in the state of Minnesota?		
	Principal Turnover	No Principal Turnover
No (0)	0 0.00%	1 11.11%
Partial (1)	5 55.56%	2 22.22%
Full (2)	4 44.4%	6 66.67%
Total	9 100%	9 100%

Summary of findings: When measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions among middle schools in Minnesota in this study, 11.11% of those middle schools where there was no principal turnover had no indication of sustaining morale among students and staff. None of the schools with principal turnover failed by this indicator. Fully 55.56% of schools with principal turnover had partial indication of sustaining morale in the two groups, while 22.22% of middle schools with no principal turnover had partial indicators. Of the schools with principal turnover, 44.4% had full indication of sustaining morale among students and staff as reflected in the above-described measures, while 66.67% of schools without principal turnover had full indication.

Table 13

RQ1m: What is the relationship between principal turnover on the indicator of parent involvement in the PBIS-related activities, programs, and/or services for public elementary schools in the state of Minnesota?		
	Principal Turnover	No Principal Turnover
No (0)	4 17.39%	4 22.22%
Partial (1)	18 78.26%	9 50.00%
Full (2)	1 4.35%	5 27.78%
Total	23 100%	18 100%

Summary of findings: Altogether, 17.39% of elementary schools with principal turnover showed no indication of parent involvement in the PBIS-related activities, programs, and/or services. Among those elementary schools studied with no principal turnover, 22.22% showed no parent involvement in PBIS activities, programs and/or services. Fully 78.26% of those with principal turnover showed a partial parent engagement in PBIS, while half (50%) of schools with no principal turnover showed partial relationship between that status and the involvement of parents with PBIS. Among schools with principal turnover, just 4.35% showed full involvement of parents in PBIS, while 27.78% of those without principal turnover showed a full relationship

Table 14

RQ1n: What is the relationship between principal turnover on the indicator of parent involvement in the PBIS-related activities, programs, and/or services for public middle schools in the state of Minnesota?

	Principal Turnover	No Principal Turnover
No (0)	6 66.67%	3 33.33%
Partial (1)	3 33.33%	4 44.44%
Full (2)	0 0.00%	2 22.22%
Total	9 100%	9 100%

Summary of findings: Among middle schools that participated in the study, 66.67% of those with principal turnover showed no indicators regarding parent participation in PBIS-related activities, programs, and/or services, while among those with principal turnover, 33.33% showed no parent PBIS involvement. Schools with principal turnover showed partial indicator of parent involvement in PBIS-related activities, programs, and/or services in 33.33% of cases and none showed a full relationship. Among those with no principal turnover, 44.44% showed partial parent PBIS participation, and 22.22% with no principal turnover show full indicator of parent involvement in the PBIS-related activities, programs, and/or services

This range of results reveals that there is some difference between the contextual consequences of principal turnover in a wide range of activities that are fundamental to the effective execution of PBIS in public elementary and middle schools when compared to those activities where the principal has not left a school. Which of these are most significant, and what implications they might have for the PBIS program in these schools is the subject of the following chapter.

Chapter 5: Discussion, Implications, Recommendations

Overview of the Study

This quantitative study examined the relationship between principal turnover on the successful maintenance of the PBIS program. PBIS is one of several school-wide, behavioral programs designed to give principals, teachers, and other school personnel an evidence-based blueprint for improving the disciplinary, academic, and motivational quality of a school (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012). Research has helped to establish PBIS as an effective behavioral intervention system in the United States (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012). - linked to both a positive school climate and an increase in student achievement in certain academic subjects (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012).

PBIS requires principals to understand not only the base principles of PBIS but also how best to establish and promote PBIS within a specific school setting (Bradshaw et al., 2008; Bradshaw et al., 2010; Horner et al., 2009; Waasdorp et al., 2012). Scholars have documented an acceleration in the turnover of public school principals in the 2000s and 2010s (Béteille, Kalogrides, & Loeb, 2012; Miller, 2013; Ronfeldt, Loeb, & Wyckoff, 2013). Given the environment of rapid principal turnover and widespread PBIS implementation, educational leaders and other stakeholders are naturally interested in how well new principals can manage schools' existing cultures and programs (Béteille et al., 2012; Miller, 2013; Ronfeldt et al., 2013), including PBIS. In the absence of empirical tests of the impact of principal turnover on PBIS success, stakeholders lack vital information about an important management challenge confronting new principals of PBIS-utilizing schools.

