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A Mixed-Methods Investigation on Generalization of Positive Behavior Supports Skills from Early Childhood to Kindergarten in a Midwestern School District

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Dr. Lynda Leavitt, Dissertation Chair	8/17/2018 Date
Dr. Patrick Keenoy, Committee Member	8/17/2018 Date
Dr. Laurie Tretter-Larkin, Committee Member	8/17/2018 Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

Full Legal Name: Ann Marie Westbrook

Signature: Ann Marie Westbrook Date: 8-17-18

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Abstract

Using a mixed-methods approach, the researcher investigated the generalization of Positive Behavior Supports Skills (PBIS) within an Early Childhood Special Education (ECSE) program, implemented with fidelity, as evidenced by statewide recognition for 10 years in a row, to the kindergarten setting in a Midwestern School District. Through investigating the generalization of PBIS social-emotional skills, the researcher aimed to identify possible frameworks for schools to better prepare students for the kindergarten transition. To investigate the generalization of skills, the researcher used secondary data in the form of 175 externalizing behavior screener scores for students who participated in a PBIS ECSE program in the 2015-2016 school year and the 460 kindergarten behavior screener scores from the fall of the 2016-2017 school year. The researcher analyzed the scores by student subgroups: participation in a PBIS ECSE program, gender, birthdate range, English Learner (EL) status, special education participation, and free and reduced (F/R) lunch eligibility. Despite the observable reductions in externalizing behavior, only the student subgroup of birthdate range from August through February demonstrated a statistical significance in generalizing social-emotional skills learned in a PBIS ECSE program. Through analysis of the qualitative data, the researcher concluded two random kindergarten teacher participants and two random elementary administrator participants found prior preschool experience better prepared students socially and emotionally for the rigors of kindergarten. The qualitative data and observable differences in the quantitative data sources suggested prior participation in a PBIS ECSE preschool program would prepare students for the transition to kindergarten, while previous research determined the PBIS framework would aid schools in helping children adjust

socially and emotionally to new academic settings through the use of universal expectations and tiered levels of behavior supports.

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Chapter One: Introduction

Background of the Study

School-Wide Positive Behavioral Interventions and Supports (SWPBIS or PBIS) was a pyramid-model, universal prevention framework implemented in schools to support pro-social behaviors, teach appropriate behavior strategies to students, prevent challenging behaviors, and reinforce appropriate behaviors (Alter & Vlasak, 2014; Carter & Pool, 2012; Jolstead et al., 2017; Sugai & Simonsen, 2012). PBIS was originally developed in the 1980s as an applied behavior analysis strategy for students with behavior disorders and expanded to the general education setting while producing positive outcomes for numerous students, specifically regarding challenging behaviors and social-emotional skills (Alter & Vlasak, 2014; Bradshaw, Waasdorp, & Leaf, 2012; Chitiyo, May, & Chitiyo, 2013; Critchfield, 2015; Sugai & Simonsen, 2012). In 2012, more than 16,000 schools had been trained in PBIS implementation, "3 states with more than 60% of schools involved . . . 9 states with more than 40%, and 16 states with more than 30%" (Sugai & Simonsen, 2012, p. 3). A study by Bradshaw et al. (2012) determined students who attended PBIS schools were 33% less likely to receive an office referral than students who did not attend a PBIS school and the decrease in inappropriate behaviors was significant when students were exposed to PBIS in the kindergarten setting and helped to promote "adjustment among elementary school children" (p. 1136).

According to Sugai and Simonsen (2012), "[PBIS] emphasis is on a process or approach, rather than a curriculum, intervention, or practice" (p. 1) and Alter and Vlasak (2014) stated, "PBIS requires schools to develop their own unique and positive school culture which includes very clear expectations and procedures for students and staff" (p.

51). Carter and Pool (2012) found "children thrive in effective environments that are consistent, predictable, positive, and safe" (p. 321); PBIS implemented in the Early Childhood or preschool setting resulted in "positive child outcomes [such as] reductions in problem behavior, increases in social competence" (Stanton-Chapman, Walker, Voorhees, & Snell, 2016, p. 333).

Purpose of the Study

The purpose of this mixed-methods investigation was to study the generalization of PBIS skills from the Early Childhood Special Education (ECSE) preschool setting to the kindergarten setting. The researcher compared the social-emotional behavior of kindergarten students in the 2016-2017 school year who participated in a PBIS program in the ECSE setting during the 2015-2016 school year and the social-emotional behavior of kindergarten students in the 2016-2017 school year who did not participate in a PBIS program in the ECSE setting during the 2015-2016 school year. Data collection included secondary data from Universal Behavior Screener scores, and included the Early Screening Project (ESP) in ECSE and the Student Risk Screening Scale (SRSS) scores in kindergarten; office referral data in kindergarten were also analyzed according to the number of office referrals by student and student subgroup factors. Analyzed factors for the secondary data sources included subgroup factors, such as students with disabilities, general education students, free and reduced lunch (F/R lunch), English Language Learners (EL), gender, and birthdate range. Anonymous open-ended surveys of kindergarten teachers and elementary administrators measured and analyzed the perception of student participation in a PBIS ECSE program and a student's generalization of social-emotional behavior skills during the kindergarten school year.

Table 1

Timeline for the Mixed Methods Investigation

Participants	Data Sources	Dates
Students who participated in a PBIS program in an ECSE setting	ESP behavioral screeners from ECSE	2015-2016 school year
	Kindergarten SRSS behavioral screener scores during the 2016-2017 school year	2016-2017 school year
Students who did not participate in a PBIS program	Kindergarten SRSS behavioral screener scores during the 2016-2017 school year	2016-2017 school year
Kindergarten Teachers	Anonymous survey on generalization of social-emotional behavior skills	2016-2017 school year
Elementary Administrators	Anonymous survey on generalization of social-emotional behavior skills	2016-2017 school year

Rationale

This mixed-methods study compared students' social-emotional behavior skills from preschool into the transition to kindergarten/Fall of the kindergarten school year, based on participation in a Positive Behavior Interventions and Supports (PBIS) Early Childhood Special Education (ECSE) program in a Midwestern suburban school district. The study helped the researcher determine best practices in preschool programming to meet young students' social-emotional behavior needs and to prevent or decrease possible social-emotional difficulties during the transition to kindergarten. Welchons and McIntyre (2015) proposed, "The transition to kindergarten is regarded as a critical early childhood developmental milestone with important implications for later school outcomes" (para. 1). McClelland and Cameron (2012) described, "As children move from preschool or home-based care into a more structured kindergarten environment,

they face increasing demands on their social and self-regulation skills, in addition to literacy, numeracy, and writing skills" (p. 136). Daniels (2014) believed students in kindergarten "are expected to develop academic, social, and behavioral conduct competencies that, in turn, promote later school achievement and wel-being" (p. 256). Cook and Coley (2017) noted, "The prevalence of difficulties adjusting to school is important, given that successful transitions provide children with the foundation for later school success" (p. 166). Researchers discovered many children experienced stress and difficulty during the transition to kindergarten (Bell-Booth, Staton, & Thorpe, 2014; Cook & Coley, 2017; Kennedy, Cameraon, & Greene, 2012; McIntyre, Eckert, Arbolino, DiGennaro Reed, & Fiese, 2014; Miller, 2015; Podvey, Hinojosa, & Koenig, 2013; van Lier et al., 2012; Welchons & McIntyre, 2015; Wildenger & McIntyre, 2012).

School readiness skills included not only pre-academic skills, but also social-emotional behavior, such as recognizing emotions and regulating emotions (Denham, Bassett, Zinsser, & Wyatt, 2014; Shala, 2013). Several researchers pointed to the link between a child's social and emotional skills, growth of academic skills, and success in elementary school (Denham et al., 2014; McClelland & Cameron, 2012; Pierce, Lambert, & Alamer, 2016; Shala, 2013). Many researchers cited the importance of young students entering kindergarten with a foundation in social-emotional behavior skills for school success (Ashdown & Bernard, 2012; Gower, Lingras, Mathieson, Kawabata, & Crick, 2014; Hatcher, Numer, & Pausel, 2012; McClelland & Cameron, 2012; Montes, Lotyczweski, Halterman, & Hightower, 2012; Nix, Bierman, Domitrovich, & Gill, 2013; Welchons & McIntyre, 2015). Researchers concluded the generalization of social-emotional behavior skills to the kindergarten setting were important for children's

academic success and long-term health and well-being (Ashdown & Bernard, 2012; Denham et al., 2014; Jones & Bouffard, 2012; Lee & Goh, 2012; Meadan, Ayvazo, & Ostrosky, 2016; Montes et al., 2012; Nix et al., 2013; Shala, 2013; Telfair & Shelton, 2012).

School-Wide PBIS (SWPBIS) was one approach to learn social-emotional skills through the three-tiered model of positive teaching, prevention, and reinforcement with increasing individualized social-emotional behavior supports (Coffey & Horner, 2012; PBIS World, 2017a; Horner & Sugai, 2015). The identification and teaching of behavioral expectations across all school environments and "creating consistent, predictable, positive and safe environments for all children" was viewed as a main or universal component to SWPBIS (Carter & Pool, 2012, p. 315). Likewise, Coffey and Horner (2012) and Alter and Vlasak (2014) agreed the PBIS approach in schools supported the whole student population with system-wide monitoring and communication, particularly for students who exhibited challenging behaviors. Research on PBIS and behavior education programs indicated a reduction in challenging behaviors through a positive behavioral support system, which resulted in positive changes for the school environment (Coffey & Horner, 2012).

Early intervention was crucial in many areas, including social-emotional and behavioral development; Coleman et al. (2013) found "the earlier the children are provided with intervention strategies and techniques, the less likely these challenging behaviors will be a detriment to their success in school and beyond" (p. 9). Wildenger and McIntyre (2012) identified access to early childhood education programs was "one variable that may be especially important for children's school readiness and early

adaptation to elementary school" (p. 169). In the early childhood setting, "many preschools already make the teaching of [social and emotional learning] skills paramount and integrated," (Jones & Bouffard, 2012, p. 4) and many social and emotional learning curriculums, programs, and approaches existed (Ashdown & Bernard, 2012; Denham et al., 2012; Eisenhower, Taylor, & Baker, 2016; Jones & Bouffard, 2012; Jones, Greenberg, & Crowley, 2015; Nix et al., 2013). A gap in the literature existed pertaining to students' participation in public preschool settings, particularly in regard to ECSE settings with a PBIS approach and students' transition to kindergarten and social-emotional adjustment and carry over of social-emotional learning skills.

This research study contributed to the literature on PBIS skills taught in the ECSE setting as an advantage and support for students during the transition to kindergarten. The then-current knowledge and literature did not address students generalizing social-emotional skills taught through a PBIS approach to other settings, such as during the transition to kindergarten, and previous studies identified social-emotional behavioral skills were important prerequisites to kindergarten entrance (Shala, 2013). Meadan, Ayvazo, and Ostrosky (2016) found, "If challenging behaviors are not addressed early with appropriate intervention and evidence-based practices, there is an increased likelihood that children will struggle with poor academic achievement, peer rejection, and mental health concerns in the future" (pp. 3-4). This study contributed to the literature specifically related to the empirical literature for students with and without disabilities by the measurement of students' social-emotional transition to kindergarten from a PBIS setting in ECSE. The study also endorsed the PBIS methodology in other early childhood and preschool settings to support students' social-emotional behavior

development. The quantitative data analyzed consisted of ESP scores from ECSE, kindergarten students' SRSS scores, and kindergarten students' office referral data, and the qualitative component included survey questions answered by anonymous kindergarten teachers and elementary administrators.

Research Setting

The researched accredited, suburban Midwestern school district spanned 44 square miles and served approximately 10,221 students in the 10 elementary buildings, four middle schools, two high schools, and an early childhood center (MODESE, 2017b, pp. 876-879). Student demographics indicated 81% of students self-identified as Caucasian and 8.6% of students were African American; the subgroups of Asian, Hispanic, Indian, Multi-Race, and Pacific Islander were too small of a sample size to be included in the District Report Card (MODESE, 2018b). School district F/R lunch rates, at the time of the study, ranged from 27.9% in 2015-2016 to 29% in 2016-2017 (MODESE, 2018a, p. 2.)

The district's 10 elementary buildings each housed grade levels kindergarten through fifth grade (MODESE, 2017b). To maintain anonymity, the PBIS ECSE early childhood center is referred to as George Washington EC center. The eight PBIS ECSE program classrooms were located at the George Washington EC center, with five additional satellite ECSE classrooms located in district elementary schools (Contact Information and Location, 2017). Preschool classes ran four half-days a week, and students attended two, three, or four half days per week. Total preschool enrollment for 2015-2016 was 305, and 270 for the academic year 2016-2017 (MODESE, 2017b).

Recognized as a Gold Level Recipient for implementation of PBIS, the preschool program's universal/Tier 1 language consisted of the Take Care Code: Take Care of Yourself, Take Care of Each Other, Take Care of Your School/Home, and Take Care of Your World (Early Childhood Director's Corner, 2017). For Gold Level recognition, a school implemented and sustained the PBIS essential components over a minimum of two years. Criteria included the implementation of PBIS school-wide, the use of data, and instruction in social-emotional behavior skills (Missouri School-Wide Positive Behavior Support [MO SW-PBS], 2016a). Students received one Take Care Ticket a week for following the Take Care Code, and families were encouraged to send in tickets (known as 'houses') for following the Take Care Code at home (PBIS Houses & Examples, 2017). The preschool program also taught a social-emotional curriculum to reinforce PBIS universals (Positive Post, 2017). Tier 2 supports included a Check-In/Check-Out system known as H.U.G. (Hello, Update, Goodbye), Social Skills Groups, and Mentoring (MO SW-PBS, 2016b). Tier 3 supports included Behavior Intervention Plans, Functional Assessments, and Wraparound services for students and families (MO SW-PBS, 2016c).

The researcher analyzed three hypotheses to determine a potential difference between participation and non-participation in a PBIS ECSE program, a potential difference in the number of office referrals, and a potential difference in the behavioral screener scores in the PBIS ECSE program. Hypotheses 1 and 3 contained eight sub-hypotheses for each detailed student subgroup. The researcher also included four research questions focused on the elementary administrators' and kindergarten teachers' perceptions of social-emotional behaviors of students in kindergarten.

Research Questions

Research Question 1: How do kindergarten teachers' perceive students' who participated in a PBIS ECSE program's social-emotional behavior skills?

Research Question 2: How do kindergarten teachers' perceive students' social-emotional behavior skills who did not participate in a PBIS ECSE program?

Research Question 3: How do elementary administrators' perceive students' social-emotional behavior skills who participated in a PBIS ECSE program?

Research Question 4: How do elementary administrators' perceive students' social-emotional behavior skills who did not participate in a PBIS ECSE program?

Hypotheses

Hypothesis H^1: There is a difference in the values of externalizing scores between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Hypothesis H^{1a}: There is a difference in the values of externalizing scores between students with disabilities who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Hypothesis H^{1b}: There is a difference in the values of externalizing scores between general education students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Hypothesis H^{1c}: There is a difference in the values of externalizing scores between female students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

HypothesisH^{1d}: There is a difference in the values of externalizing scores between male students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Hypothesis H^{1e}: There is a difference in the values of externalizing scores between EL students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Hypothesis H^{1f}: There is a difference in the values of externalizing scores between students who are eligible to receive free and reduced lunch and who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Hypothesis H^{1g}: There is a difference in the values of externalizing scores between students whose birthdate is between August and February who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Hypothesis H^{1h}: There is a difference in the values of externalizing scores between students whose birthdate is between March and July who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Hypothesis H^2: There is a difference in the number of office referrals between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Hypothesis H^3: There is a difference between the fall and spring ESP scores for students participating in a PBIS ECSE program.

Hypothesis H^{3a}*:* There is a difference between the fall and spring ESP scores for students with disabilities who participated in a PBIS ECSE program.

Hypothesis H^{3b}: There is a difference between the fall and spring ESP scores for general education students who participated in a PBIS ECSE program.

Hypothesis H^{3c}*:* There is a difference between the fall and spring ESP scores for female students who participated in a PBIS ECSE program.

Hypothesis H^{3d}*:* There is a difference between the fall and spring ESP scores for male students who participated in a PBIS ECSE program.

Hypothesis H^{3e}*:* There is a difference between the fall and spring ESP scores for EL students who participated in a PBIS ECSE program.

Hypothesis H^{3f}*:* There is a difference between the fall and spring ESP scores for students who are eligible to receive free and reduced lunch and who participated in a PBIS ECSE program.

Hypothesis H^{3g}*:* There is a difference between the fall and spring ESP scores for students whose birthdate is between August and February and who participated in a PBIS ECSE program.

Hypothesis H^{3h}*:* There is a difference between the fall and spring ESP scores for students whose birthdate is between August and February and who participated in a PBIS ECSE program.

Limitations

The study took place in a Midwest suburban school district where the researcher was employed as the Director of the Early Childhood program. For the purposes of this study, secondary data received from the researched school district had the student names redacted before data analysis commenced. Another NIH-certified committee member

sent the surveys to adult participants via school email addresses, and the participants were anonymous to eliminate possible coercion.

Definition of Terms

Behavior Intervention Plan*:* A systematic plan to address specific student behaviors and teach replacement behaviors (PBIS World, 2017b).

Check-In/Check Out*:* A Tier 2 positive approach provided to students with adult feedback and support at the beginning and end of each school day (PBIS World, 2017c).

Hello, Update, Goodbye: For the purposes of this study, a form of Check-In/Check Out using a positive approach providing students with adult feedback and support at the beginning and end of each school day.

Early Childhood Special Education*:* For the purposes of this study, specialized instruction in the preschool setting, including specialized instruction in the area of school readiness skills, adaptive behavior, communication development, cognitive development, physical development, and/or social-emotional behavior. Students with and without disabilities participated in ECSE preschool settings.

Early Screening Project*:* A systematic screener in ECSE conducted three times per year by classroom teams (September, January, April), where teams identified at least three internalizing students and three externalizing students for each class. Student ratings consisted of no risk, at risk, moderate risk, or extreme risk. The Tier 2/3 Team (Early Screening Project [ESP], n.d.) considered Tier 2 or Tier 3 Interventions and supports for students who received a risk ranking.

Internalizing student(s)*:* Students who demonstrated behaviors of withdrawal, such as anxiety or depression (Gartstein, Putnam, & Rothbart, 2012; Jones & Bouffard, 2012).

Externalizing student(s)*:* Students who demonstrated behaviors of acting-out, such as aggression or impulsivity (Gartstein et al., 2012; Jones & Bouffard, 2012).

English Language Learners/Dual Language Learners*:* Students exposed to more than one language, due to families speaking a language other than English in the home (U.S. Department of Health and Human Services, 2016).

Free and reduced lunch*:* Students who were eligible to receive federally funded school meals at a reduced or free rate, based on family income (U.S. Deparment of Agriculture, 2017).

Functional Assessment/Behavior Intervention Plan: A process to identify causes and functions of behaviors and "provides data for developing an appropriate and effective behavior plan" (PBIS World, 2017d, para. 1).

Houses*:* For the purposes of this study, paper tickets shaped like a 'house' that served as a reinforcement tool for home in ECSE. Each month teachers sent home a sheet of eight houses for families to use to recognize a child's positive behavior. Families returned the houses to school as children earned the tickets; the students in the child's class celebrated the student's accomplishment as a social recognition reinforcement.

Mentoring*:* For the purposes of this study, a positive adult role model in ECSE who spent approximately 15 minutes, once a week, one-on-one with a child. Activities included playing games, reading books, crafts, and playing outside, etc. Mentors helped

support play skill development, increased communication skills, or helped build student confidence.

Office Referrals*:* A written notice by a school staff member that alerted the principal and/or school counselor of challenging student behavior (PBIS World, 2017e).

Positive Behavior Interventions and Supports*:* An approach to addressing student behavior through teaching, prevention, and reinforcement. PBIS "generally appears as 3 tiers of increasingly intensive and individualized behavior interventions as well as a system of data collection and analysis" (PBIS World, 2017b, para. 2).