The purpose of this study was to determine the impact of the independent variable of principal turnover on the dependent variable of PBIS program success according to the indicators of maintenance of the PBIS system. The indicators of successful maintenance were taken from the School-Based PBIS Implementation Phases Inventory (IPI). The IPI is a survey that measures building/district support and their investment in PBIS at the following phases: preparation, initiation, implementation, and maintenance. The study focused on the 7 maintenance phase indicators of the IPI inventory. Which were as follows:

1. Data are used to make decisions regarding additional training.
2. Professional development is provided to staff.
3. Data are used to inform and update the action plan.
4. There is documentation to support the ongoing use of PBIS.
5. Links with community are established to provide incentives for students and staff.
6. Morale is sustained among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions.
7. Parents remain involved in PBIS-related activities, programs, and / or services

   The problem is that the impact of principal turnover on the success of ongoing PBIS programs is unknown.

To gather the data, an anonymous survey was sent to 158 elementary and 48 middle school principals of Minnesota public schools that have completed the Minnesota Department of Education PBIS training. The principals were asked to rate their school's level of successful maintenance for each of the 7 indicators on a scale of 0-2 (0=no, 1=partial, and 2-full).

This chapter includes the research questions that guided this study along with a discussion of data results provided in chapter 4. It also addresses overall conclusions and implications for the PBIS program. It concludes with recommendations for practitioners and academic institutions.

Research Questions

RQ1: What is the relationship between principal turnover on the indicators of successful maintenance of the PBIS program in post-PBIS training public elementary and middle schools in the state of Minnesota?

This research question was divided into several sub-research questions to address the indicators of successful maintenance, as follows:

RQ1a: What is the relationship between principal turnover on the indicator of using data to make decisions regarding additional training for public elementary schools in the state of Minnesota?

RQ1b: What is the relationship between principal turnover on the indicator of using data to make decisions regarding additional training for public middle schools in the state of Minnesota?

RQ1c: What is the relationship between principal turnover on the indicator of providing professional development to staff for public elementary schools in the state of Minnesota?

RQ1d: What is the relationship between principal turnover on the indicator of providing professional development to staff for public middle schools in the state of Minnesota?

RQ1e: What is the relationship between principal turnover on the indicator of using data to inform and update the action plan for public elementary schools in the state of Minnesota?

RQ1f: What is the relationship between principal turnover on the indicator of using data to inform and update the action plan for public middle schools in the state of Minnesota?

RQ1g: What is the relationship between principal turnover on the indicator of having documentation to support ongoing use of PBIS for public elementary schools in the state of Minnesota?

RQ1h: What is the relationship between principal turnover on the indicator of having documentation to support ongoing use of PBIS for public middle schools in the state of Minnesota?

RQ1i: What is the relationship between principal turnover on the indicator of establishing links with the community to provide incentives for students and staff for public elementary schools in the state of Minnesota?

RQ1j: What is the relationship between principal turnover on the indicator of establishing links with the community to provide incentives for students and staff for public middle schools in the state of Minnesota?

RQ1k: What is the relationship between principal turnover on the indicator of sustaining morale among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions for public elementary schools in the state of Minnesota?

RQ1l: What is the relationship between principal turnover on the indicator of sustaining morale among students and staff, as measured by consistently high staff attendance and participation, rapid completion of staff surveys, and the maintenance of a system for recognizing staff contributions for public middle schools in the state of Minnesota?

RQ1m: What is the relationship between principal turnover on the indicator of parent involvement in the PBIS-related activities, programs, and/or services for public elementary schools in the state of Minnesota?

RQn: What is the relationship between principal turnover on the indicator of parent involvement in the PBIS-related activities, programs, and/or services for public elementary schools in the state of Minnesota?

Conclusions

In multiple areas of the results, the importance of continuity in school administration as it relates to PBIS in particular and critical components to a thriving school environment in general are in evidence. First there is a strong relationship between the documentation required for continuing the PBIS plan and a lack of principal turnover in both elementary and middle schools. A full relationship between the two was present in 11, or 61.11% of the elementary schools and 66.67% of the middle schools – 6 of them. This reflects the belief held by some researchers that administrative leadership can make a substantial impact on the ability of a school to develop and maintain an overall plan for academic achievement and general excellence at a school (Fink, 2000). It also shows that this is true with the PBIS plan in particular. The impact on the action plan for elementary and middle schools is also substantial, with a full relationship between no turnover in 88.89% of middle schools and 72.2% for elementary schools. There is also a relationship between turnover and action plans, but in neither case is it as strong as that between an absence of turnover and the action plans.

The closely related question of morale is addressed in the relationship between middle school and sustaining morale. This was measured in several ways and therefore there may be substantial implications to any strong relationships. While the data for elementary schools is less clear, there is a strong correlation between middle schools without principal turnover and morale. There were 66.67%, or 6, schools that showed a full relationship between morale and no

principal turnover. The factors measured were high staff attendance and participation, swift completion of staff surveys, and maintenance of a system to recognize staff contributions.

Other results included a pattern for using data to make decisions regarding additional training, providing professional staff development, and establishing links with the community to provide incentives for students and staff. According to the elementary schools sampled, all of the schools where there was no principal turnover indicated either partial or full maintenance of using data to make decisions regarding additional training while at least one school where there was principal turnover identified no use of data to make decisions regarding additionally training. Also, there was a slightly higher percentage of middle schools where principal turnover was not experienced that indicated full maintenance of providing professional development to staff compared to middle schools that experienced principal turnover. Lastly, there were higher percentages in both elementary and middle schools that had no principal turnover that indicated full maintenance indicator of establishing links with the community to provide incentives for students and staff. There was also a noteworthy connection between principle turnover in middle schools and parent involvement-66.67% of the middle schools that had no turnover indicated partial or full parental involvement while only 33.3% of middle schools that had turnover indicated partial parental involvement.

The third variable problem presented in the assumptions and limitations section can be clearly illustrated in examining these results. For example, do the results regarding principal turnover and parent participation in middle schools mean that it does not matter whether the principal is known to the parents in terms of whether they will participate in PBIS activities? It seems at least likely that other factors overcome the reticence many people feel when dealing with a new school administrator, including support from other parents and other connections in

the school. A similar question could be posed in terms of impact of principal turnover on morale in elementary schools. Are teachers and students indifferent to whether the principal is staying or leaving? It seems unlikely. Other factors impacting these outcomes are likely and should be explored in future research.

Implications of the Study

While it is clear that, in many instances, the leaving of a school by a principal proves to be a meaningful event, leading to disruption of plans for the school and setting back efforts at overall school improvement, it is not self-evident in this study. That is to say that while there were indications of disruption when elementary and middle schools experienced principal turnover, there were also indicators of successful maintenance of PBIS schools that experienced principal turnover. While one can conclude from this research that it is problematic for many school reform efforts to lose the principal, it is inevitable that it will eventually happen. Of course, in some places, it is intentionally done (Stine, 1998), as some research shows that principals either lose effectiveness over time or continue to innovate if given new challenges – often in the form of new schools (Boesse, 1991).

Preparation either for the eventual loss of the principal or simply to improve the distribution of responsibility can help to maintain a level of functionality that could mitigate the sorts of outcomes reflected in this paper. Vesting administrators beyond the principal with knowledge and authority – known as distributed leadership, can provide substantial benefits. Distributed leadership is known to improve the overall health of institutions – including schools (Hargreaves & Fink, 2008). While this evidence demonstrates the important role of the principal, it also reveals where and why the leadership of the school must be spread out.

Recommendations for Practitioners

Although it has been around since the 1960s, distributed leadership has had a resurgence in recent years, which has been traced to the work of Spillane, Halverson, and Diamond (2001), which examined the relationships between leaders and followers and the contexts within which they engage. Spillane later developed a more complete account of what distributed leadership is and how it can benefit schools (2006).

The areas in which there is obviously correlation between transitioning principals and the progress of school-wide development plans focus on the work required to maintain a specific plan – including the mundane particulars like paperwork and planning documents. A leader paradigm that shared these responsibilities more broadly would reduce the degree of damage done by the loss of any part of the team (Harris 2011).

It is very important that practitioners pursue instances of partial documentation related to continued presence of PBIS in middle schools, and it is essential that instances where there is no such documentation in elementary schools is explored. Since there were instances of no paperwork both in schools with and without transition turnover, there is no question that there are other factors at play. Those should be identified and addressed. The urgency is driven by the fact that these programs could easily be stripped from schools in which they are providing benefits to students because of a technical mishap. School officials on a district-wide basis should also be alerted to this situation and policies that make accommodations for schools where there is evidence of benefit but without paperwork for PBIS should be put in place in the short term.

Recommendations for Academics

This research only scratches the surface of what can be learned by examining the relationship between principal turnover and the school-wide initiatives most often associated with the principal. These can and must be launched by the head administrator, but he or she should quickly put people in place that are able to do the basic maintenance required to implement and they maintain programming and policy.