Social Skills Groups*:* Small groups of students in ECSE who learned prosocial skill activities based on the Second Step Curriculum (Second Step, 2018). Activities included playing games, reading books, crafts, and playing outside. Students selected for social skills groups helped support peer interactions, classroom skills, coping strategies, and/or play skill development.

Strong Start - PreK*:* A prevention and early intervention social-emotional learning program for students ages three through five (Whitcomb & Parisi Damico, 2016).

Student Risk Screening Scale*:* A universal screening tool utilized in kindergarten to identify students who may be at risk for behavioral problems (Drummond, 1994).

Take Care Code*:* For the purposes of this study, a Universal/Tier 1 support which consisted of the ECSE program-wide set of expectations; specifically, Take Care of Yourself, Take Care of Each Other, Take Care of Your School/Home, Take Care of Your World.

Take Care Tickets*:* For the purposes of this study, small notes written home in ECSE that used positive, behavior-specific praise to reinforce appropriate student behavior.

Tier 2 supports*:* Secondary academic and behavior supports for students who were at risk or had not responded to universal supports including H.U.G., mentoring, social skills groups, and behavior intervention plans (Horner & Sugai, 2015).

Tier 3 supports*:* Tertiary supports for individual students who were at risk or had not responded to Tier 2 interventions, including functional assessment/behavior intervention plan (FA/BIP) and Wraparound (Horner & Sugai, 2015).

Universal supports/Tier 1 supports*:* Primary school supports provided to all students (such as the ECSE program-wide expectations of the Take Care Code, Take Care Tickets, PBIS lessons and curriculum, and Houses/home reinforcement) and were "designed to be administered before error patterns develop" (Horner & Sugai, 2015, p. 81).

Universal Screener*:* A tool to help in the identification of internalizing or externalizing behavior in students, such as the ESP or the SRSS (Donohue, Goodman-Scott, Betters-Bubon, 2015; ESP, n.d.; Drummond, 1994).

Summary

The purpose of this study was to investigate the generalization of PBIS skills from a PBIS ECSE program to the students' transition to kindergarten. Researchers found the kindergarten transition created student and family stress (Bell-Booth et al., 2014; Cook & Coley, 2017; Kennedy et al., 2012; McIntyre et al., 2014; Miller, 2015; Podvey et al., 2013; van Lier et al., 2012; Welchons & McIntyre, 2015; Wildenger & McIntyre, 2012).

Researchers cited the importance of student social-emotional skills not only for a more successful transition into the kindergarten setting, but also for long term health and well being (Ashdown & Bernard, 2012; Denham et al., 2014; Jones & Bouffard, 2012; Lee & Goh, 2012; Meadan et al., 2016; Montes et al., 2012; Nix et al., 2013; Shala, 2013; Telfair & Shelton, 2012). The researcher believed the learning and generalization of social-emotional skills in preschool with a result of a successful transition to kindergarten was worthy of study. Discussed in the Chapter Two are topics included in the review of the then-current literature: kindergarten and school readiness, social-emotional skills, early childhood preschool programs, and PBIS. Chapter Three includes the methodology of the study focused on a student's social-emotional skills during the transition to kindergarten, based on participation or non-participation in a PBIS ECSE preschool. Chapter Four outlines the results of the study from the data sources, and the researcher addresses recommendations for programs and recommendations for future research in Chapter Five.

Chapter Two: The Literature Review

Introduction

The transition to kindergarten continued to be a stressful period as children learned to adjust to the new school environment, rules and expectations, and increased academic rigor (Bell-Booth et al., 2014; Cook & Coley, 2017; Feil & Frey, 2013; Kennedy et al., 2012; McIntyre et al., 2014; Miller, 2015; Podvey et al., 2013; Rous & Hallam, 2012; van Lier et al., 2012; Welchons & McIntyre, 2015; Wildenger & McIntyre, 2012). Researchers determined a child's successful transition to kindergarten included school readiness skills, such as academic and social-emotional behavior preparedness, which also predicted students' future academic success and well-being (Cook & Coley, 2017; Miller, 2015; Racz, King, Wu, Witkiewitz, & McMahon, 2013; Rous & Hallam, 2012; Stormont, Herman, Reinke, King, & Owens, 2015). Students who participated in a preschool had a greater likelihood to adapt to a larger number of peers, transitions, rules, and expectations in the kindergarten setting (Appl & Hughes, 2015; Hatcher et al., 2012; Wildenger & McIntyre, 2012). The Positive Behavior Interventions and Supports (PBIS) approach was one method teachers used to teach students social-emotional behavior skills, prevented the occurrence of challenging behaviors, and supported all students with the use of universal supports, tiers of intervention, behavior screeners, and a social-emotional curriculum (Bradshaw, 2013; Buysse & Peisner-Feinberg, 2013; Coffey & Horner, 2012; Cressey, Whitcomb, McGilvray-Rivet, Morrison, & Shander-Reynolds, 2014; Donohue et al., 2015; Dunlop, 2013; Goodman-Scott, 2014; Hemmeter, Fox, & Snyder, 2013; Landers, Courtrade, & Ryndak, 2012;

Martens & Andreen, 2013; Missouri School-Wide Positive Behavior Support [MO SW-PBS], 2017; Navo et al., 2015; Sugai & Simosen, 2012).

Organization of the Literature Review

The literature review begins with the topic of kindergarten transition and the relationship between students and families. The researcher included a description of kindergarten/school readiness skills and discussed the increased importance of social-emotional behavior skills, such as self-regulation as young children transitioned into the kindergarten setting. The researcher then outlined social and emotional behavior risks, definitions of internalizing and externalizing behaviors, the definitions of self-regulation skills, and the connection to the early learning social-emotional curriculum. The researcher included social-emotional behavior outcomes regarding gender, socio-economic status (SES), race, and English Language Learner (EL) status. The researcher then outlined kindergarten readiness in connection to participation in Early Childhood preschool programs. The researcher then described PBIS approaches in schools, which consisted of school-wide components, such as universal expectations, increased tiers of interventions for students, a universal social-emotional behavior screener, and social-emotional curriculums.

The Transition to Kindergarten

Researchers determined the transition to kindergarten predicted later school success in both academics and social-emotional outcomes for students (Cook & Coley, 2017; Daniels, 2014; Welchons & McIntyre, 2015). Wong (2015) interviewed teachers who found a negative relationship to students' learning skills who demonstrated difficulties in the transition to kindergarten. McClelland and Cameron (2012) noted

when young children transitioned from a preschool or daycare environment into the structured kindergarten setting, there were more demands placed on students' academic skills and social and emotional behavior skills, such as self-regulation. Daniels (2014) described in the kindergarten setting young children were required to "develop academic, social, and behavioral conduct competencies that, in turn, promote later school achievement and well-being" (p. 256). Cook and Coley (2017) noted the frequency of difficulties as young children adjusted to the kindergarten environment and remarked the importance of successful transitions as indicative of success in school, later in life. Researchers discovered many children experienced stress and difficulty during the transition and adjustment to kindergarten (Bell-Booth et al., 2014; Cook & Coley, 2017; Feil & Frey, 2013; Kennedy et al., 2012; McIntyre et al., 2014; Miller, 2015; Podvey et al., 2013; Rous & Hallam, 2012; van Lier et al., 2012; Welchons & McIntyre, 2015; Wildenger & McIntyre, 2012).

Kindergarten classes in years recent to this writing had an increased academic focus as well as an increased schedule; for example, kindergarten previously existed as a half-day, play-based model, as opposed to the then-present-day kindergarten setting, which consisted of a full-length school day, with a rigorous curriculum and increased pencil-paper tasks (Bassok, Latham, & Rorem, 2016; Little, Cohen-Vogel, & Curran, 2016). Families of students transitioning to kindergarten had many concerns surrounding the change, such as beginning in a new school (Brown, 2013; McIntryre et al., 2014; Miller, 2015; van Lier et al., 2012). Miller (2015) found the transition to kindergarten was more difficult for families of a lower SES. McIntyre et al. (2014) noted parents of students with disabilities also had difficulties with the transition process, as families had

many more concerns and questions in comparison to families of children who were typically-developing. Brown (2013) pointed to the Family Stress Model (see Figure 1) which detailed "Instability as well as other forms of chaos in children's lives may interfere with children's approaches to learning in part because it compromises biobehavioral processes that are linked to self-regulation" (p. 189). Hindman and Morrison (2012) also found parenting styles were associated with young childrens' self-regulation skills and compliance.

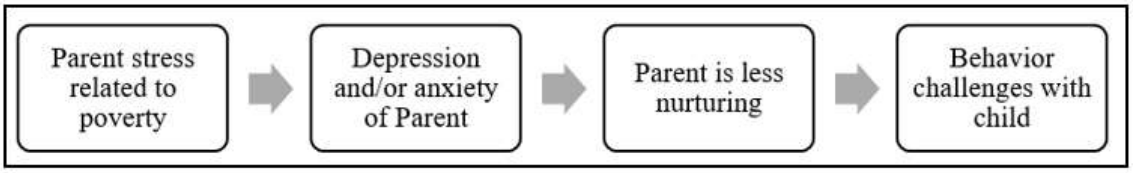

Figure 1. Family Stress Model. Adapted from Brown (2013).

A study by Rickmeyer, Lebiger-Vogel, Leuzinger-Bohleber (2017) determined parenting styles, such as emotionally available parents helped children regulate stress during the transition to kindergarten, particularly for children with an immigrant background.

School Readiness and Social-Emotional Behavior. Gilford (2013) explained school readiness reasearch was a newer field of study, despite the fact the topic had begun to gain interest in the late 1990s. Hatcher, Numer, and Pausel (2012) described kindergarten readiness, also referred to as school readiness, had many different meanings and contained many different factors. Gilford (2013) added school readiness largely depended on the perspective of adults; for instance, parents, teachers, and principals each possessed differing opinions on the definition of school readiness. Researchers proposed kindergarten readiness consisted of development in not only academic curricular domains

but also included factors, such as age, connection between home and school, and the child's developmental stage (Daniels, 2014; Hatcher et al., 2012; Montes et al., 2012).

Gilford (2013) noted school readiness skills as "the essentials that children need to be successful in school and in life" (p. 58). School readiness was defined by researchers as a child's academic or cognitive skills, yet also included a child's skills in the social-emotional realm and included self-regulation, cooperation with others and positive social interactions (Shala, 2013). Researchers defined social-emotional behavior largely consisted of self-regulation skills; for example, the management of negative emotions and aggressive behavior, the modification of feelings that impeded the child's learning and coping, and prosocial skills, such as empathy, positive social interactions, effective communication, and social interaction with peers and adults (Denham et al, 2014; Jones & Boufard, 2013; Shala, 2013). Arnett (2016) agreed with the importance of the whole child and stressed educators and parents should have been concerned with the child's social-emotional growth as much as the child's academic growth. Whitcomb and Parisi Damico (2016) emphasized, "Teaching children positive social, emotional, and behavioral skills is a critical challenge facing our society" (p. 4). Halle et al. (2014) outlined the young years were an important time to teach young children social and emotional behavior skills as the skills were a critical "foundation for later development" (p. 738). Many researchers concluded the generalization of social-emotional behavior skills were important for children's academic success and long-term health and well-being (Ashdown & Bernard, 2012; Brown, 2013; Davies, Janus, Duku, & Gaskin, 2016; Denham et al., 2014; Duran, Zhou, Frew, Kwok, & Benz, 2012); Feil & Frey, 2013; Jones & Bouffard, 2012; Lee & Goh, 2012; Meadan et al., 2016; Montes et al., 2012; Nix

et al., 2013; Pears, Kim, Healey, Yoerger, & Fisher, 2014; Shala, 2013; Telfair & Shelton, 2012; Sabol & Pianta, 2012; Weissberg & Cascarino, 2013).

However, the definition of school readiness skills also differed between local school districts, state educational departments, and educational associations (Gilford, 2013). For example, the State of Missouri Early Learning Standards and curriculum contained five curricular domains: (1) language and literacy, (2) mathematics, (3) physical development, health, and safety (4) science, and (5) social and emotional development; the domains demonstrated the focus on social and emotional development as a key curricular area (MODESE, 2009a).

Knowledge of Self	• I can show respect for self (e.g. washes own hands, puts personal belongings away, asks for help) • I can develop personal preferences (e.g. express likes and dislikes) • I know personal information (e.g. first name, gender, age, hair or eye color)	• I can show respect for self (e.g. washes own hands, puts personal belongings away, asks for help) • I can develop personal preferences (e.g. express likes and dislikes) • I know personal information (e.g. first and last name, gender, age, address, birthday)
Develops self-control	• I can follow simple rules with minimal support • I can accept transitions and follow daily routines with minimal support • I can express my feelings through appropriate gestures, actions, and language with minimal support • I can adapt to different environments	• I can follow simple rules • I can accept transitions and follow daily routines • I can express and identify my own feelings and the feelings of others through appropriate gestures, actions, and language • I can adapt to different environments
Develops personal responsibility	• I can care for personal and group possessions • I can begin to accept the consequences of my own actions with support (e.g. admits wrongdoing)	• I can care for personal and group possessions • I can begin to accept the consequences of my own actions (e.g. admits wrongdoing)

Figure 2. Social-Emotional Learning Standards. Adapted from Missouri Early Learning Standards (MODESE, 2009a).

The Missouri Early Learning Standards Teacher's Guide listed social-emotional skills in three main components: knowledge of self, knowledge of others, and approaches to learning. Process standards under knowledge of self, consisted of self-awareness, self-control, and responsibility; process standards under knowledge of others consisted of cooperation and relationships with others; and process standards under approaches to learning consisted of curiosity, initiative, creativity, confidence, persistence, and ability to problem-solve (MODESE 2009c) (see Figure 2).

The Missouri Early Learning Curriculum Parent Guide for social-emotional curriculum defined social development as "the growth and change in our interactions with others as we mature while emotional development is the growth and change in our understanding and management of emotions" (MODESE, 2009b, add p. or para. # here). In the early learning preschool years, social-emotional development skills were a prerequisite to kindergarten entrance (MODESE, 2009b).

Denham, Bassett, Zinsser, and Wyatt (2014) proposed, "social-emotional competencies are identified as among the most important abilities supporting early school success and the growth of academic competence during elementary school" (para. 2). A 2013 study by Shala concluded, "There is a greater association between social-emotional development and academic achievement in elementary school, especially during the first three years" (p. 789). Whereas a study by McClelland and Cameron (2012) reported, "A large body of evidence points to the importance of children's self-regulation for successfully navigating academic and social settings" (p. 140). Many researchers cited the importance of a foundation in social-emotional behavior skills for young students who transitioned into kindergarten (Ashdown & Bernard, 2012; Brown, 2013; Feil &

Frey, 2013; Gower et al., 2014; Hatcher et al., 2012; Hemmeter et al., 2013; McClelland, Acock, Piccinin, Rhea, & Stallings, 2012; McClelland & Cameron, 2012; Montes et al., 2012; Nix et al., 2013; Sabol & Pianta, 2012; Sasser, Bierman, & Reinrichs, 2015; Webster-Stratton & Reid, 2013; Welchons & McIntyre, 2015; Ziv, 2013).

However, Denham et al. (2014) explained social-emotional behavior skills were difficult for young children who entered structured school settings "where they are required to sit still, attend, follow directions, and approach and enter group play" (para. 1). Eisenhower, Taylor, and Baker (2016) identified the transition to kindergarten tested young childrens' self-regulation skills, which led to the emergence of challenging behaviors, and stressed the kindergarten transition period was the "ideal time to intervene" (p. 142). Brown (2013) proposed, "If children's inability to regulate behavior and emotions interferes with the acquisition of basic skills, it will undermine their chances for school success" (pp.198-199). Meadan et al. (2016) further proposed, "If challenging behaviors are not addressed early with appropriate intervention and evidence-based practices, there is an increased likelihood that children will struggle with poor academic achievement, peer rejection, and mental health concerns in the future" (pp. 3-4). Previous researchers indicated early intervention in social-emotional behavior skills could improve long-term student outcomes (Bornstein, Hahn, & Suwalsky, 2013; Jones et al., 2015).

Social-Emotional Behavior Risks

Hemetter, Fox, and Snyder (2013) found students were more likely to be expelled from schools when teachers were not trained to address challenging behaviors. Duran, Zhou, Frew, Kwok, and Benz (2012) determined students with lower social skills were

more likely to receive disciplinary exclusion; especially students who were male, students with a lower SES, and students with disabilities. Bradshaw, Waasdorp, and Leaf (2012) outlined young childrens' challenging and aggressive behaviors were a crucial developmental concern. Feil and Frey (2013) agreed, "Children who present with challenging behavior at a young age are at a significantly higher risk for ongoing problem behavior and long-term detrimental outcomes" (p. 186). A study by Montes, Lotyczweski, Halterman, and Hightower (2012) determined young children with challenging behaviors also transitioned to kindergarten with lower skills in other developmental areas, such as communication development, physical development, academics, and social skills. Shala (2013) explained, "Young children cannot learn to read if they have problems that distract them from educational activities, problems following directions, problems getting along with others and controlling negative emotions, and problems that interfere with relationships" (p. 788). Previous researchers determined links between social-emotional behavior concerns and deficits in academic skills (Benner, Kutash, Nelson, & Fisher, 2013; Ecklund & Dowdy, 2014; Feil & Frey, 2013; Gower et al., 2014; Grothaus, 2013; Hemmeter et al., 2013; Hirschland, 2015; McClelland & Cameron, 2012; Shala, 2013; Webster-Stratton & Reid, 2013).

Self-Regulation Skills. Webster-Stratton and Reid (2013) determined the attribution of challenging behaviors in students was the absence of self-management skills. Fuhs, Farran, and Nesbitt (2013) agreed and found many kindergarten students had difficulty with self-regulation skills. Brown (2013) defined self-regulation or self-management skills as cognitive skills known as executive functions, such as "command and control functions" (p. 197). Hirschland (2015) defined self-regulation as a student's

ability to self-calm, maintain focus, and the ability to self-soothe. Webster-Stratton and Reid (2013) described self-regulation as the ability to incorporate both emotions and the manifestation of emotional responses into appropriate and expected behaviors in varying situations, which then allowed children to adapt successfully. Liew (2012) affirmed young children needed skills in effortful control skills, such as attention to task skills and ability to control emotional responses to learn, comprehend, and generalize activities from preschool and kindergarten. Morgan, Farkas, Hillemeier, Hammer, and Maczuga (2015) found children with a larger vocabulary increased self-regulation skills upon kindergarten entry; in particular, specific demographic factors, such as female gender and higher SES.

Internalizing and externalizing behaviors. In the work on the ESP, Walker, Severson, and Feil (1995) stated, "While there may be a host of possible causes for a child's problem behavior (e.g. temerament, trauma, and inadequate parenting), there are some common observable indicators that signal whether a child is developing serious adjustment problems" (p. 1). Gartstein, Putnam, and Rothbart (2012) proposed, "Childhood behavior problems are seen to form two broadband domains, externalizing and internalizing" (p. 197). However, van Lier et al. (2012) found children who demonstrated eternalizing behaviors also demonstrated internalizing behaviors. Reaserchers defined externalizing behavior as undercontrolled behaviors which emerged in the early years, such as verbal aggression, physical aggression, oppositional behavior, and impulsivity (Bornstein et al., 2013; Gartstein et al., 2012; Lane et al., 2012b; van Lier et al., 2012; White, Jarrett, & Ollendick, 2013). Researchers defined internalizing behaviors as overcontrolled behaviors, such as social withdrawal, shyness, social

isolation, anxiety, depression, and self-inflicted pain (Bornstein et al., 2013; Gartstein et al., 2012; Lane et al., 2012b; Madigan, Laurin, Atkinson, & Benoit, 2013; van Lier et al., 2012; White et al., 2013).

Stormont, Herman, Reinke, King, and Owens (2015) found Office Discipline Refferals (ODRs) were a data source which identified externalizing behaviors, but did not necessarily identify internalizing behaviors. Garwood, Varghese, and Vernon-Feagans (2017) agreed internalizing behaviors were more difficult to detect than externalizing behaviors and surmised early identification and intervention was crucial to support students with internalizing behaviors (p. 228). Lane et al. (2012b) agreed and stated, "In the absence of effective interventions, [students with internalizing behavior] struggle socially, behaviorally, and academically during the school years" (p. 245). A study by Bornstein et al. (2013) determined early childhood externalizing and internalizing behaviors predicted behavioral problems in early adolescence. Van Lier et al. (2012) studied the link between student externalizing behavior and the relationship with academics, and found "externalizing problems lead to academic underachievement and experiences of peer victimization. Academic underachievement and peer victimization, in turn, predicted increases in internalizing and externalizing problems" (p. 1775). Many researchers surmised internalizing and externalizing behaviors in young children had a negative impact on academics, relationships with peers, and interactions with peers (Garwood, Varghese, & Vernon-Feagans, 2017; Lane et al., 2012b; van Lier et al., 2012).

Social-Emotional Behavior and Student Subgroups

Students with Disabilities. Social-emotional behavior disorders were linked to medically diagnosed conditions or eligibility criteria for an educational disability, such as

Young Child with a Developmental Delay in the area of social-emotional behavior or Emotional Disturbance, according to Part B of the Individuals with Disabilities Act (Individuals with Disabilities Education Act [IDEA], 2017; Missouri Department of Elementary and Secondary Education [MODESE], 2017a; MODESE, 2016). Montes et al. (2012) illustrated, students with "behavior problems were 14 times more likely to have an [Attention Deficit Hyperactivity Disorder] or [Attention Deficit Disorder] diagnosis [and] seven times more likely to have received [early intervention] services" (p. 545). According to Grothaus (2013), behavior disorders "also have high rates of comorbidity with other mental health concerns, such as anxiety, mood, impuse control, learning, communication, and substance use disorders, and ADHD" (p. 246). However, Montes et al. (2012) found other developmental delays, such as communication, speech, and language also manifested as challenging behaviors in the school setting. Gower, Lingras, Mathieson, Kawabata, and Crick (2014) added challeging behaviors and aggression were also linked to a child's difficulty with transitions at school. Pears, Kim, Healey, Yoerger, and Fisher (2014) stressed students with disabilities were likely to experience difficulties with social-emotional self-regulation skills. Studies by Benner, Kutash, Nelson, and Fisher (2013) and Gower et al. (2014) discussed students with social-emotional and behavioral disorders and the gap in achievement had widened over time between students with and without disabilities.

Gender. Previous researchers found girls of kindergarten age had greater behavioral engagement levels and self-regulation skills than male counterparts (DiPrete & Jennings, 2012; Garwood et al., 2017; Morgan et al., 2015; Searle, Sawyer, Miller-Lewis, & Baghurst, 2014). Studies found males were more likely than females to exhibit

challenging behaviors and therefore at a greater social-emotional behavioral risk (Montes et al., 2012; Stormont et al., 2015). Duran et al. (2012) determined students with lower social skills were more likely to receive disciplinary exclusion, especially students who were male, students with a lower SES, and students with disabilities. By contrast, Garwood et al. (2017) pointed to the lack of studies focused on "differences by child gender while exploring externalizing, internalizing, and hyperactive/inattentive behaviors" (p. 221). Garwood et al. (2017) also determined no significant differences existed between the genders in terms of externalizing nor internalizing behaviors, yet found boys were "rated significantly higher on hyperactivity/inattention" (p. 226), and found a correlation between male students' internalizing behaviors and struggles with academics, specifically early literacy skills. Graves, Blake, and Kim (2012) found teachers and parents were more likely to rate male students as being at risk for aggression, hyperactivity, and inattention.

Weiland and Yoshikawa (2013) affirmed, "Gender has also been of interest as a moderator of preschool impacts" (p. 2115). Data from the U.S. Department of Education Office of Civil Rights (OCR) outlined disparities between student gender for expulsion and suspension in preschool, citing "while boys represent 54% of the preschool population, they represent 79% of preschool children suspended once and 82% of preschool children suspended multiple times" (U.S. Department of Education Office of Civil Rights [OCR], 2014, p. 3, para. 3). In fact, parents of males (especially male students with birthdates in the spring or summer months) were more likely to delay a child's enrollment in kindergarten for one year to give the child more time to mature

(Datar & Gottfried, 2013; Ensey Hover, 2014; Huang, 2014, 2015; Whitmore-Schanzenback & Howard-Larson, 2017).

Socio-economic Status. Researchers found social-emotional skills tended to be lower and students were more likely to exhibit challenging behaviors if a student's family had a low-income background (Duran et al., 2012; Montes et al., 2012; Morgan et al., 2015; Sasser, Bierman, Heinrichs, & Nix, 2017; Stormont et al., 2015). Studies found students from low-income backgrounds who participated in a social-emotional curriculum in preschool were more likely to adjust to kindergarten academically and behaviorally (Jenkins, 2014; Nix et al. 2013; Weiland & Yoshikawa, 2013). Garwood et al. (2017) outlined, there were "less empirical studies that have accounted for children's [SES status]" (p. 221). However, according to the Civil Rights Data Collection Data Snapshot: Early Childhood Education (2014), only 25% of school districts offered preschool programming specifically for students from low-income backgrounds (as cited in OCR, 2014, p. 3,). Feil and Frey (2013) determined students from low-income families were at risk of failure and were less likely to relate to other peers in school. Bellone, Dufrene, Tingstrom, Olmi, and Barry (2014) surmised that preschool students who were from low SES backgrounds were at an increased risk of developing behavioral problems, and summarized, "early and effective intervention is necessary, especially for preschool children facing socioeconomic challenges" (p. 379).

Race and English Language Learners. Data from the OCR outlined disparities between race for expulsion and suspension in preschool, and cited, "black children make up 18% of preschool enrollment, but 48% of preschool children suspended more than once" (OCR, 2014, p. 3). The findings from Duran et al. (2012) and Navo et al. (2015)

concurred and found racial disparities among students, such as African Americans, were more likely to receive disciplinary exclusion. The OCR data also indicated English learners "represented 12% of preschool children, 11% of students suspended once, and 9% of preschool students suspended more than once" (OCR, 2014, p. 4). English Language Learners (EL) or Dual Language Learners (DLL) in elementary school represented "14% of students enrolled and 18% of students retained in elementary schools" (OCR, 2014, p. 6). According to LaForett, Peisner-Feinberg, and Buysse (2013), the number of students from EL families increased significantly over the years and determined a need for research-based approaches for EL students in early education. Studies on participation in preschool programs found improved social-emotional skills and academics in EL students, specifically in Hispanic students (Ansari & Lopez, 2015; Weiland & Yoshikawa, 2013). A 2016 study by Quirk, Grimm, Furlong, Nylund-Gibson, and Swami determined Latino students who entered kindergarten with higher social-emotional school readiness skills predicted literacy outcomes in Grades two through five.

Students' Age. Many researchers studied the correlation between student birthdate and kindergarten school readiness in social-emotional skills and academics (Bassok & Reardon, 2012; Datar & Gottfried, 2013; Hover, 2015; Huang, 2015; Huang & Invernizzi, 2013; Watkins, 2013; Winsler et al., 2012; Whitmore-Shazenbach & Howard-Larson, 2017). In the United States, students enrolled in kindergarten if the child's fifth birthday was on or before a designated cutoff date, usually around August or September. With the increased academic rigor in kindergarten, parents were hesitant to enroll a child in kindergarten if the child's birthday occurred in the spring or summer months, especially if the child was a male Caucasian with a higher SES (Bassok &

Reardon, 2012; Hover, 2015; Winsler et al., 2012). Due to the child's delayed entrance to kindergarten, parents felt the child would have another year to mature; known as redshirting (Hover, 2015; Huang, 2015; Winsler et al., 2012). Researchers found an increase in social-emotional and academic skills for students who were older than the younger classmates (Datar & Gottfried, 2013; Huang & Invernizzi, 2013; Whitmore-Shazenbach & Howard-Larson, 2017). Conversely, researchers also discovered delaying a child's enrollment in kindergarten initially showed benefits in social-emotional behavior and academics, nonetheless the benefits decreased as the child progressed through the elementary grades and entered middle school (Datar & Gottfried, 2013; Whitmore-Shazenbach & Howard-Larson, 2017).

Ensey Hover (2014) found early childhood educational programs supported students with late or summer birthdays. Likewise, Watkins (2013) determined participation in a preschool program for late birthdays was the most beneficial if the child participated for at least two years. Conversely, Huang (2014) and Huang and Invernizzi (2013) determined young students in kindergarten experienced a higher likelihood of retention, regardless if the student participated in an early childhood preschool program.

Early Childhood Preschool Education Programs

While early childhood programs varied from the entrance age of the child and the duration of the program, the literature review focused on preschools for students ages three through five (Duncan & Magnuson, 2013). Hatcher et al. (2012) and Fuhs et al. (2013) found preschool programs prepared students for kindergarten because of the focus on social and emotional behavior. Feil and Frey (2013) proposed, "The preschool-age period, from 3-5 years old, represents a unique opportunity to dramatically affect

children's lives in positive ways" (p. 187). Wildenger and McIntyre (2012) described access to early childhood education programs as essential for young children's school readiness and adaptation and transition to kindergarten. Appl and Hughes (2015) outlined participation in a preschool program gave young children practice with transitions and therefore practice with school readiness skills. While, Wildenger and McIntyre (2012) further explained, "Standard pre-kindergarten programs in public elementary schools have the ability to provide an opportunity for all children, regardless of family or community at-risk factors, to access high-quality pre-kindergarten programs" (p. 175). Researchers proposed for a more successful transition period to kindergarten, children who demonstrated the most success and had adapted and adjusted to kindergarten previously participated in a high quality preschool program (Duncan & Magnuson, 2013; Jenkins, 2014; Jenkins, Farkas, Duncan, Burchinal, & Vandell, 2016; Hatcher et al., 2012; Wildenger & McIntyre, 2012; Yoshikawa et al., 2013).

Sandall and Schwartz (2013) described a high quality preschool program as a purposeful, organized, teacher-facilitated environment with a developmentally appropriate curriculum and multiple opportunities for learning. Early childhood preschool programs varied from state to state and community to community; programs consisted of Head Start, public preschool, center-based childcare programs, and family day care homes (Hemmeter et al., 2013; Jenkins et al., 2015; Jolstead et al., 2017). Some high quality public preschool programs offered early childhood special education inclusive settings, where students with and without disabilities were enrolled in the same classroom together. The model provided supports for all student needs through special education teachers, therapists, and an embedded modified and adapted curriculum

(Brown, Knopf, Conroy, Googe, & Greer, 2013; Hemmeter et al., 2013; Nachtigal, 2017; Rous & Hallam, 2013; Sandall & Schwartz, 2013; Snyder, Hemmeter, McLean, Sandall, & McLaughlin, 2013). Brown et al. (2013) found positive behavioral outcomes of inclusive preschool settings, which included various interventions for social and emotional behavior skills and differentiation of the curriculum, which assisted students both with and without special education needs.

However, Weiland, and Yoshikawa (2013) found, "pre-kindergarten appears to have positive, small-to-large effects on children's cognitive development and small effects on children's prosocial and problem behaviors" (p. 2113). A study by Phillips and Meloy (2012) analyzed participation in an inclusive public preschool program, and determined no significant difference in academic scores for children either with or without disabilities. Duncan and Magnuson (2013) argued the relationship of prekindergarten on academic test scores faded over time, but recognized the outcomes later on in life, and added early childhood programs provided "little evidence of program impacts on children's behavior" (p. 122). Yudron, Jones, and Raver (2014) discussed classroom composition, such as class size, SES, and students' language skills as a factor in externalizing behavior and social-emotional outcomes. To the contrary, Jenkins (2014) found preschool programs had a significant positive outcome for students from disadvantaged backgrounds. Other positive factors for student enrollment and participation in public preschool programs consisted of the possible identification of students for early interventions, and Cameron et al. (2012) recognized "successful intervention depends on identifying the readiness skills that predict long-term achievement and developing programs that can improve these skills early in the school

trajectory" (p. 1229). Graves et al. (2012) concluded, "School professionals are faced with the task of assessing and providing interventions for children with emotional and behavioral disorders effectively" (p. 151). Researchers stressed the many preschools embed social and emotional skills throughout the school day (Jones & Bouffard, 2012; Joseph, Rausch, & Strain, 2018). Feil and Frey (2013) outlined, "[the preschool-age period] is different from later childhood. It furnishes a window of opportunity for enriching input and a window of vulnerability to the development of behavior problems" (pp. 187-188).

However, Hemmeter, Fox, and Snyder (2013) noted preschool education differed from elementary, middle, and high school; preschool took place in a "variety of settings, including Head Start, public school, center-based childcare programs, family day care homes, and home visiting programs" (p. 96). Jolstead et al. (2017) agreed the location of public preschools were in a variety of places from part of another elementary, middle, or high school to a stand-alone preschool facility. Non-public preschools were also in settings, such as churches, or in homes, which may or may not have been licensed or accredited. Many of the non-public preschool settings lacked the resources to implement interventions effectively, and Montes et al. (2012) critqued, "There appears to be a limited availability of services [for children without disabilities] . . . evidenced-based intervention in a timely manner could have allowed these children to be ready for school by kindergarten" (pp. 547-548). Feil and Frey (2013) agreed and stated the data on then-current practices indicated identification, interventions, and "consistent outcomes are in short supply. As a result, children with emotional and behavioral disorders are identified

too late in their school careers, at a stage when interventions are . . . less successful" (p. 199).

Many social and emotional learning curriculums and programs for preschool programming existed (Ashdown & Bernard, 2012; Buysse & Peisner-Feinberg, 2013; Denham et al., 2012; Eisenhower et al., 2016; Jolstead et al., 2017; Jones & Bouffard, 2012; Jones et al., 2015; Nix et al., 2013; Webster-Stratton & Reid, 2013; Whitcomb & Damico, 2016). However, Jones and Bouffard (2012) reviewed, social-emotional "programs are rarely integrated into classrooms and schools in ways that are meaningful, sustained, and embedded in the day-to-day interactions of students, educators, and school staff" (p. 3). Whitcomb and Parisi Damico (2016) proposed, "Those efforts that are most successful tend to be implemented in a planned, cohesive manner within a system" (p. 5). Arnett (2016) reinforced students' achieved success with social-emotional skills when the entire school emphasized the integration of the skills. Jones and Bouffard (2012) outlined social and emotional skills developed in a similar way to academic skills, through continuous teaching and practice, and suggested schools should be "integrating the teaching and reinforcement of [social-emotional] skills into their daily interactions and practices with students" (p. 1). Dusenbury and Weissberg (2017) also determined social and emotional development was most successful when the entire school promoted social-emotional skills through "school-wide organizational structures" (p. 39).

Positive Behavior Interventions and Supports

Positive Behavior Interventions and Supports (PBIS) was a format schools used school-wide to deliver social--emotional learning and supports (Navo et al., 2015). Sugai and Simonsen (2012) described the three-tiered model of prevention (also referred to as

Positive Behavior Supports or PBS, School Wide PBIS or SWPBIS, and School Wide Positive Behavior Supports or SW-PBS) as "an implementation framework that is designed to enhance academic and social behavior outcomes for all students" (p. 1). Dunlop (2013) also defined PBIS as "a framework for enhancing adoption and implementation of a continuum of evidence-based interventions to achieve academically and behaviorally important outcomes for all students" (p. 38). Bradshaw et al. (2012) summarized PBIS promoted positive adjustment to school settings and prevented the early-onset of challenging behaviors and behavior problems. In summary, PBIS was a prescribed research-validated process for schools which prevented challenging behaviors, taught social and emotional behavior skills, and identified behavior difficulties in students (Bradshaw, 2013; Buysse & Peisner-Feinberg, 2013; Coffey & Horner, 2012; Cressey et al., 2014; Donohue et al., 2015; Dunlop, 2013; Goodman-Scott, 2014; Goodman-Scott, Betters-Bubon, & Donohue, 2015; Hemmeter et al., 2013; Landers et al., 2012; Martens & Andreen, 2013; Navo et al., 2015; Sugai & Simosen, 2012; MO SW-PBS, 2017d).

> School-wide Positive Behavior Support (SW-PBS) is a framework for creating safe and orderly learning environments in schools, while improving the social-emotional outcomes for students. It is a proactive approach that relies on research-based practices, including developing clear behavioral expectations, teaching these expectations, acknowledging appropriate behavior, consistently correcting inappropriate behavior, and using behavioral data to systematically solve problems. SW-PBS is built on a three-tiered model that provides additional

behavioral supports to students who are not responding to the tier 1 interventions. (MO SW-PBS, 2016a, para. 1)

Researchers explained PBIS had roots based in behavioral and systems theories, as well as applied behavior analysis, originally intended for use in students with disabilities who received special education services (Buysse & Peisner-Feinberg, 2013; Goodman-Scott, 2014). However, Arnett (2016) found, "Research demonstrates that [students with disabilities] have a profile of social-emotional strengths and challenges that mirror that of the general population" (p. 2). The PBIS approach evolved and expanded from students who received special education services, and included prevention practices, teaching practices, and early detection of behavioral problems with all students in a school system (Arnett, 2016; Buysse & Peisner-Feinberg, 2013). Coffey and Horner (2012) determined PBIS had positive changes in students and in the entire school environment, which prompted schools to adopt the approach school-wide.

Algozzine et al. (2012) surmised students who achieved success in school received both academic instruction and direct instruction in behavior. A study by Bradshaw et al. (2012) illustrated "significant effects of SWPBIS on children's behavior problems, concentration problems, social-emotional functioning, and prosocial behavior" (p. 1136). Coffey and Horner (2012) emphasized all students in a school were monitored for problem behaviors in a PBIS approach because of educators' increased communication among staff members and parents. Algozzine et al. (2012) stated in a study on the PBIS approach, "Systematic behavior instruction and support improves behavior" (p. 61). A motivator for young children was positive reinforcement for the demonstration of appropriate behaviors; Coleman et al. (2013) explained young children

needed to know what the appropriate behavior was rather than the inappropriate behavior, and added the need for reinforcement in young children for the appropriate behavior. Eisenhower et al. (2016) found positive behavior and relationships were a powerful motivator for young children, which led to the prevention of challenging behavior problems over time. The OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports (2017b) explained PBIS was "conceptualized best in the larger framework of prevention. The tiered model of prevention offers a hierarchy of prevention and intervention strategies with the intensity of the strategies geared to the level of perceived need" (Positive Behavioral Interventions & Supports, 2017a, para. 1).

> Universal practices associated with a SWPBIS model include clearly defining and systematically teaching three to five behavioral expectations and key examples of expected behaviors to all students in the classroom and non-classroom settings, having a system of acknowledgement for students meeting expected behaviors, precorrecting for expected behaviors, and having a clearly articulated system for discouraging challenging behaviors across all school settings. (Cressey et al., 2014, p. 91)

Jolstead et al. (2017) emphasized especially in preschools and during the early elementary years, social skills were another important component of PBIS. Coleman et al. (2013) outlined, in the research on early intervention in social-emotional behavior development, students who were provided with positive intervention techniques and strategies earlier were less likely to have challenging behaviors; a detriment to school success and beyond. The OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports (2017a) affirmed schools were the first places where young

children's challenging behaviors were observed, and emphasized the need for challenging behavior to be resolved rapidly. Researchers outlined students with challenging behaviors were often suspended or expelled from school, which led to student disengagement, prevented students from academic and social supports, and in turn led to falling behind peers in increased students' challenging behaviors (Cressey et al., 2014; Navo et al., 2015).