The field can be substantially improved by continuing to bring clarity to this area where there has been little attention. It is now established that principal turnover matters to some of the most fundamental aspects of school development, but what solutions to prevent unnecessary pain during transitions have taken place? What work outside of traditional professional development is being done to make sure that people who come to the principal are encouraged to give their time, both from inside and outside the school?

In particular, areas where there is a possibility of additional factors leading to the results of the study's questions are important for the academic community to pursue. A very important example is that of a complete absence of documentation for continuing PBIS in elementary schools. Understanding what factors are leading to this outcome is very important for the continued health of the program and to ensure the positive outcomes students are experiencing from it.

Concluding comments

In a performance-based society, it is not unusual for professional success to be linked to rapid ascension. This is a problematic model for the public schools, all of which need careful stewardship that can be measured in years and not months. The purpose of this study was to examine some measures of the outcomes of principal turnover. As predicted, there are negative effects to principal turnover, and advantages to principals staying put.

This is not the approach of all education administrators. Some will keep principals moving to keep them sharp. Others will relocate principals on an entirely materialistic basis. Whether these approaches really improve education is, to say at least debatable.

First and foremost, the education arena should be a place of discourse and deliberation. This ought to include careful consideration before principals are relocated, even in situations where there is some evidence of a need for reform within a school. There are many steps that can be taken that are less disruptive than principal turnover, and they should be pursued when appropriate. For the sake of future harmony, one can hope that it will be the beginning of a careful deliberation regarding education, past and future.

Whether one thinks of the principal of a public school as an ally or an obstacle, there is no question that these players often hold more power than just about any other school official. Consequently, engagement is not optional. Providing leaders with the tools to stay in constant communication and to delegate responsibility when possible could lead to substantial innovations in the efforts of reformers to make public school more democratic and responsive to the people who use it – both children and parents or guardians.

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Appendix A

Introductory Consent Agreement

You are invited to participate in a study of principal tenure and successful maintenance of Positive Behavioral Interventions & Supports (PBIS). I hope to provide educational leaders, principals, and other stakeholders in the state of Minnesota with an evidence-based understanding of the impact of new principals on the successful maintenance indicators for PBIS. You were selected as a possible participant in this study because you have been identified by the Minnesota PBIS organization as a PBIS utilizing school. This research is for my dissertation requirement at Bethel University for a degree in Education Doctorate in Leadership in K-12 Education.

The study involves a brief survey for you and/or the PBIS coach to complete. The survey will take approximately 3-5 minutes.

All responses given will be kept strictly confidential. Your input will only be used in combination with the responses of others participating in the survey. My research examines the opinions of groups of respondents. Your individual responses are not shown to anyone.

Please reply to this email to let me know if you are willing to participate. Your decision whether or not to participate will not affect your future relations with Bethel University in any way. If you decide to participate, you are free to discontinue participation at any time without affecting such relationships. This research project has been reviewed and approved in accordance with Bethel's Levels of Review for Research with Humans. If you have any questions about the research and/or research participants' rights or wish to report a research related injury, please call Katie Svenby (Student at Bethel University) at 612-242-6754 or Craig Paulson (Program Director) at 651-635-8025.

If you decide to participate, I (Katie Svenby) will send you a follow up email with a link to the survey. By clicking the link, you accept participation in the study. If you are accepting to participate in the study, please be prepared to answer some brief questions (approximately 3-5 minutes).

Appendix B

Principal Tenure & PBIS Maintenance Survey

How best would you describe your school?
Middle School
Elementary School
Do you currently have the same principal as you did when you initially implemented PBIS in your school?
Yes
No
Please rate the following maintenance indicators related to Positive Behavioral Interventions & Supports (PBIS) with either a score of 0 for "no," 1 for "partial," or 2 for "full."

Maintenance Phase		**Not (0)**	**Partial (1)**	**Full (2)**
1	Data are used to make decisions regarding additional training.			
2	Professional development is provided to staff.			
3	Data are used to inform and update the action plan.			
4	A set of materials/tool kit has been developed to sustain PBIS. ▪ *Documentation to support ongoing use of PBIS.*			
5	Links with community have been established to provide incentives for students and staff.			
6	Morale is sustained among students and staff. ▪ *Staff attendance and participation is consistently high; rapid completion of staff surveys; system in place for recognizing staff contributions.*			
7	Parents are involved in PBIS-related activities, programs, and/or services.			