Another component of PBIS was collaboration with the home environment through increased levels of implementation, such as Secondary or Tertiary Supports (Garbacz et al, 2016). Meadan et al. (2016) stated, "Understanding the basic principles of behavior can facilitate adults' understanding of challenging behavior and promote collaboration between family members and professionals in the development of effective prevention and intervention strategies" (p. 5). Researchers determined children generalized social-emotional skills and were more successful in school settings when families collaborated with the school (Baker, Wise, Kelley, & Skiba, 2016; Cook & Coley, 2017; Dusenbury & Weissberg, 2017; Eisenhower et al., 2016; Garbacz et al., 2016; Haines, McCart, & Turnbull, 2013; Miller, 2015; Podvey et al., 2013; Webster-Stratton & Reid, 2013; Welchons & McIntyre, 2015).

PBIS Levels of Implementation

Universal Supports. PBIS included several support and strategy components organized into Universal system prevention strategies, Tier 2 or secondary supports, or Tier 3 or tertiary supports (Alter & Vlasak, 2014; Bradshaw et al., 2012; Carter & Pool, 2012; Chitiyo et al., 2013; Critchfield, 2015; Dunlop, 2013; Horner & Sugai, 2015; Jolivette, Swoszowski, McDaniel, & Duchaine, 2016; Landers et al., 2012; Reynolds,

2012; Stanton-Chapman et al., 2016; Sugai & Simonsen, 2012; Whitcomb & Damico, 2016). The Missouri School-Wide Positive Behavior Supports Tier 1 Team Workbook (2017) described eight essential components of PBIS for schools to have in place for the program to be successful (Tier 1 Team Workbook, 2017) (See Table 2).

Table 2

Essential Components of PBIS.

Essential Component	Description
Common Philosophy and Purpose	Creating a school philosophy through a Mission and Vision statement indicating the belief of achieving desired student behaviors through proactive and positive teaching rather than through punishment.
Leadership	The formation of a school leadership team consisting of staff representatives who guides school staff in implementation of PBIS, such as with training, collection and analysis of data, and staff coaching.
Clarifying Expected Behavior	The development of three to five school-wide expectations, including defining what the desired behaviors look like.
Teaching Expected Behavior	The teaching of the school-wide expected behaviors through teaching, practice, and feedback.
Encouraging Expected Behavior	A positive to negative interaction ratio of at least 4:1with students; staff model the correct behaviors.
Discouraging Inappropriate Behavior	The approach to giving feedback on inappropriate behaviors and teaching, practicing, and reinforcing the expected behaviors.
Ongoing Monitoring	The collection of data for purposes of identifying areas that are strong and identifying areas in need of improvement.
Effective Classroom Practices	Expected behaviors specific to the classroom, as defined by the teacher

Note. Adapted from MO SW-PBS, 2017.

According to the Tier 1 Team Workbook (MO SW-PBS, 2017), the generalization of social-emotional behaviors was a primary goal of teaching social-emotional skills to students. Generalizing skills, also known as the carry-over of skills to other situations

and other settings, meant a student learned the material and applied the skills to other instances and environments (Webster-Stratton & Reid, 2013).

The universal or primary level of PBIS supports focused on addressing all students' behaviors through proactive teaching, prevention, and reinforcement; approximately 80% of the student population responded to PBIS (Debnam, Pas, & Bradshaw, 2012, p. 142, para. 1; Positive Behavioral Interventions and Supports, 2017c, para. 2; Horner & Sugai, 2015, p. 81, para. 1; Martens & Andreen, 2013, p. 314, para. 1). PBIS universal supports and strategies included a set of five or fewer positively stated expectations or rules for students and staff to follow; the expectations were set for all school settings, such as the classroom, hallways, and bathrooms and supported the generalization of the skills to other settings (Bradshaw et al., 2012). Reinke, Herman, and Stormont (2013) further explained teachers developed expectations for classrooms aligned to the school-wide expectations, for example positively stated actions, such as "Be Kind, Be Safe, and Be Responsible" (p. 40). Dunlop (2013) included universals also consisted of increased positive interactions, active supervision, positive reinforcement, positive adult role models, and "high rates of academic and social success" (p. 39). Universal systems also consisted of "teaching and/or reviewing school-wide behavioral expectations before students have the opportunity to make behavioral mistakes" (Horner & Sugai, 2015, p. 81). In addition, Universal Supports included the use of School-wide Systematic Screeners, such as the SRSS and the ESP identified students at risk for internalizing or externalizing behaviors (Donohue et al., 2015; Drummond, 1994; ESP, n.d.). However, other more intensive levels of PBIS implementation existed for students who needed additional supports above universal systems; as stated by Lane, Oakes,

Ennis, and Hirsch (2014), “Primary prevention simply cannot address the academic, behavioral, and social needs of all students; in short, one size does not necessarily fit all” (p. 175).

Tier 2 or Secondary Supports. Students who displayed at-risk behavior or were not responding to Universal Supports received Tier 2 or secondary prevention supports (Dunlop, 2013). Tier 2, also known as Secondary Supports or targeted supports “focus on moderate intensity supports that address the most common needs of students with ongoing problem behavior” (Horner & Sugai, 2015, p. 81). Examples of Secondary Supports included small group instruction, mentoring, a Check in/Check Out (CICO) system, behavior contracts, or self-monitoring, and also gave student access to Tier 1 or Universal Supports (Bruhn, Lane, & Hirsch, 2013). Small-group instruction often included Social Skills instructional groups (Bradshaw, 2013; Carter & Pool, 2012; Dunlop, 2013; Sugai & Simonsen, 2012). CICO, also known as Check, Connect, and Expect (CCE), Hello, Update, Goodbye (HUG), or Behavior Education Program (BEP) consisted of a student meeting at the beginning and end of the school day with an adult mentor who coached the student on daily goals (Bruhn et al., 2013; Debnam, et al., 2012). Between 10 and 15% of the student population responded to secondary preventions (Bruhn et al., 2013, p. 171, para. 1; Horner & Sugai, 2015, p. 81; Martens & Andreen, 2013, p. 314, para. 1).

Check In/Check Out Form

Name: _____ Date: _____

0 = need work 1 = okay 2 = great job!

	Take Care of Yourself			Take Care of Each Other			Take Care of Your School		
Table Time	0	1	2	0	1	2	0	1	2
Circle Time	0	1	2	0	1	2	0	1	2
Snack Time	0	1	2	0	1	2	0	1	2
Center Time	0	1	2	0	1	2	0	1	2
Playground Time	0	1	2	0	1	2	0	1	2
Today's Goal:				Today's Total Points:					
Comments:									

Figure 3. Check In/Check Out form. Adapted from PBIS World (2017f).

Tier 3 or Tertiary Supports. Students who did not respond to Secondary or Tier 2 supports received Tier 3 or tertiary prevention supports. Tier 3 supports consisted of more intensive interventions focused on individualized supports, such as support plans or behavior intervention plans designed to target the 5% or fewer students in a school (Horner & Sugai, 2015, p. 81, para. 4; Martens & Andreen, 2013, p. 314, para. 1). Tier 3 supports were for students who demonstrated the most at-risk behaviors and required a functional behavioral assessment (FBA) based Behavior Intervention Plan, one-on-one instruction, or wraparound services from the larger community (Bruhn et al., Hirsch, 2013). FBAs consisted of observation of the student behavior, which helped school staff determine the function or purpose of the behavior to prevent future occurrences (Debnam, et al., 2012).

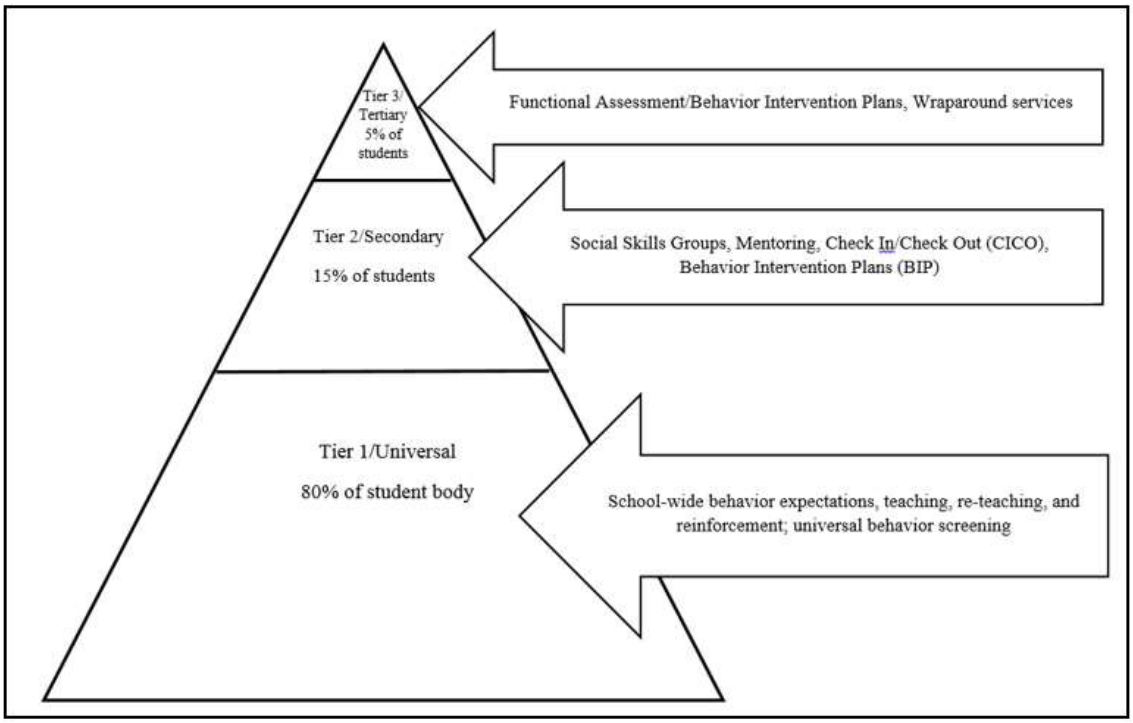

Figure 4. PBIS pyramid. Adapted from Whitcomb and Damico (2016).

Data collection on student progress and response to interventions consisted of information in three main areas: treatment integrity, which tracked the implementation of the planned supports; student outcome data, which tracked how a student responded to the intervention; and social validity data, which polled teachers, parents, and students input in regards to the intervention (Lane, Oakes, Ennis, & Hirsch, 2014).

PBIS and Effects on Student Subgroups

Arnett (2016) stated, "Effective school-wide social-emotional learning enhances the functioning of typical developing students and provides the context to increase the intensity, duration, and generalization of social-emotional skills for students with special needs" (p. 2). Benner et al. (2013) proposed, "Youth with emotional and behavioral disorders (E/BD) require multi-tiered systems of support (MTSS) or prevention, due to the intensity of their behavioral *and* academic challenges" (p. 15). To the contrary,

Tobin, Horner, Vincent, and Swain-Bradway (2012) found a lack of studies focused on outcomes for students with disabilities who attended a school which implemented a PBIS approach. PBIS developed as an initial response and created behavioral interventions for students who had an educational disability of Behavioral Disorders and received special education services (Sugai & Simonsen, 2012). Coffey and Horner's (2012) study discussed how PBIS recorded the data from behavioral interventions used in the school, and school professionals included the observational data, assessments, and intevention data into an evaluation for special education services. In fact, Landers, Courtrade, and Ryndak (2012) remarked the Individuals With Disabilities Education Act amendments in 1997 "mandated that positive behavioral interventions and supports (PBIS) and functional behavior assessments be used with students who have disabilities and whose behavior impedes either their learning or the learning of others" (p. 1). Navo et al. (2015) recommended behavioral interventions through the PBIS approach for students who had been suspended or expelled, as PBIS prevented long-term problems.

Universal Behavior Screening

Universal behavior screeners were utilized in schools as a Tier One prevention for all students by teachers assessing each student for social-emotional behavior functioning and to develop tiered interventions for students (Comprehensive, Integrated Three-Tiered Model of Prevention [Ci3T], 2017, 2017b; Donohue et al., 2015; ESP, n.d.; Feil & Frey, 2013; Hoff, Strawhun, & Peterson, 2015; Kilgus & Ecklund, 2017; Lane, Menzies, Oakes, & Kalberg, 2012a; Lane et al., 2012b; Michigan's Integrated Behavior and Learning Support Initiative [MIBLSI], n.d.; Pierce et al., 2016; Stormont et al., 2015; Walker, Severson, & Feil, 1995, 2014). Previous researchers determined universal

behavior screening was a proactive and preventative approach that identified students' behavioral needs, aided in the development of individual student interventions, and even guided decisions for the school system (Donohue et al., 2015). Lane et al. (2012b) described the universal behavior screening tools supported school staff in the identification of students who needed additional supports, and lessened the chances of non-identification of students who needed additional interventions and supports. Stormont et al. (2015) found universal screeners were especially helpful to determine if a student demonstrated internalizing behaviors. While Hoff, Strawhun, and Peterson (2015) concluded research supported utilizing behavior screeners because of the positive outcomes the screeners produced for students.

Most universal screening tools utilized teachers and at times parents to rate student behaviors, and a few of the screeners had students identify self-behavior traits (Hoff et al., 2015, Kilgus & Ecklund, 2017). Universal screeners ranged from free to a cost associated with usage, and the design of different screening tools targeted specific ages and grade levels (Donohue et al., 2015; Hoff et al., 2015; Kilgus & Ecklund, 2017; Pierce et al., 2016). Rous and Hallam (2013) advised universal screening tools should have met "standards for technical adequacy related to reliability and validity and that are appropriate for the diversity of children (i.e., language, ability, culture, [and] ethnicity) served" (p. 377). Commonly utilized universal screeners included the Systematic Screening for Behavior Disorders (SSBD), the SRSS, the Behavior Assessment Scale for Children Three: Behavior and Emotional Screening Scale (BASC-3 BESS), the Strengths and Difficulties Questionnaire (SDQ), the Social, Academic, and Emotional Behavior Risk Screener, and the ESP (Donohue et al., 2015; Drummond, 1994; ESP, n.d.; Hoff et

al., 2015; Kamphaus & Reynolds, 2007; Kilgus, von der Embse, Chafouleas, & Riley-Tillman, 2014; Kilgus & Ecklund, 2017; Lane et al., 2012a; Ci3T, 2017; Walker et al., 1995, 2014). Two examples of Universal Behavioral Screeners utilized in the study are discussed in the next sections of Chapter Two - the ESP for the preschool level and the SRSS for the elementary level.

Early Screening Project. The ESP, designed for preschool aged children (ages three through five) consisted of three stages for the identification of at-risk students (Feil & Frey, 2013). The assessment relied on Likert-scale teacher rankings for students who exhibited internalizing and externalizing behaviors in the preschool classroom and school teams completed the screener in less than one hour (Feil & Frey, 2013). The ESP screener consisted of three stages, which ranged from school teams who ranked student behaviors and observed student behaviors (Walker et al., 1995). The screener utilized Likert scales to rank student behavior, designed to assess the frequency, intensity of the behavior, and differences between students (Walker et al., 2014). Walker et al. (2014) tested the three stages of assessment for reliability, test-retest reliability, and consistency among raters (Walker et al., 1995, 2014).

The ESP screener contained two stages of teacher questionnaires - Stage One consisted of the teacher studying two examples of behaviors – externalizing behavior and internalizing behavior; teachers then ranked students according to the behaviors that most closely described the students' behavior in the classroom (Walker et al., 1995). Stage Two of the questionnaire consisted of teachers selecting the corresponding internalizing or externalizing form and completing four sections of questionnaires and indexes (Walker et al., 1995, 2014). For example, the Externalizer and the Internalizer forms both

contained the Critical Events Index, which detailed 16 different serious student behaviors and ranged from descriptions, such as “has vomited after eating, has set fires, or has reported sexual abuse” (Walker et al., 1995, p. 2). Both the Externalizer and the Internalizer forms also contained the Adaptive and Maladaptive Behavior Indexes, using a Likert-scale of 1 to 5; a score of one corresponded with a frequency of the behavior never occurring, and a score of five corresponded with ‘frequently’ (Walker et al, 1995). The Adaptive Behavior Index contained eight items; teachers based individual ratings on the knowledge of the student within the last month using the same Likert-Scale of 1 to 5 (Walker et al., 1995). The Adaptive Behavior items ranged from the “student had followed the routines of the classroom, cooperated with peers, and participated in group activities” (Walker et al., 1995, p. 4), and the Maladaptive Behavior items ranged from “the student had responded to others inappropriately, had tested classroom rules, and needed redirection or removal from the classroom (Walker et al., 1995, p. 5). The Externalizer form contained an Aggressive Behavior Scale with nine behavior traits; teachers used a Likert-scale of 1 to 5 on each trait, which ranged from physically aggressive behavior with others, and damaged property, or had tantrums (Walker et al., 1995). The Internalizer form contained a Social Interaction Scale with eight behavior traits; teachers used a Likert-scale of 1 to 7 on each trait, where a score of one meant “not true or descriptive” (Walker et al., 1995, p. 2) and a score of seven meant “very true or descriptive” (Walker et al., 1995, p. 2); questions ranged from descriptions of “had worked with a peer, initiated conversations, or shared laughter with others” (Walker et al., 1995, p. 2).

Table 3

ESP Universal Screening Tool.

Description			
Stage one: Raters rank students according to gender on either internalizing or externalizing items. Stage two: Raters filled out the appropriate internalizing or externalizing questionnaire.			
Internalizing Items		Externalizing Items	
Normative Comparison Measures			
Critical Events Index		Critical Events Index	
Social Interaction Scale		Aggressive Behavior Scale	
Clinical Measures			
Adaptive Behavior Scale		Adaptive Behavior Scale	
Maladaptive Behavior Scale		Maladaptive Behavior Scale	
Scoring			
Boys			
	At Risk	High Risk	Extreme Risk
Critical Events Index	2	3	4 or more
Aggressive Behavior Scale	15-16	17-18	19 or more
Social Interaction Scale	20-26	14-19	8-13
Adaptive	25-27	22-24	21 or less
Maladaptive	20-22	23-25	26 or more
Girls			
	At Risk	High Risk	Extreme Risk
Critical Events Index	2	3	4 or more
Aggressive Behavior Scale	14	15	16 or more
Social Interaction Scale	25-31	19-24	8-18
Adaptive	27-29	24-26	23 or less
Maladaptive	20-22	23-25	26 or more

Note. Adapted from Walker et al. (1995).

Stage Three of the ESP, which was an optional process, consisted of the voluntary Parent Questionnaire, which contained 12 questions that ranged from “playing with other children to getting along with adults” (Walker et al., 1995, p. 30); parents checked the corresponding boxes next to each question for “always,” “frequently,” “sometimes,” or “never” (Walker et al., 1995, p. 30). Once completed, the rater summed the scores from each of the normative comparison measures and the clinical measures. Each measure ranked in the ‘no risk’ category received a zero; measures ranked in the ‘at risk’ category received a number one; ‘high risk’ received a number two; and ‘extreme risk’ received a

three. Raters summed the numbers, which gave a final ranking of a score from zero to 12 (Walker et al, 1995) (see Table 3).

The Student Risk Screening Scale. The SRSS, a free Universal Screening Tool for grades kindergarten through twelfth, was a free screening tool which identified elementary students' social-emotional behaviors (Hoff et al., 2015). Elementary schools administered the SRSS three times a year and teachers ranked each student on seven criteria for externalizing behaviors (Donohue et al., 2015).

Table 4

SRSS Universal Screening Tool.

	Description
Students are individually rated on seven items using a 4-point Likert-type scale: never = 0 occasionally = 1 sometimes = 2 frequently = 3	
Externalizing Items	1. Steal 2. Lie, Cheat, Sneak 3. Behavior Problem 4. Peer Rejection 5. Low Academic Achievement 6. Negative Attitude 7. Aggressive Behavior
Internalizing Items	1. Emotionally flat 2. Shy, withdrawn 3. Sad, depressed 4. Anxious 5. lonely
Scoring	0-3 Low Risk 4-8 Moderate Risk 9-12 High Risk

Note. Adapted from Ci3T (2017).

The SRSS contained seven questions or items and took approximately 10 to 15 minutes for the school teams to rank the whole class (Lane et al., 2012b). Results of

studies determined the SRSS to be a valid, reliable behavior-screening tool for students who demonstrated externalizing and internalizing behaviors (Lane et al., 2012b). The SRSS was originally developed to detect antisocial behaviors, and expanded to include internalizing and externalizing behaviors in students, known as the Student Risk Screening Scale – Internalizing and Externalizing (SRSS-IE); the SRSS-IE added five questions and supported the identification of students with internalizing behavior (Hoff et al., 2015; Lane et al., 2012b; Kilgus & Ecklund, 2017) (see Table 4).

Social Skills Instruction

Another component of SWPBIS consisted of Social Skills Instruction, which improved social-emotional learning, decreased challenging behaviors, helped children adopt nonaggressive interaction skills, and reduced internalizing and externalizing behaviors (Bradshaw, 2013; O'Connor, Strawhun, Hoff, & Peterson, 2014; Sklad, Diekstra, De Ritter, Ben, & Gravesteijn, 2012; Webster-Stratton & Reid, 2013). Whitcomb and Parisi Damico (2016) added, in addition to the increase of social and emotional skills, social-emotional programs prevented mental health difficulties. Social skills instruction often consisted of a social-emotional curriculum taught in either a whole group or small group setting. For example, one social skills curriculum was a part of the preschool curriculum for whole group instruction, while a school staff member, such as the school counselor or social worker, taught another social skills curriculum as a Tier 2 or secondary support in the small group setting (Debnam et al., 2012). O'Connor et al. (2014) stated, "Evidence-based social skills programs . . . include direct instruction, modeling, role-playing the skill, practicing the skill in different settings, and performance feedback" (p. 1).

Table 5

Social and Emotional Learning Curriculum Lessons.

Lesson Title	Social-Emotional Competencies Addressed
The Feelings Exercise Group	Self-Awareness Self-Management
Understanding Your Feelings 1	Self-Awareness
Understanding Your Feelings 2	Self-Awareness Self-Management Social Awareness
Understanding Other People's Feelings	Social Awareness
When You're Angry	Self-Awareness Self-Management
When You're Happy	Self-Awareness Self-Management
When You're Worried	Self-Awareness Self-Management
Being a Good Friend	Self-Awareness Self-Management Social Awareness Relationship Skills
Solving People Problems	Self-Awareness Self-Management Social Awareness Relationship Skills Responsible Decision Making
Finishing UP!	Self-Awareness Self-Management Social Awareness Relationship Skills Responsible Decision Making

Note. Adapted from Whitcomb & Parisi Damico, 2016.

The goal of social skills instruction was for students to learn social-emotional and behavioral skills, such as managing emotions and behavior, following directions, problem

solving, and to utilize a student's skills without prompting or cueing, and to generalize skills to other settings (Jones & Bouffard, 2012; O'Connor et al., 2014; Whitcomb & Parisi Damico, 2016). Table 5 outlines the social and emotional learning curriculum lessons from the Strong Start Pre-K program for ages three to five and indicates which social-emotional competencies each lesson addressed (Whitcomb & Parisi Damico, 2016).

Webster-Stratton and Reid (2013) stressed the importance of social-emotional skills taught early in a child's school experience, and a study by Sklad, Diekstra, De Ritter, Ben, and Gravesteijn (2012) determined social-emotional behavior skills instruction programs had "positive effects on a number of desirable outcomes…the largest effects were found for social-emotional skills, attitudes towards self, and prosocial behavior" (p. 905). DiPrete and Jennings (2012) discovered females began school with more social and behavioral skills than males. However, Sklad et al. (2012) warned the research on social skills instruction had been conducted within one year or less of the completion of the social-emotional curriculum, and "conclusions about lasting effects of these SEB programs need to be made very cautiously" (p. 905). Webster-Stratton and Reid (2013) identified "for some children, particularly those who are at high risk for problems, it may take many years to achieve competence in emotion regulation and social skills and an ability to self-evaluate" (p. 275). Sabol and Pianta (2012) agreed and found social skills and challenging behaviors fluctuated over time and depended on the "specific nature and severity of the problem" (p. 284).

Common evidence-based social skills programs included The Incredible Years; The PATHS Curriculum (Promoting Alternative Thinking Strategies); Second Step,

2018; Second Step; Strong Start; and Why Try? (Kilgus & Ecklund, 2017; O'Connor et al., 2014; Webster-Stratton & Reid, 2013; Whitcomb & Parisi Damico, 2016). Table 6 outlines the social skills curriculum units and concepts from the Second Step Social-Emotional Learning Program for ages four to five (Second Step, 2018).

Table 6

Social Skills Curriculum Units and Concepts.

Social Skills Instruction				
Skills for Learning	Empathy	Management of Emotions	Problem Solving Skills	Transitioning to Kindergarten
Welcoming Listening Focusing Attention Self-Talk Following directions Asking for wants and needs	Identifying feelings More feelings Identifying anger Same or different feelings Accidents Caring and helping	Identifying feelings Strong feelings Naming feelings Managing disappointment Managing anger Managing waiting	Fair ways to play Having fun with friends Inviting to play Joining in with play Saying the problem Thinking of solutions Speaking assertively	Learning in kindergarten Riding the kindergarten bus Making new friends in kindergarten

Note. Adapted from SecondStep.org, 2018.

Social and emotional curriculums and social skills curriculums contained similarities in content, and addressed awareness of emotions, awareness of other's emotions, and the management of emotions (Kilgus & Ecklund, 2017; O'Connor et al., 2014; Second Step, 2018; Webster-Stratton & Reid, 2013; Whitcomb & Parisi Damico, 2016).

Summary

Kindergarten or school readiness consisted of factors, such as academic readiness and social and emotional behavior readiness, such as self-regulation skills. Researchers found the transition to kindergarten created stress for students (Bell-Booth et al., 2014;

Cook & Coley, 2017; Feil & Frey, 2013; Kennedy et al., 2012; McIntyre et al., 2014; Miller, 2015; Podvey et al., 2013; van Lier et al., 2012; Welchons & McIntyre, 2015; Wildenger & McIntyre, 2012). Previous researchers determined an importance for a foundation in social-emotional skills for academic success and long-term health (Ashdown & Bernard, 2012; Brown, 2013; Davies et al., 2016; Denham et al., 2014; Duran et al., 2012; Feil & Frey, 2013; Jones & Bouffard, 2012; Lee & Goh, 2012; Meadan et al., 2016; Montes et al., 2012; Nix et al., 2013; Pears et al., 2014; Shala, 2013; Telfair & Shelton, 2012; Sabol & Pianta, 2012). Research indicated participation in a preschool program increased social and emotional behavior skills, such as self-regulation for students regardless of gender, SES, race, disability, or status as an EL (Brown et al. 2013; Hatcher et al. 2012; Fuhs, Farran, & Nesbitt, 2013; Wildenger & McIntyre, 2012).

Sugai and Simonsen (2012) emphasized the SWPBIS or PBIS approach promoted positive academic and social-emotional outcomes for all students. The PBIS approach prevented challenging behaviors, taught social and emotional behavior skills, and identified behavior difficulties in students, and supported students through tiered levels of intervention (Bradshaw, 2013; Buysse & Peisner-Feinberg, 2013; Coffey & Horner, 2012; Cressey et al., 2014; Donohue et al., 2015; Dunlop, 2013; Goodman-Scott, 2014; Hemmeter et al., 2013; Landers et al., 2012; Martens & Andreen, 2013; Navo et al., 2015; Sugai & Simosen, 2012; MO SW-PBS, 2016d, 2017). The researcher aimed to investigate the participation in a PBIS preschool program and the generalization of social-emotional skills and self-regulation skills to kindergarten. Chapter Three outlines the methodology used for the study. Chapter Four outlines the results of the mixed-methods investigation, and Chapter Five discusses the results, and gives

recommendations for early childhood programs and the implementation of PBIS, social-emotional teaching, and how early childhood programs and elementary schools can support students and families in the transition to kindergarten.

Chapter Three: Methodology

Purpose

The purpose of this mixed-methods investigation was to study the generalization of PBIS skills from the Early Childhood Special Education (ECSE) preschool setting to the kindergarten setting. The researcher compared the social-emotional behaviors of kindergarten students in the 2016-2017 school year who participated in a PBIS program in the ECSE setting during the 2015-2016 school year and the social-emotional behaviors of kindergarten students in the 2016-2017 school year who did not participate in a PBIS program in the ECSE setting during the 2015-2016 school year. The researcher utilized secondary data from the ESP scores in ECSE, SRSS scores, and office referral data in kindergarten. Analyzed subgroups included students with disabilities, general education students, students eligible for F/R lunch, students who were EL, student gender, and student birthdate range (birthdates from August through February and birthdates from March through July). Anonymous, open-ended surveys of kindergarten teachers and elementary administrators measured the perception of student behaviors from the beginning of the school year, differences in student behaviors, possible interpretation of differences in the behaviors, and implementation results of PBIS interventions and other behavioral interventions. The surveys helped the researcher gauge the perception of student participation in a PBIS ECSE program and a student's generalization of social-emotional behavior skills during the kindergarten school year.

Surveys

Once the Institutional Review Board and the research site granted permission, a NIH-certified committee member contacted kindergarten teachers and elementary

administrators via district email. The email contained an introduction to the investigation and included a link for participants to respond to a voluntary nine-question, anonymous survey (see Appendix A and Appendix B). The researcher designed the survey through the website *Qualtrics* (Qualtrics.com, 2017). Twenty-three kindergarten teachers received the survey link, and 12 elementary administrators received the survey link. The researcher anticipated completion of the minimum number of two surveys from each of the adult participant groups; five elementary administrators and three kindergarten teachers responded within two weeks.

Methodology

The mixed-methods investigation compared students' social-emotional behavior skills during the transition into kindergarten, based on participation or non-participation in a PBIS Early Childhood Special Education (ECSE) preschool. The investigation was primarily quantitative by analysis of secondary data sources and contained a secondary component via anonymous, adult participant responses to open-ended survey questions, coded for common themes. The use of a mixed-method approach triangulated the data sources and provided the researcher a clearer picture of students generalizing social-emotional skills.

The researcher analyzed secondary data from fall and spring ESP scores from the students who participated in PBIS ECSE during the 2015-2016 school year, externalizing SRSS scores from the fall of the students' kindergarten year (2016-2017), and office referral data from the fall of the students' kindergarten year (2016-2017). Qualitative data consisted of responses to open-ended, anonymous surveys sent to the adult participants, which consisted of elementary administrators and kindergarten teachers; the

surveys gauged the perceptions of kindergarten students' social-emotional behavior skills; for example, students who participated in a PBIS ECSE program, as opposed to students who did not participate in a PBIS ECSE program.

The researcher emailed the Assistant Superintendent of the participating school district/research site with information on the proposed study, asking for permission to conduct the study in the school district. The Assistant Superintendent granted permission to use the district as a research site, pending student names remained anonymous. The researcher then gained IRB approval from Lindenwood University to begin gathering secondary data and to conduct anonymous, open-ended surveys of the adult participants employed by the participating school district.

Null Hypotheses

Null Hypothesis H^1*:* There is no difference in the values of externalizing scores between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Null Hypothesis H^{1a}*:* There is no difference in the values of externalizing scores between students with disabilities who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Null Hypothesis H^{1b}: There is no difference in the values of externalizing scores between general education students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Null Hypothesis H^{1c}*:* There is no difference in the values of externalizing scores between female students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Null Hypothesis H^{1d}*:* There is no difference in the values of externalizing scores between male students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Null Hypothesis H^{1e}*:* There is no difference in the values of externalizing scores between EL students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Null Hypothesis H^{1f}***:*** There is no difference in the values of externalizing scores between students eligible to receive free and reduced lunch and participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Null Hypothesis H^{1g}*:* There is no difference in the values of externalizing scores between students whose birthdate is between August and February who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Null Hypothesis H^{1h}*:* There is no difference in the values of externalizing scores between students whose birthdate is between March and July who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Null Hypothesis H^2*:* There is no difference in the number of office referrals between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Null Hypothesis H^3*:* There is no difference between the fall and spring ESP scores for students participating in a PBIS ECSE program.

Null Hypothesis H^{3a}*:* There is no difference between the fall and spring ESP scores for students with disabilities who participated in a PBIS ECSE program.

Null Hypothesis H^{3b}: There is no difference between the fall and spring ESP scores for general education students who participated in a PBIS ECSE program.

Null Hypothesis H^{3c}*:* There is no difference between the fall and spring ESP scores for female students who participated in a PBIS ECSE program.

Null Hypothesis H^{3d}*:* There is no difference between the fall and spring ESP scores for male students who participated in a PBIS ECSE program.

Null Hypothesis H^{3e}*:* There is no difference between the fall and spring ESP scores for EL students who participated in a PBIS ECSE program.

Null Hypothesis H^{3f}*:* There is no difference between the fall and spring ESP scores for students who are eligible to receive free and reduced lunch and who participated in a PBIS ECSE program.

Null Hypothesis H^{3g}*:* There is no difference between the fall and spring ESP scores for students whose birthdate is between August and February and who participated in a PBIS ECSE program.

Null Hypothesis H^{3h}*:* There is no difference between the fall and spring ESP scores for students whose birthdate is between August and February and who participated in a PBIS ECSE program.

Research Questions

Research Question 1: How do kindergarten teachers' perceive students' who participated in a PBIS ECSE program's social-emotional behavior skills?

Research Question 2: How do kindergarten teachers' perceive students' social-emotional behavior skills who did not participate in a PBIS ECSE program?

Research Question 3: How do elementary administrators' perceive students' social-emotional behavior skills who participated in a PBIS ECSE program?

Research Question 4: How do elementary administrators' perceive students' social-emotional behavior skills who did not participate in a PBIS ECSE program?

Quantitative Data Collection/Analysis

To research Hypothesis 1 and sub-Hypotheses a-h, the researcher contacted the researched school district Information Technology (IT) department and requested a de-identified list from the school district's student database of all kindergarten students from the 2016-2017 school year, organized into a Microsoft Excel chart and containing the information listed in Table 7. The de-identified data included the coding of student names as S1, S2, and S3, etc.

Table 7

Kindergarten Student Participants

Participation in a PBIS ECSE Program - Yes or No
Gender
Birthdate Range (August-February) or (March-July)
Free and Reduced (F/R) lunch status/Eligibility
Special Education participation – yes or no
English Language Learner status
Fall SRSS score
Fall Office Referral Data (if any)

The researched district IT department located 696 kindergarten student records which contained SRSS externalizing scores in the district database. The researcher narrowed the number of kindergarten student records to the maximum of 460, set by the researcher.

The researcher sorted the data by students who participated in a PBIS ECSE preschool program during the 2015-2016 school year versus students who did not

participate in a PBIS ECSE preschool program during the 2015-2016 school year. The researcher stratified the kindergarten student data into subgroups and then determined random subgroup samples of 50 by utilizing the 'random' function in Excel. Table 8 describes the stratified subgroups.

Table 8

Stratified Random Samples for Kindergarten Students' SRSS Scores

Stratified Random Samples of 30-50	
Students who participated in a PBIS ECSE program during the 2015-2016 school year:	Students who did not participate in a PBIS ECSE program during the 2015-2016 school year:
Students who are enrolled in general education	Students who are enrolled in general education
Students who have been identified as students with disabilities according to the Missouri Department of Elementary and Secondary Education	Students who have been identified as students with disabilities according to the Missouri Department of Elementary and Secondary Education
Female students	Female students
Male students	Male students
Students who are English Language (EL) learners	Students who are English Language (EL) learners
Students eligible to receive free and reduced lunch	Students eligible to receive free and reduced lunch
Students whose birthdate is between August and February	Students whose birthdate is between August and February
Students whose birthdate is between March and July	Students whose birthdate is between March and July

Although the researcher set a minimum of 30 and a maximum of 50 for each stratified random sample, if a minimum data sample did not equal a minimum of 30, the researcher utilized all available data samples. For instance, for the subgroup, 'Students who did not participate in a PBIS ECSE program during the 2015-2016 school year and who have been identified as students with disabilities according to the Missouri Department of Elementary and Secondary Education,' only yielded 19 samples; thus the researcher included all 19 samples in a *t*-test for difference in means.

Using a statistics calculator program, MathPortal.org (n.d.), the data analysis program in Excel, and an online *t*-test calculator to crosscheck the statistics, Social Science Statistics (2018), the researcher generated a *t*-test for difference in means for each data set of externalizing scores on the SRSS from the fall of the students' kindergarten school year (MathPortal.org, n.d.; Maxwell, 2013; Social Science Statistics, 2018). The researcher analyzed the data set for a difference in means of the students who attended a PBIS ECSE program during the 2015-2016 school year against students who did not participate in a PBIS ECSE program during the 2015-2016 school year.

The researcher utilized an online standard deviation calculator through the website, Calculator.net (2017), to identify the sum, the standard deviation, and the mean of the scores to determine a critical value for each stratified random sample in a two-tailed test for difference in means, with an alpha level of 0.05. If the *t*-value fell into the critical region, the results supported the alternative Hypothesis and the researcher rejected the Null Hypothesis. The researcher displayed the data in tables and visually illustrated the results for each of the stratified random samples.

To analyze research Null Hypothesis 2, the researcher sorted the de-identified list from the school district's student database of all kindergarten students from the fall of the 2016-2017 school year. The researcher organized the information into a Microsoft Excel chart that contained the information in Table 9. The de-identified data included the coding of student names as S1, S2, and S3, etc. Within the 460 kindergarten student records, six students received office referrals during the kindergarten school year. The researcher anticipated a minimum of 30 and a maximum of 50; since the number of office referrals was less than the minimum number set by the researcher, the researcher used

descriptive analysis to report results. If the data reported a minimum number of 50 office referrals, the researcher planned to conduct a *t*-test in addition to descriptive statistics.

Table 9

Stratified Random Samples of Fall Kindergarten Office Referrals

Stratified Random Samples of Office Referral Data	
Students who received an office referral in the fall of 2016 and who participated in a PBIS ECSE program during the 2015-2016 school year:	Students who received an office referral in the fall of 2016 and who did not participate in a PBIS ECSE program during the 2015-2016 school year:
Students who are enrolled in general education	Students who are enrolled in general education
Students who have been identified as students with disabilities according to the Missouri Department of Elementary and Secondary Education	Students who have been identified as students with disabilities according to the Missouri Department of Elementary and Secondary Education
Female students	Female students
Male students	Male students
Students who are English Language (EL) learners	Students who are English Language (EL) learners
Students eligible to receive free and reduced lunch	Students eligible to receive free and reduced lunch
Students whose birthdate is between August and February	Students whose birthdate is between August and February
Students whose birthdate is between March and July	Students whose birthdate is between March and July

To research Null Hypothesis 3/sub-Hypotheses a-h, the researcher contacted the researched school district Information Technology (IT) department and requested a de-identified list from the school district's student database of all early childhood students who participated in the district's PBIS ECSE preschool during the 2015-2016 school year. The de-identified data included the coding of student names as S1, S2, and S3, etc. A Microsoft Excel chart contained the 255 student records organized from the IT department, noted in Table 10. The researcher narrowed the student records to the maximum number set by the researcher of 175 by the 'random' function in Excel.

Table 10

PBIS ECSE Program Student Participants

Student Gender
Birthdate Range (August-February) or (March-July)
Free and Reduced (F/R) lunch status/eligibility
Students eligible for Special Education
Students who are Dual Language (EL) Learners
Fall ESP score
Spring ESP score

The researcher stratified the student data according to the subgroups listed in Table 11.

Table 11

Stratified Random Samples of Early Childhood Students' ESP Scores.

Stratified Random Samples of 30-50
Students enrolled in General Education
Students who have been identified as students with disabilities according to the Missouri Department of Elementary and Secondary Education
General education students
Female students
Male students
Students who are English Language (EL) Learners
Students eligible to receive Free and Reduced (F/R) Lunch
Students whose birthdate is between August and February
Students whose birthdate is between March and July

The Excel program determined a random stratified sample of 30 to 50 participants by the 'random' function. The researcher analyzed the stratified random samples of the secondary data to investigate if students in PBIS ECSE settings were making statistically significant gains in social-emotional skills, as measured by each student's fall and spring ESP scores. For instance, the ESP scores ranged from 0 (no risk) to 12 (high risk) (ESP, n. d.). A decrease in the ESP scores over the 2015-2016 school year indicated learning and comprehension of social-emotional skills by the student, while an increase or no

change in the ESP score over the 2015-2016 school year indicated little or no learning and comprehension of social-emotional skills by the student. The researcher averaged the student data and conducted a *t*-test for difference in means, with an alpha level of 0.05, for each of the stratified random sample categories.

Qualitative Data Collection/Analysis

A member of the dissertation committee who was then-currently NIH-certified contacted the Human Resources department of the researched school district for a convenience sample of all elementary administrators and all kindergarten teachers from the 2016-2017 school year and a list of the school email addresses (Bluman, 2015). The NIH-certified dissertation committee member emailed the convenience sample of elementary administrators and kindergarten teachers through the school email addresses and outlined all aspects of the mixed-methods investigation, in addition to consent to participate in the survey. The email contained a link to the anonymous, electronic survey using an online survey tool, *Qualtrics* (see Appendix A & Appendix B) (Qualtrics.com, 2017). The researcher set a minimum number for both participant groups of two and a maximum of five.

The researcher was prepared to have the NIH-certified member of the committee resend emails to the adult participants if the minimum number of two surveys had not been completed and returned within one week. The plan consisted of resending the email with a phone message from the NIH-certified dissertation committee member on the school phone extensions after two weeks. After three weeks of little to no responses, the committee member would then generate a new random sample of adult participants using an online tool, Random.org (Random.org, 2017). However, the survey was open for a

total of two weeks; within one week, five elementary administrators and three kindergarten teachers completed and returned the survey, which met the minimum participant number for both groups.

When the surveys returned completed from both adult participant groups (elementary administrators and kindergarten teachers), a random sample of two participants from the list of elementary principals and a random sample of two participants from the list of kindergarten teachers was determined by a random number generator using an online tool, Random.org (Bluman, 2015; Random.org, 2017). The NIH-certified committee member shared the responses with the researcher, who reviewed, categorized, and coded the participant responses into common themes pertaining to each research question (Maxwell, 2013). The survey responses were stored in the *Qualtrics* password-protected online survey program.

Limitations

Inner-rater reliability could have been a possible limitation for both the SRSS screener ratings by kindergarten teachers and for the ESP screener ratings by ECSE teachers. However, in most cases, ECSE classroom teams (consisting of the classroom teacher, paraprofessional, and therapists) completed the ESP rating scales as a group to help eliminate rater bias. Consistently utilized in the researched school district was the SRSS for externalizing behaviors; some elementary buildings in the district also used the SRSS-IE, which would also identify internalizing behaviors and give a broader picture of student behaviors. The ESP screener data consisted of student data for all preschool students and not necessarily just students in the pre-kindergarten year. The data did not detail enrollment dates for students in the preschool program or how many days per week

students attended class; for instance, two, three, or four half days per week. Another limitation found was certain subgroups had very small sample sizes, such as students with disabilities, for Null Hypothesis H^{01a}, had 42 students in ECSE and 19 in kindergarten. The subgroup of students who were English Language (EL) Learners, for Null Hypothesis H^{01e}, had 11 from in ECSE; and the subgroup, F/R lunch, for Null Hypothesis H^{01f}, had 23 students in ECSE. For Null Hypothesis H^{02} , Office Referral Data from kindergarten resulted in a very small sample size of six.

The Research Site and Participants

The data sample size consisted of information generated by kindergarten students who participated in a PBIS ECSE program during the 2015-2016 school year and generated by kindergarten students who did not participate in a PBIS ECSE program during the 2015-2016 school year. The researcher utilized secondary data by identifying the ECSE student population of the 2015-2016 classes and the kindergarten student population of the 2016-2017 kindergarten classes. Data analysis, conducted by the researcher, included use of a stratified random sample for each of the student populations. Table 12 includes the student populations, the minimum and maximum number of participants, and the secondary data utilized.

Table 12

Student Population

Student Population Secondary Data Description:	Minimum-Maximum:
Externalizing SRSS scores from Kindergarten students during the fall of the 2016-2017 school year	275-460
Office Referral data from Kindergarten students during the 2016-2017 school year	50-100
Fall and Spring ESP scores from students who participated in a PBIS ECSE program during the 2015-2016 school year	80-175

Summary

The purpose of this study was to measure the generalization of PBIS skills from the Early Childhood Special Education (ECSE) preschool setting to the kindergarten setting. The researcher utilized a mixed-methods approach by the collection and analysis of social-emotional behavior rating scales, by the stratified office referral data, and through the anonymous surveys of kindergarten teachers and elementary administrators. The mixed-method approach to the study provided information on student behavior ratings and on the perception of educators and the students' generalization of social and emotional behavior skills. Chapter Four describes and explains the results obtained through the mixed-methods research approach.

Chapter Four: Results

Overview

The purpose of this mixed-methods investigation was to study the generalization of PBIS skills from the Early Childhood Special Education (ECSE) preschool setting to the kindergarten setting. The researcher compared the social-emotional behavior of kindergarten students in the 2016-2017 school year who participated in a PBIS program in the ECSE setting during the 2015-2016 school year and the social-emotional behavior of kindergarten students in the 2016-2017 school year who did not participate in a PBIS program in the ECSE setting during the 2015-2016 school year.

The research questions addressed and main null hypotheses applied were:

Research Question 1: How do kindergarten teachers' perceive students' who participated in a PBIS ECSE program's social-emotional behavior skills?

Research Question 2: How do kindergarten teachers' perceive students' social-emotional behavior skills who did not participate in a PBIS ECSE program?

Research Question 3: How do elementary administrators' perceive students' social-emotional behavior skills who participated in a PBIS ECSE program?

Research Question 4: How do elementary administrators' perceive students' social-emotional behavior skills who did not participate in a PBIS ECSE program?

Null Hypothesis H^1*:* There is no difference in the values of externalizing scores between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Null Hypothesis H^2*:* There is no difference in the number of office referrals between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Null Hypothesis H^3*:* There is no difference between the fall and spring ESP scores for students participating in a PBIS ECSE program.

From the researched district, the researcher collected de-identified secondary data of the kindergarten SRSS scores from the 2016-2017 school year, the kindergarten office referrals from the fall of the 2016-2017 school year, and the Early Childhood ESP scores from the 2015-2016 school year in an Excel spreadsheet from the researched school district's student database and IT department. The de-identified data included the coding of student names as S1, S2, and S3, etc. The researcher collected anonymous survey responses from elementary administrators and kindergarten teachers on the behavior of the students in kindergarten during the 2016-2017 school year.

The researcher detailed the stratified samples of subgroups (see Table 13) used to sort the kindergarten SRSS data, the office referral data, the Early Childhood ESP data, and the labels used to describe each subgroup in the subsequent tables of results.

Table 13

Stratified Subgroup Samples and Table Labels.

Student Group	Labels Used in Tables
Overall Student Population who participated in a PBIS ECSE program	Overall EC
Overall Student Population who did not participate in a PBIS ECSE program	Overall No EC
Students who had been identified as eligible for special education according to the Missouri Department of Elementary and Secondary Education and who participated in a PBIS ECSE program	EC IEP

Continued.

Table 13. Continued.

Students who had been identified as eligible for special education according to the Missouri Department of Elementary and Secondary Education and who did not participate in a PBIS ECSE program	No EC IEP
General education students who participated in a PBIS ECSE program	EC Gen Ed
General education students who did not participate in a PBIS ECSE program	No EC Gen Ed
Female students who participated in a PBIS ECSE program	EC Female
Female students who did not participate in a PBIS ECSE program	No EC Female
Male students who participated in a PBIS ECSE program	EC Male
Male students who did not participate in a PBIS ECSE program	No EC Male
Students who are English Language (EL) Learners who participated in a PBIS ECSE program	EC EL
Students who are English Language (EL) Learners who did not participate in a PBIS ECSE program	No EC EL
Students eligible to receive Free and Reduced (F/R) Lunch who participated in a PBIS ECSE program	EC F/R Lunch
Students eligible to receive Free and Reduced (F/R) Lunch who did not participate in a PBIS ECSE program	No EC F/R Lunch
Students whose birthdates were between August and February who participated in a PBIS ECSE program	EC Aug-Feb birthday
Students whose birthdate were between August and February who did not participate in a PBIS ECSE program	No EC Aug-Feb birthday
Students whose birthdate were between March and July who participated in a PBIS ECSE program	EC Mar-Jul birthday
Students whose birthdate were between March and July who did not participate in a PBIS ECSE program	No EC Mar-Jul birthday

Null Hypothesis 1

The researcher analyzed the externalizing kindergarten SRSS scores from the fall of the 2016-2017 school year to investigate a potential difference in the behaviors of students who participated in a PBIS ECSE program versus students who did not participate in a PBIS ECSE program, overall.

Null Hypothesis H^1*:* There is no difference in the values of externalizing scores between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

The researcher analyzed a random sample of 50 externalizing kindergarten scores from the fall SRSS data to investigate Null Hypothesis 1; 50 scores from students who participated in a PBIS ECSE program (Overall EC) and 50 scores from students who did not participate in a PBIS ECSE program (Overall No EC). As stated in Chapter Two, teachers rated students individually on seven items on the SRSS using a 4-point Likert-type scale of never = 0, occasionally = 1, sometimes = 2, and frequently = 3 (Ci3T, 2017; Donohue et al., 2015; Drummond, 1994). The seven items on the SRSS consisted of: (1) steal, (2) lie, cheat, sneak, (3) behavior problem, (4) peer rejection, (5) low academic achievement, (6) negative attitude, and (7) aggressive behavior (Ci3T, 2017; Donohue et al., 2015; Drummond, 1994). A SRSS externalizing score of 0 to 3 indicated a student was 'low risk,' a score of 4 to 8 indicated 'moderate risk,' and a score of 9 to 12 indicated 'high risk' (Ci3T, 2017; Donohue et al., 2015; Drummond, 1994). The researcher used a standard deviation calculator program and summed the SRSS scores, and determined the mean, standard deviation, and the variance for each investigated student subgroup (Calculator.net, 2017). Overall, students who did not participate in a

PBIS ECSE program had a 50-point difference between the sum and a 1-point difference between the mean on the externalizing SRSS scores. Students who participated in a PBIS ECSE program had the highest sum at 113 and the highest mean at 2.26. Since both subgroups met the researcher's set maximum number of 50, the researcher conducted a *t*-test for difference in means, where the critical value was 2.009 and the *t*-score was 1.63. The researcher failed to reject Null Hypothesis 1 and did not support Hypothesis 1, since the *t*-score was less than the critical value.

Null Hypothesis 1 included eight sub-Null Hypotheses a-h. For each subgroup, the researcher analyzed a stratified random sample of externalizing kindergarten SRSS scores from the fall; scores from students who participated in a PBIS ECSE program, and scores from students who did not participate in a PBIS ECSE program. As stated in Chapter Two, a SRSS externalizing score of 0 to 3 indicated a student was 'low risk,' a score of 4 to 8 indicated 'moderate risk,' and a score of 9 to 12 indicated 'high risk' (Ci3T, 2017, Donohue et al., 2015; Drummond, 1994). The researcher summed the scores, and determined the mean, standard deviation and the variance for each of the investigated student subgroups. Table 14 displays the number of students in the each of the subgroup samples (count), the total of the SRSS scores from the Fall of the kindergarten school year (sum), the average of the SRSS scores (mean), the sample standard deviation, and the amount of difference between the SRSS scores (sample standard variance).

Table 14

Fall Kindergarten SRSS Data.

Groups	Count	Sum	Mean	Sample Standard Deviation	Variance (sample standard)
Overall EC	50	113	2.26	3.57	12.8
Overall No EC	50	63	1.26	2.4	5.74
EC IEP	42	102	2.43	3.51	12.3
No EC IEP	19	25	1.32	2.98	8.9
EC Gen Ed	50	56	1.12	1.97	3.86
No EC Gen Ed	50	59	1.18	2.32	5.38
EC Female	35	49	1.4	3.14	9.84
No EC Female	50	31	0.62	1.12	1.26
EC Male	50	89	1.78	2.75	7.56
No EC Male	50	83	1.66	2.8	7.82
EC EL	11	10	0.91	1.38	1.89
No EC EL	50	66	1.32	1.74	3.04
EC F/R Lunch	23	73	3.17	4.43	19.60
No EC F/R Lunch	50	68	1.36	2.15	4.60
EC Aug-Feb birthday	50	109	2.18	3.81	14.51
No EC Aug-Feb birthday	50	51	1.02	1.83	3.37
EC Mar-Jul birthday	41	75	1.83	2.57	6.6
No EC Mar-Jul birthday	50	58	1.16	1.6	2.55

The subgroup, No EC Female, had the lowest sum and mean on the SRSS externalizing scores for the subgroups that met the maximum number of 50. Although the researcher set the minimum subgroup sample size at 30 and a maximum sample size of 50, three subgroup categories contained student totals equal to or less than 30. The subgroups were EC EL (11 students), EC F/R Lunch (23 students), and No EC IEP (19 students). The researcher summed the scores, determined the mean, standard deviation, and variance and included descriptive statistics for each subgroup area.

Null Hypothesis H^{1a}*:* There is no difference in the values of externalizing scores between students identified as eligible for special education services who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

The total student count for the subgroup, EC IEP, yielded 42 student scores and the subgroup, No EC IEP, yielded 19 scores. Although the researcher set a minimum of 30 and a maximum of 50 student scores, the total student count for the subgroup, No EC IEP, did not meet the minimum number of 30. The researcher included descriptive statistics and summed the scores, where an observable difference in the sum of the fall SRSS scores revealed a 77-point difference between the two subgroups and the mean revealed a 1.11-point difference. Although an observable difference existed in the values of externalizing scores between students identified as eligible for special education services who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program, guided by the study design requirement for a sample size minimum of 30, the researcher did not conduct a *t*-test to determine a potential statistical significance to analyze Null Hypothesis H^{1a}.

Null Hypothesis H^{1b}: There is no difference in the values of externalizing scores between general education students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Both total student counts for the subgroup, EC Gen Ed, and for the subgroup, No EC Gen Ed, met the maximum number of 50 scores. The researcher summed the scores, where a difference in the sum of the fall SRSS scores revealed a 3-point difference between the two subgroups and the mean revealed a 0.06-point difference. Although there existed an observable difference in the scores, the researcher conducted a *t*-test for

difference in means to determine a statistical difference, where the critical value was ±2.009 and the *t*-score was -0.13; the researcher did not reject Null Hypothesis H^{1b} and did not support the Hypothesis, since the *t*-score was between the critical values.

Null Hypothesis H^{1c}*:* There is no difference in the values of externalizing scores between female students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

The researcher set a minimum of 30 and a maximum of 50 student scores for the sample size; the total student count for the subgroup, EC Female, yielded 35 student scores, which was above the minimum number. The total student count for the subgroup, No EC Female, yielded 50 scores. The researcher summed the scores, where a difference in the sum of the fall SRSS scores revealed an 18-point difference between the two subgroups and the mean revealed a 0.78-point difference. Although there existed an observable difference in the values of externalizing scores between female students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. Since the subgroups did not contain the same sample sizes, the researcher utilized a *t*-test assuming unequal variances with a critical value of 2.02 and a *t*-score of 1.41; the *t*-score was less than the critical value and the researcher did not reject the Null Hypothesis H^{1c} and did not support the Hypothesis.

Null Hypothesis H^{1d}*:* There is no difference in the values of externalizing scores between male students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Both total student counts for the subgroup, EC Male, and for the subgroup, No EC Male, met the maximum number of 50 scores. The researcher summed the scores, where a difference in the sum of the fall SRSS scores revealed a 6-point difference between the two subgroups and the mean revealed a 0.12-point difference. Although there existed an observable difference, the researcher conducted a *t*-test for difference in means to determine a statistical significance, where the critical value was 2.009 and the *t*-score was 0.22; the researcher did not reject Null Hypothesis H^{1d} and did not support the Hypothesis, since the *t*-score was less than the critical value.

Null Hypothesis H^{1e}*:* There is no difference in the values of externalizing scores between EL students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Although the researcher set a minimum of 30 and a maximum of 50 student scores for sample size, the total student count for the subgroup, EC EL, yielded 11 student scores, which did not meet the minimum number of 30. The total student count for the subgroup, No EC EL, met the maximum number of 50 scores. The researcher included descriptive statistics and summed the scores, where an observable difference in the sum of the fall SRSS scores revealed a 56-point difference between the two subgroups and the mean revealed a 0.41-point difference. Although an observable difference existed in the values of externalizing scores between EL students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program, guided by the study design requirement for a sample size minimum of 30, the researcher did not conduct a *t*-test to determine a potential statistical significance to analyze Null Hypothesis H^{1e}.

Null Hypothesis H^{1f}: There is no difference in the values of externalizing scores between students eligible to receive free and reduced lunch and participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Although the researcher set a minimum of 30 and a maximum of 50 student scores for sample size, the total student count for the subgroup, EC F/R Lunch, yielded 11 scores, which did not meet the minimum number of 30. The subgroup had the highest score as an overall mean with a score of 3.17, the highest score for the standard deviation with a score of 4.43, and the highest score for the overall variance at 19.60. The total student count for the subgroup, No EC F/R Lunch, who did not participate in a PBIS ECSE program met the maximum number of 50 scores. The researcher included descriptive statistics and summed the scores, where a difference in the sum of the fall SRSS scores revealed a 5-point difference between the two subgroups and the mean revealed a 1.81-point difference. Although an observable difference existed in the values of externalizing scores between students eligible to receive F/R lunch and participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program, guided by the study design requirement for a sample size minimum of 30, the researcher did not conduct a *t*-test to determine a potential statistical significance to analyze Null Hypothesis H^{1f}.

Null Hypothesis H^{1g}*:* There is no difference in the values of externalizing scores between students whose birthdate is between August and February who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Both total student counts for the subgroup, EC Aug-Feb birthday, and the subgroup, No EC Aug-Feb birthday, met the maximum number of 50 scores. The

researcher summed the scores, where a difference in the sum of the fall SRSS scores revealed a 58-point difference between the two subgroups and the mean revealed a 1.16-point difference. Although there existed an observable difference in the scores, the researcher conducted a *t*-test for difference in means to determine a statistical significance, where the critical value was 2.009 and the *t*-score was 2.09, which was determined to be a significant difference. A value equal to or greater than 2.009 demonstrated strong evidence against the null hypothesis. The researcher rejected Null Hypothesis H^{1g} and supported the Hypothesis, since the *t*-score was greater than the critical value. This was the only subgroup in the study whose *t*-score had a statistically significant difference.

Null Hypothesis H^{1h}*:* There is no difference in the values of externalizing scores between students whose birthdate is between March and July who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

The total student count for the subgroup, EC Mar-Jul birthday, yielded 41 scores, which met the minimum number set by the researcher but did not meet the maximum number. The total student count for the subgroup, No EC Mar-Jul birthday, met the maximum of 50 scores. The researcher summed the scores, where a difference in the sum of the fall SRSS scores revealed a 17-point difference between the two subgroups and the mean revealed a 0.67-point difference. Although there existed an observable difference in the values of externalizing scores between students whose birthdate was between March and July who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. Since the subgroups did not contain the

same sample sizes, the researcher utilized a *t*-test assuming unequal variances with a critical value of 1.99 and a *t*-score of 1.45; the *t*-score was less than the critical value, and the researcher did not reject Null Hypothesis $H^{1h}$and did not support the Hypothesis.

Table 15 displays the summary of the fall kindergarten externalizing SRSS scores and indicates how many students fell into the low risk category (scores of 0 to 3), moderate risk (scores of 4 to 8), high risk (scores of 9 to 12), extreme risk (scores of 13 to 15), and the percentage of the sample for each risk category (Ci3T, 2017, Drummond, 1994).

The students who participated in a PBIS ECSE program had seven less students in the low risk category than students who did not participate in a PBIS ECSE program. The students who participated in a PBIS ECSE program had a higher number of students in the moderate risk (4), high risk (1), and extreme risk (1) categories compared to students who did not participate in a PBIS ECSE program. Six of the subgroups of students who did not participate in a PBIS ECSE program had a higher percentage of students in the low risk category, and the two subgroup categories of EC Gen Ed and EC EL had a greater percentage in the low risk category.

Table 16 displays the SRSS data stratified into the subgroups and details the makeup of the subgroup, such as the total student count, number of males, females, students eligible for F/R Lunch, students with disabilities, EL students, students with a March through July birthdate, and students with an August through February birthdate.

Table 15

Fall Kindergarten SRSS Summary

Groups	Low Risk (Scores of 0-3)	% of sample	Moderate Risk (Scores of 4-8)	% of sample	High Risk (Scores of 9-12)	% of sample	Extreme Risk (Scores of 13-15)	% of sample
Overall EC	38	76%	7	14%	3	6%	1	2%
Overall No EC	45	90%	3	6%	2	4%	0	0
EC IEP	32	76%	5	11.9%	5	11.9%	0	0
No EC IEP	18	94.7%	0	0	0	0	1	5.2%
EC Gen Ed	45	90%	4	8%	1	2%	0	0
No EC Gen Ed	44	88%	5	10%	0	0	1	2%
EC Female	32	91.4%	1	2.6%	1	2.6%	1	2.6%
No EC Female	47	94%	2	4%	0	0	0	0
EC Male	41	82%	6	12%	3	6%	0	0
No EC Male	43	86%	5	10%	1	2%	1	2%
EC EL	10	91%	1	9.1%	0	0	0	0
No EC EL	45	90%	4	8%	0	0	0	0
EC F/R Lunch	16	69.5%	3	13%	3	13%	1	4.3%
No EC F/R Lunch	43	86%	6	12%	1	2%	0	0
EC Aug-Feb birthday	41	82%	4	8%	5	10%	1	2%
No EC Aug-Feb birthday	46	92%	3	6%	1	2%	0	0
EC Mar-Jul birthday	34	83%	5	12%	2	4.8%	0	0
No EC Mar-Jul birthday	44	88%	6	12%	0	0	0	0

Table 16

SRSS Data by Subgroup.

Groups	Count	Male	Female	F/R	IEP	EL	Mar-July Birthday	Aug-Feb Birthday
Overall EC	50	30	20	8	19	4	19	31
Overall No EC	50	27	23	14	2	10	17	33
EC IEP	42	30	12	7	42	2	19	23
No EC IEP	19	12	7	8	19	3	9	10
EC Gen Ed	50	28	22	8	N/A	9	20	30
No EC Gen Ed	50	27	23	14	N/A	6	20	30
EC Female	35	N/A	35	6	13	4	15	20
No EC Female	50	N/A	50	16	2	16	23	27
EC Male	50	50	N/A	14	31	6	22	28
No EC Male	50	50	N/A	17	2	5	15	35
EC EL	11	7	4	3	2	11	5	2
No EC EL	50	22	28	26	2	50	23	27
EC F/R Lunch	23	17	6	14	23	4	8	15
No EC F/R Lunch	50	22	28	50	2	17	18	32
EC Aug-Feb birthday	50	31	19	14	24	6	N/A	50
No EC Aug-Feb birthday	50	25	25	16	1	12	N/A	50
EC Mar-Jul birthday	41	26	15	9	22	5	41	N/A
No EC Mar-Jul birthday	50	25	25	17	4	12	50	N/A

Table 16 displays that the subgroups, Overall EC and EC Aug-Feb birthday, had the most males in the samples, at 30 and 31 respectively. The subgroups, No EC EL and No EC F/R, both had the most females at 28. The subgroup, No EC EL, had the most

students eligible for F/R lunch, at 26. The subgroup, EC Male, contained the largest number of students eligible for special education, at 31. Both subgroups, No EC Female and No EC F/R, contained the highest number of EL students, at 16 and 17 respectively.

Table 17 displays the *t*-test for difference in means results from each of the subgroup categories with, a critical value of alpha = 0.05. Table 17 describes whether the *t*-score indicated a statistically significant finding for any of the subgroup categories that either participated in a PBIS ECSE program or did not participate in a PBIS ECSE program. The subgroups for the EC and Kindergarten populations of Female, EL, and F/R Lunch did not meet the researcher's set minimum number; guided by the study design requirement for a sample size minimum of 30, the researcher did not apply a *t*-test for difference in means to analyze the Null Hypotheses for the aforementioned subgroups, H^{1a}, H^{1e}, and H^{1f}. The subgroup of students with a March-July birthday and Female students met the researcher's minimum number but not the maximum number; since the EC and Kindergarten populations did not contain the same sample sizes, the researcher utilized a *t*-test assuming unequal variances. When the researcher administered the *t*-test with a critical value of alpha = 0.05, only one of the subgroup categories contained a statistically significant *t*-score with regard to Null Hypothesis H^{1g}, for the subgroups, EC and No EC Aug-Feb birthday. The researcher rejected the Null Hypothesis for the subgroup and supported the Hypothesis. Since the *t*-score value was less than the critical value for the other subgroups, the researcher did not reject sub-Null Hypotheses H^{1b-d} and H^{1h}. The researcher discussed the results of Null Hypothesis 1 along with recommendations in Chapter Five.

Table 17

T-test of Two Independent Means for Fall Kindergarten SRSS Scores

Groups	Sample Size	Sample Mean	Variance	T Stat	t Critical Value	Significant Difference?
Overall EC	50	2.26	12.7	1.63	2.009	No
Overall No EC	50	1.26	5.7			
EC Gen Ed	50	1.12	3.86	-0.13	2.009	No
No EC Gen Ed	50	1.18	5.38			
EC Female	35	1.4	9.84	1.41	2.02	No
No EC Female	50	0.62	1.26			
EC Male	50	1.78	7.56	0.22	2.009	No
No EC Male	50	1.66	7.82			
EC Aug-Feb birthday	50	2.18	14.52	2.09	2.009	Yes
No EC Aug-Feb birthday	50	1.02	3.37			
EC Mar-Jul birthday	41	1.83	6.6	1.45	1.99	No
No EC Mar-Jul birthday	50	1.16	2.55			

Null Hypothesis 2

Null Hypothesis H^2*:* There is no difference in the number of office referrals between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

The researcher planned to use a statistics calculator program, MathPortal.org (n.d.) or the data analysis function in Excel, to conduct an unpaired *t*-test for difference in means to analyze the number of office referrals in the fall of the students' kindergarten

school year (MathPortal.org, n.d.). The researcher would have tested whether the means of the student populations (students who attended a PBIS ECSE program during the 2015-2016 school year versus students who did not participate in a PBIS ECSE program during the 2015-2016 school year) were statistically different from each other (Maxwell, 2013). The researcher originally planned to conduct a *t*-test for difference in means for each subgroup if the office referral data, a stratified sample size of 30 to 50, existed in any of the subgroup categories. However, the office referral data gathered from kindergarten yielded a result of six referrals, below the minimum number of 30 set by the research design; the researcher used descriptive statistics to describe each of the subgroups.

Table 18 displays the data from the number of office referrals from kindergarten during the 2016-2017 school year and contains each of the subgroups (groups), the number of office referrals (number), the percentage of the sample, the Risk Category for the students' SRSS scores (low risk, moderate, or high), and the percentage of the student sample. Of the six students who received office referrals in kindergarten, none of the students participated in a PBIS ECSE program, all six were male, four had received F/R lunch, four had a birthdate range of between March and July, and five-out-of-the-six had not received special education services. Since the minimum number of office referrals between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program was not met, guided by the study design requirement for a sample size minimum of 30, the reseacher did not apply a *t*-test for difference in means to analyze Null Hypothesis H^2. The researcher summarized the results of Null Hypothesis 2 along with recommendations in Chapter Five.

Table 18

Fall Kindergarten Office Referral Data.

Groups	No.	% of Sample	Low Risk (Scores of 0-3)	% of Sample	Moderate Risk (Scores of 4-8)	% of Sample	High Risk (Scores of 9-12)	% of Sample
EC	0	0%	0	0%	0	0%	0	0%
IEP	1	16.7%	1	100%	0	0%	0	0%
Gen Ed	5	83.3%	4	80%	1	20%	0	0%
Female	0	0%	0	0%	0	0%	0	0%
Male	6	100%	5	83.3%	1	16.7%	0	0%
EL	2	33.33%	2	100%	0	0%	0	0%
F/R Lunch	4	66.7%	3	75%	1	25%	0	0%
Aug-Feb birthday	2	33.3%	2	100%	0	0%	0	0%
Mar-Jul birthday	4	66.7%	3	75%	1	25%	0	0%

Null Hypothesis 3

The researcher analyzed a random sample of fall and spring ESP scores to investigate Null Hypothesis 3. As stated in Chapter Two, the ESP screener contained two stages of four teacher questionnaires and scales scored with a Likert scale (ESP, n.d.; Feil & Frey, 2013, Walker et al., 1995, 2014). An ESP score of 0 indicated a student was at 'no risk,' a score of 1 to 4 indicated 'at risk,' a score of 5 to 8 indicated 'high risk' and a score of 9 to 12 indicated 'extreme risk' (ESP, n.d.; Feil & Frey, 2013, Walker et al., 1995, 2014). The researcher summed the scores, and determined the mean, standard deviation, and the variance.

Null Hypothesis 3 also included eight sub-Null Hypotheses, a-h, analyzing student subgroups. For each sub-Null Hypothesis the researcher analyzed a random sample of ESP scores from the fall and spring. The researcher summed the scores, and determined the mean, standard deviation, and the variance. Although the researcher set a

minimum of 30 and a maximum of 50 student scores, two subgroups did not meet the minimum number of student scores; EL (16 students) and F/R Lunch (21 students). Guided by the study design requirement for a sample size minimum of 30, the researcher did not apply a *t*-test for difference in means to analyze Null Hypotheses H^{3e} and H^{3f}.

Null Hypothesis H^3*:* There is no difference between the fall and spring ESP scores for students participating in a PBIS ECSE program.

The total student count for the Overall EC group met the maximum number of 50 scores. The researcher summed the scores, where an observable difference in the sum of the fall and spring ESP scores revealed a 26-point increase and the mean revealed a 0.52-point increase. To determine a statistical significance, the researcher conducted a *t*-test for two dependent means for the fall and spring ESP scores with a *P* two-tail value of 0.14 and a *t*-stat of 1.52. The result was not statistically significant at 0.05, and the researcher did not reject Null Hypothesis $H^3$and did not support the Hypothesis.

Null Hypothesis H^{3a}*:* There is no difference between the fall and spring ESP scores for students with disabilities who participated in a PBIS ECSE program.

The total student count for the subgroup, IEP, met the maximum number of 50 scores. The researcher summed the scores, where an observable difference in the sum of the fall and spring ESP scores revealed a 2-point increase and the mean revealed a 0.04-point increase. To determine a statistical significance, the researcher conducted a *t*-test for two dependent means for the fall and spring ESP scores with a *P* two-tail value of 0.93, and a *t*-stat of 0.08. The result was not statistically significant at 0.05, and the researcher did not reject Null Hypothesis H^{3a} and did not support the Hypothesis.

Null Hypothesis H^{3b}: There is no difference between the fall and spring ESP scores for general education students who participated in a PBIS ECSE program.

The total student count for the subgroup, Gen Ed, met the maximum of 50 scores. The researcher summed the scores, where an observable difference in the sum of the fall and spring ESP scores revealed a 12-point increase and the mean revealed a 0.24-point increase. To determine a statistical significance, the researcher conducted a *t*-test for two dependent means for the fall and spring ESP scores with a *P* two-tail value of 0.21 and a *t*-stat of 1.26. The result was not statistically significant at 0.05, and the researcher did not reject Null Hypothesis H^{3b} and did not support the Hypothesis.

Null Hypothesis H^{3c}*:* There is no difference between the fall and spring ESP scores for female students who participated in a PBIS ECSE program.

The total student count for the subgroup, Female, met the maximum of 50 scores. The researcher summed the scores, where an observable difference in the sum of the fall and spring ESP scores revealed a 5-point decrease and the mean revealed a 0.1-point decrease. To determine a statistical significance, the researcher conducted a *t*-test for two dependent means for the fall and spring ESP scores with a *P* two-tail value of 0.72 and a *t*-stat of 0.36. The result was not statistically significant at 0.05, and the researcher did not reject Null Hypothesis H^{3c} and did not support the Hypothesis.

Null Hypothesis H^{3d}*:* There is no difference between the fall and spring ESP scores for male students who participated in a PBIS ECSE program.

The total student count for the subgroup, Male, met the maximum of 50 scores. The researcher summed the scores, where an observable difference in the sum of the fall and spring ESP scores revealed a 3-point increase and the mean revealed a 0.06-point

increase. To determine a statistical significance, the researcher conducted a *t*-test for two dependent means for the fall and spring ESP scores with a *P* two-tail value of 0.85 and a *t*-stat of 0.19. The result was not statistically significant at 0.05, and the researcher did not reject Null Hypothesis H^{3d} and did not support the Hypothesis.

Null Hypothesis H^{3e}*:* There is no difference between the fall and spring ESP scores for EL students who participated in a PBIS ECSE program.

Although the researcher set a minimum of 30 and a maximum of 50, the total student count for the subgroup, EL, yielded 16 scores, which was below the minimum number. The researcher included descriptive statistics and summed the scores, where an observable difference in the sum of the fall and spring ESP scores revealed a 7-point increase and the mean revealed a 0.43-point increase. Although an observable difference existed between the fall and spring ESP scores for EL students who participated in a PBIS ECSE program, guided by the study design requirement for a sample size minimum of 30, the researcher did not conduct a *t*-test to determine a potential statistical significance to analyze Null Hypothesis H^{3e}.

Null Hypothesis H^{3f}*:* There is no difference between the fall and spring ESP scores for students who are eligible to receive free and reduced lunch and who participated in a PBIS ECSE program.

Although the researcher set a minimum of 30 and a maximum of 50, the total student count for the subgroup, F/R Lunch, yielded 21 scores, which was below the minimum of 30 set by the researcher. The researcher included descriptive statistics and summed the scores, where an observable difference in the sum of the fall and spring ESP scores revealed a 1-point increase and the mean revealed a 0.05-point increase. Although

an observable difference existed between the fall and spring ESP scores for students who are eligible to receive F/R lunch who participated in a PBIS ECSE program, guided by the study design requirement for a sample size minimum of 30, the researcher did not conduct a *t*-test to determine a potential statistical significance to analyze Null Hypothesis H^{3f}.

Null Hypothesis H^{3g}*:* There is no difference between the fall and spring ESP scores for students whose birthdate was between August and February and who participated in a PBIS ECSE program.

The total student count for the subgroup, Aug-Feb birthday, met the maximum number of 50 scores. The researcher summed the scores, where an observable difference in the sum of the fall and spring ESP scores revealed an 11-point decrease and the mean revealed a 0.22-point decrease. To determine a statistical significance, the researcher conducted a *t*-test for two dependent means for the fall and spring ESP scores with a *P* two-tail value of 0.5 and a *t*-stat of -0.69. The result was not statistically significant at 0.05, and the researcher did not reject Null Hypothesis H^{3g} and did not support the Hypothesis.

Null Hypothesis H^{3h}*:* There is no difference between the fall and spring ESP scores for students whose birthdate was between March and July and who participated in a PBIS ECSE program.

The total student count for the subgroup, Mar-Jul birthday, met the maximum number of 50 scores. The researcher summed the scores, where an observable difference in the sum of the fall and spring ESP scores revealed a 6-point increase and the mean revealed a 0.12-point increase. To determine a statistical significance, the researcher

conducted a *t*-test for two dependent means for the fall and spring ESP scores with a *P* two-tail value of 0.75 and a *t*-stat of 0.32. The result was not statistically significant at 0.05, and the researcher did not reject Null Hypothesis H^{3h} and did not support the Hypothesis.

Table 19 details the Early Childhood ESP data from each of the student subgroups (groups) and included the number of students in the sample (count), the total of the fall and spring scores (Fall Sum and Spring Sum), the average of the scores for fall and spring (Fall Mean and Spring mean). Table 19 also includes the sample standard deviation (Fall Sample SD and Spring Sample SD) and the variance of the scores for fall and spring (Fall Var. and Spring Var.).

As stated in Chapter Two, an ESP score of 0 indicated a student was at "no risk," a score of 1-4 indicated "at risk," a score of 5-8 indicated "high risk" and a score of 9-12 indicated "extreme risk" (Feil & Frey, 2013; Walker et al., 1995, 2014). After PBIS teams identified students with at risk ESP scores in the fall, Tier 2 and Tier 3 interventions were implemented (CICO, 2016; Dunlop, 2013; Horner & Sugai, 2015; Martens & Andreen, 2013).

The subgroups with a demonstrated decrease in ESP scores, Aug-Feb birthday, had a decrease of eleven points, and the gender, Female, had a decrease of five points. The subgroups with a demonstrated increase in ESP scores from the fall to spring were the Overall group, which displayed an increase of 26 points; the Gen Ed group, had an increase of 12 points; the EL group, had an increase of 7 points; and Mar-Jul birthday group, had an increase of 6 points.

Table 19

Fall and Spring ESP Score Data.

Groups	Count	Fall Sum	Fall Mean	Fall Sample SD	Fall Var.	Spring Sum	Spring Mean	Spring Sample SD	Spring Var.
Overall	50	50	1	2.44	5.96	76	1.52	2.96	8.78
IEP	50	122	2.44	2.99	8.95	124	2.48	3.41	11.64
Gen Ed	50	13	0.26	0.69	0.48	25	0.5	1.52	2.29
Male	50	59	1.18	2.23	4.97	62	1.24	2.53	6.39
Female	50	35	0.7	1.88	3.52	30	0.6	2.08	4.33
EL	16	34	2.13	3.34	11.18	41	2.56	3.63	13.19
F/R Lunch	21	33	1.57	2.59	6.46	34	1.62	3.12	9.75
Aug-Feb birthday	50	93	1.86	2.91	8.45	82	1.64	2.96	8.77
Mar-Jul birthday	50	62	1.24	2.48	6.15	68	1.36	2.73	7.46

Three other subgroups demonstrated little to no increase in ESP scores and included: Male, which increased 3 points, IEP, which increased 2 points, and F/R Lunch, which increased 1 point.

Table 20 displays the summary of the ESP scores from the fall and the spring and indicates the number of students who fell into the categories of no risk (score of 0), at risk (scores of 1 to 4), high risk (scores of 5 to 8), and extreme risk (scores of 9 to 12).

Table 19

Fall and Spring ESP Score Summary

Groups	Fall No Risk (Score of 0)	Fall At Risk (Scores 1-4)	Fall High Risk (Scores 5-8)	Fall Extreme Risk (Scores 9-12)	Spring No Risk (Score of 0)	Spring At Risk (Scores 1-4)	Spring High Risk (Scores 5-8)	Spring Extreme Risk (Scores 9-12)
Overall	38	7	2	3	36	6	5	3
IEP	22	15	10	3	27	9	9	5
Gen Ed	42	8	0	0	44	3	3	0
Female	39	8	2	1	45	0	3	1
Male	32	12	4	1	35	8	3	2
EL	9	3	2	2	7	3	1	3
F/R Lunch	13	5	2	1	15	2	3	1
Aug-Feb birthday	30	9	8	3	34	8	3	5
Mar-Jul birthday	37	6	6	1	39	1	9	1

As stated in Chapter Two, to demonstrate positive student outcomes of Tier 2 and Tier 3 interventions, the spring scores in the ‘no risk’ category should have shown an increase, while the categories of ‘at risk,’ ‘high risk,’ and ‘extreme risk’ would have needed to show a decrease (Feil & Frey, 2013; Walker et al., 1995, 2014). The ESP scores in the ‘no risk’ category for nine of the 11 subgroups increased. The category of Female increased 6 points, IEP increased 5 points, Aug-Feb birthday increased 4 points,

Male increased 3 points, and F/R Lunch and Gen Ed both increased 2 points. The subgroups of EL and Mar-Jul birthday decreased 2 points.

Figure 5 displays the percentage of student scores in accordance to the PBIS Pyramid (ESP, n. d.; Feil & Frey, 2013; Walker et al., 1995, 2014).

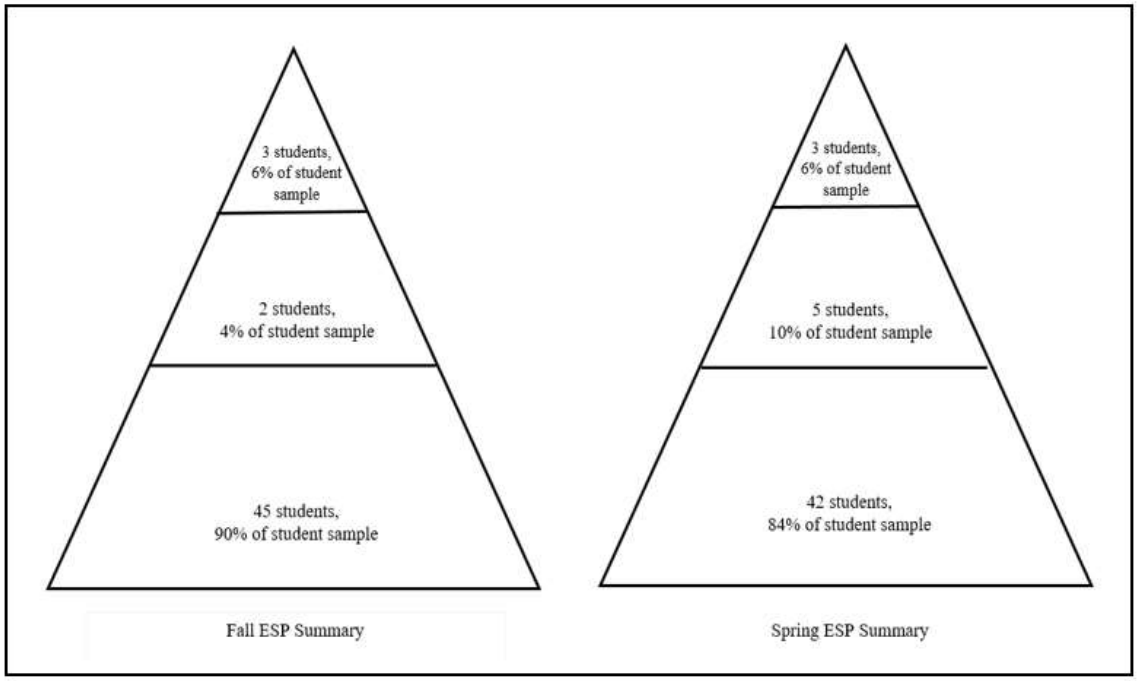

Figure 5. Overall ESP scores as demonstrated by a PBIS Pyramid.

Also, as stated in Chapter Two, the overall student sample continued to demonstrate the PBIS Pyramid concept, where 80% of students scored in the 'no risk' or 'at risk' categories (Tier 1/Universal) as displayed in Figure 4 (Coffey & Horner, 2012; FAQ, 2017; Horner & Sugai, 2015, p. 81, para. 1; Martens & Andreen, 2013, p. 314, para. 1). The 'high risk' category (Tier 2/Secondary) contained 15% of the student sample (CICO, 2016; Horner & Sugai, 2015, p. 81, para. 3; Martens & Andreen, 2013, p. 314, para. 1), and the 'extreme risk' (Tier 3/Tertiary) contained 5% of the student sample (Dunlop, 2013; Horner & Sugai, 2015, p. 81, para. 6; Martens & Andreen, 2013, p. 314, para. 1).

Table 21 displays the ESP data stratified into subgroups and analyzed the makeup of the subgroup, such as total student count, number of males and females, students eligible for F/R Lunch, students with disabilities, EL students, students with a March through July birthdate, and students with an August through February birthdate.

Table 20

ESP Data by Subgroup

Groups	Count	Male	Female	F/R	IEP	EL	Mar-July Birthday	Aug-Feb Birthday
Overall	50	35	15	4	20	3	19	31
IEP	50	40	10	10	50	7	19	31
Gen Ed	50	24	26	6	N/A	8	24	26
Female	50	N/A	50	3	9	8	21	29
Male	50	50	N/A	7	25	7	15	35
EL	16	10	6	3	9	16	3	13
F/R Lunch	21	17	4	21	11	6	8	13
Aug-Feb birthday	50	33	17	5	28	10	N/A	50
Mar-Jul birthday	50	25	25	6	17	7	50	N/A

Table 22 displays the *t*-test for difference in means results from each of the subgroup categories, with a critical value of alpha = 0.05, and describes whether the *t*-score indicated significant results for any of the subgroup categories. When the researcher administered the *t*-test for difference in means, with a critical value of alpha = 0.05, none of the subgroup categories contained a *t*-score deemed statistically significant, with regard to Null Hypothesis 3. Since the *t*-score value was less than the critical value for all subgroups, the researcher did not reject the Null Hypotheses H^{3a-h} and did not support the Hypothesis. The researcher summarized the results of Null Hypothesis 3 along with recommendations in Chapter Five.

Table 21

T-test for Fall and Spring ESP Scores

Groups	Sample Size	Mean of Fall Scores	Mean of Spring Scores	Var. of Fall Scores	Var. of Spring Scores	t Stat	P (T<=t) two-tail	Significant Difference?
Overall	50	1	1.52	6	8.8	1.52	0.14	No
IEP	50	2.44	2.48	8.95	11.64	0.08	0.93	No
Gen Ed	50	0.26	0.5	0.48	2.3	1.26	0.21	No
Female	50	0.7	0.6	3.52	4.32	0.36	0.72	No
Male	50	1.18	1.24	4.97	6.4	0.19	0.85	No
Aug-Feb	50	1.86	1.64	8.45	8.77	-0.69	0.5	No
Mar- Jul	50	1.24	1.36	6.15	7.46	0.32	0.75	No

Research Question 1 and Research Question 2:

How do kindergarten teachers' perceive students' who participated in a PBIS ECSE program's social-emotional behavior skills?

How do kindergarten teachers' perceive students' social-emotional behavior skills who did not participate in a PBIS ECSE program?

As described in Chapter Three, the researcher designed a nine-question anonymous survey for participation by a minimum of two and a maximum of five kindergarten teachers. Three kindergarten teachers completed the survey; the researcher randomly selected responses from two surveys to answer Research Questions 1 and 2.

The survey asked kindergarten teachers to describe student behavior at the beginning of the school year; one respondent stated students 'may have difficulty with focusing on work for long periods of time' and 'sometimes they might struggle with body control.' Another respondent stated students were 'loud, physical, not great at following directions.' The survey asked if the teachers saw any possible differences in the behavior of the students; one respondent stated, 'Yes, they are more well behaved' and 'I think

they are more mature and they are used to a formal, day long school environment.' Another respondent stated,

> I think some children have not gone to preschool. So, this is the first time they have been exposed to a formal school setting. After a year of school, kids have matured and grown up a little bit. They are able to control themselves a little bit more. They understand how their choices affect other people.

From the respondents' answers to the survey questions, kindergarten classrooms had universal Positive Behavior Interventions in place, such as reinforcing desired behaviors by prizes, participation in social activities, and a daily stamp. One respondent stated,

> The students have a daily folder to record their behavior. The students color in their behavior for the day. If a child earns green days all week, then he or she gets to pick a prize out of the treat box and gets to participate in a Friday Fun activity. We send home positive notes and make positive phone calls home. Teachers offer a lot of verbal praise as well.

Another respondent added, 'We do a star table where we recognize tables doing the right thing. We have golden tickets that students receive for being on track. I also do a daily stamp if students had a great day.' The elementary schools also had a school-wide system in place to recognize good behaviors, such as earning bucket drops or golden tickets. One respondent described, 'As a school the kids earn bucket drops for good behavior. They earn class and entire school rewards for earning bucket drops.' When asked to 'describe the outcome of the Positive Behavior intervention on the student's behavior' one respondent said, 'The students respond very well to these

interventions. They are eager to earn individual, class, and school rewards for their good behavior.' Another respondent agreed, 'Students try to be recognized and to do the right thing more often.'

Tier 2 supports in classrooms consisted of 'individual behavior charts that breaks their day up into smaller time periods. This chart helps us to reflect with the kids about their behavior.' When asked to describe the outcome of the behavior interventions on the student's behavior one respondent stated, 'We have found these individual charts to be very effective in tracking behavior and in reinforcing good behavior.' Another responded added, 'They seem to want to do the right thing just for the sake of being a good person.'

The researcher discussed Research Questions 1 and 2 along with recommendations in Chapter Five.

Research Question 3 and Research Question 4:

How do elementary administrators' perceive students' social-emotional behavior skills who participated in a PBIS ECSE program?

How do elementary administrators' perceive students' social-emotional behavior skills who did not participate in a PBIS ECSE program?

As described in Chapter Three, the researcher designed a nine-question anonymous survey for participation by a minimum of two and a maximum of five elementary administrators. Five elementary administrators completed the survey; the researcher randomly selected responses from two surveys to answer Research Questions 3 and 4.

The survey asked elementary administrators to describe the behavior of the kindergarten students in school at the beginning of the school year. One respondent

answered, ‘The behavior of the students at the beginning of the year was pretty much on task and they were able to follow the rules of the class. At the same time some of the students behaved as if they had never been in school before.’ Another respondent stated,

> We had a range of behaviors. It was evident which students participated in prekindergarten schooling and which ones did not. Homesickness was an issue for several students. Of bigger concern was the behavior of some parents. We had parents who would show up to lunch and feed their kids and try to help them transition in the morning past the bell.

The survey asked if the elementary administrators saw any possible differences in the behavior of the kindergarten students, one respondent answered, ‘Generally speaking, those students who have been in an academic environment prior to kindergarten are better served than those who have not been exposed to academic content.’ The survey asked elementary administrators why they believed there were differences in the behavior of the kindergarten students. One respondent stated, ‘Prior experience’ while another respondent explained, ‘Students come from a wide range of backgrounds, and sadly, so many of students have faced trauma backgrounds. Many parents are in survival mode themselves, which in turn negatively affects the child.’ A respondent described,

> There is a vast difference between the expectations of early childhood, and that of kindergarten. Additionally, there is a greater student to teacher ratio [in kindergarten], with less individualized support for students. With the expectations of society today, there seems to be an imbalance of academic expectations, with limited focus on supporting the whole child – including socially and emotionally. We must make this a priority.

Indicated by the survey answers, the PBIS schools had in place universal language; one respondent answered, ‘Students learn about respecting themselves, each other, their school, and their world. Students also learn appropriate behaviors in the classroom, hallway, and other areas of the school.’ Another respondent spoke to the PBIS universals and Tier 2 supports, ‘We use bucket drops, classroom-based interventions, teach a limited version of Zones of Regulation, have Check In and Check Out, use planners, classroom meetings, rules, and procedures…and share our Big 5 data with the kindergarten teachers.’ Additional supports students received were special education and social skills lessons. According to one respondent, the effectiveness of the interventions resulted in ‘students learn to interact well with each other’ and according to another respondent, ‘These students benefitted from social skills and specific academic instruction’ and ‘85% of students [were] successfully engaged at the end of the school year.’

The researcher discussed Research Questions 3 and 4 along with recommendations in Chapter Five.

Summary

The researcher determined in this mixed-methods study one subgroup, Aug-Feb birthday, of students who participated in a PBIS ECSE preschool as statistically more likely to generalize social and emotional skills from ECSE, as measured by the ESP screener, to the transition to kindergarten, as measured by the SRSS screener. Although students who participated in a PBIS ECSE preschool made observable social and emotional gains in preschool, as measured by the ESP screener, the analysis resulted in no significant difference. As stated in Chapter Two, the data from students who

participated in a PBIS ECSE program demonstrated the PBIS Pyramid concept, where 80% of students scored in the ‘no risk’ or ‘at risk’ categories (Coffey & Horner, 2012; FAQ, 2017; Horner & Sugai, 2015, p. 81, para. 1; Martens & Andreen, 2013, p. 314, para. 1).

The surveys from elementary administrators and kindergarten teachers described the behavioral differences of students in kindergarten who attended a preschool versus students who did not attend a preschool, and revealed students who attended a preschool were ‘more well behaved,’ ‘more mature,’ and ‘used to a formal, day long school environment.’ The surveys also revealed a larger concern of students entering school with traumatic backgrounds and the parents who were hesitant to separate from their child. The surveys detailed the PBIS universals the elementary settings had in place to establish expectations and procedures, and resulted in ‘85% of students [were] successfully engaged at the end of the school year,’ which could also be another topic of study in the transition from preschool to kindergarten. Chapter Five outlines suggestions for early childhood programs and the implementation of PBIS, social-emotional teaching, and how early childhood programs and elementary schools can support students and families in the transition to kindergarten.

Chapter Five: Discussion, Reflection, and Recommendations

Overview

The researcher studied a suburban, Midwestern school district, specifically an ECSE program for three, four, and five year-olds, whose emphasis was on SWPBIS to investigate the generalization of PBIS skills from ECSE to kindergarten. The ECSE program utilized a social-emotional curriculum as part of Tier 1 supports, Check-In/Check-Out, mentoring, and social skills groups as part of Tier 2 supports, and Functional Assessment, behavior intervention plans, and Wraparound as part of Tier 3 supports for students. The researcher analyzed the ECSE ESP scores from the fall and the spring of the 2015-2016 school year to gauge if students learned and generalized social-emotional behavior skills during the preschool year. The researcher analyzed the SRSS scores and office referral data from the fall of the 2016-2017 kindergarten school year from subgroups of students to gauge if a difference existed between the social-emotional behaviors of students who participated in a PBIS ECSE program versus students who did not participate in a PBIS ECSE program. The subgroups consisted of gender, birthdate range, EL, F/R lunch, students eligible for special education, and general education students. The researcher gathered anonymous surveys from kindergarten teachers and elementary administrators to gauge the perceptions of student behaviors during the kindergarten year, opinions on why behaviors differed, and whether staff used positive behavior interventions, along with the results of the interventions. Through investigating the quantitative and qualitative sources of PBIS data, the researcher hoped to determine participation in a PBIS ECSE program would produce greater generalization of social-emotional behavior skills and therefore create a positive

transition to kindergarten, regardless whether the elementary school implemented SWPBIS. The researcher hoped to determine specific PBIS practices at the researched ECSE program to influence professional development in other preschool programs resulting in a greater number of students successfully transitioning to kindergarten.

The research questions addressed and main hypotheses that guided this research were:

Research Question 1: How do kindergarten teachers' perceive students' who participated in a PBIS ECSE program's social-emotional behavior skills?

Research Question 2: How do kindergarten teachers' perceive students' social-emotional behavior skills who did not participate in a PBIS ECSE program?

Research Question 3: How do elementary administrators' perceive students' social-emotional behavior skills who participated in a PBIS ECSE program?

Research Question 4: How do elementary administrators' perceive students' social-emotional behavior skills who did not participate in a PBIS ECSE program?

Hypothesis H^1*:* There is a difference in the values of externalizing scores between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Hypothesis H^2*:* There is a difference in the number of office referrals between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Hypothesis H^3*:* There is a difference between the fall and spring ESP scores for students participating in a PBIS ECSE program.

Discussion

Hypothesis H^1: There is a difference in the values of externalizing scores between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Overall, no difference existed in the values of externalizing scores between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program; the researcher did not support Hypothesis H^1. The researcher also conducted a *t*-test for difference in means and found the *t*-value (1.63) was less than the critical value (2.009). Students who participated in a PBIS program had a greater sum (113 compared to 63) and mean (2.26 compared to 1.26) on the fall SRSS scores. The researcher found the results surprising, and as stated in Chapter Two, Wildenger and McIntyre (2012) found children who demonstrated the most success in adapting and adjusting to kindergarten previously participated in a high quality preschool programs. The findings correlated with Weiland and Yoshikawa (2013) who stated, "pre-kindergarten appears to have . . . small effects on children's prosocial and problem behaviors" (p. 2113). In fact, students who participated in a PBIS ECSE program had fewer students scoring in the low risk category (scores of 0 to 3) on the SRSS and had more students scoring in the moderate risk (scores of 4 to 8), high risk (scores of 9 to 12), and extreme risk (scores of 13 to 15) than students who did not participate in a PBIS ECSE program. When the researcher stratified the scores by subgroup makeup, the 50 externalizing scores contained 30 males, 20 females, eight students with F/R lunch status, 19 students who received special education services, four students who received EL

services, 19 students with a birthdate range of March through July, and 31 students with a birthdate range of August through February.

In contrast, the 50 externalizing SRSS scores from students who did not participate in a PBIS ECSE program had seven more students in the low risk category, four less in the moderate risk, and one less in the high risk and extreme risk categories. The sample contained 27 males, 23 females, 14 students with F/R lunch status, two students who received special education services, 10 students who received EL services, 17 students with a birthdate range of March through July, and 33 students with a birthdate range of August through February.

As stated in Chapter Two, a relationship may exist between classroom composition, externalizing behavior, and social-emotional outcomes (Yudron, Jones, & Raver, 2014). When the researcher analyzed descriptive statistics of the subgroup data, the sample of students who participated in a PBIS ECSE program had a greater number of students who received special education services and a greater number of male students, at 19 and 30 respectively. The researched district's PBIS ECSE program was a reverse-mainstream model of special education with a greater number of males who received special education overall, in the program. Duran et al. (2012) found males and students with disabilities tended to have lower social skills, which could explain the observably higher sum and mean. Researchers also found male students were more likely than females to exhibit challenging behaviors, and therefore, at a greater social-emotional behavioral risk (Montes et al., 2012; Stormont et al., 2015).

Hypothesis H^{1a}: There is a difference in the values of externalizing scores between students with disabilities who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Although the researcher found an observable difference in the values of externalizing scores between students with disabilities who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program, guided by the study design requirement for a sample size minimum of 30, the researcher did not apply a *t*-test for difference in means to analyze Hypothesis H^{1a}. The random sample of student externalizing scores on the SRSS from students with disabilities and who participated in a PBIS ECSE program consisted of 42 students. However, observably the students who participated in a PBIS program had a greater sum (102 compared to 25) and mean (2.43 compared to 1.32) on the fall SRSS scores, resulting in an unexpected outcome. As stated in Chapter Two, Hatcher et al. (2012) noted, "A major outcome of preschool includes increased readiness of children for kindergarten in social/emotional and academic aspects" (p. 2). The sample contained 30 males, 12 females, seven students with F/R lunch status, two students who received EL services, 19 students with a birthdate range of March through July, and 23 students with a birthdate range of August through February. However, the sample contained 30 males; Duran et al. (2012) found males and students with disabilities tended to have lower social skills, which could explain the higher sum and mean. Researchers also found male students were more likely than females to exhibit challenging behaviors and therefore at a greater social-emotional behavioral risk (Montes et al., 2012; Stormont et al., 2015).

The random sample of student externalizing scores from the SRSS of students with disabilities who did not participate in a PBIS ECSE program consisted of 19 students. The sample contained 12 males, seven females, eight students with F/R lunch status, three students who received EL services, nine students with a birthdate range of March through July, and 10 students with a birthdate range of August through February. One reason for the small sample of students with disabilities who did not participate in a PBIS ECSE program was due to the nature of Child Find; according to MODESE (2017c), students in need of special education services aged birth through 21 "should be identified, located, and evaluated" (para. 1). The Missouri First Steps program, Parents As Teachers, and ECSE Diagnostic programs worked in conjunction to fulfill the Child Find responsibilities as soon as a child could be eligible for special education to receive early intervention services. The lower sum and mean of the SRSS scores among 31 less students could have been due to the smaller sample size overall.

Hypothesis H^{1b}: There is a difference in the values of externalizing scores between general education students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Although there existed an observable difference in the values of externalizing scores between general education students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. The researcher found the *t*-value (-0.13) was between the critical values (±2.009) and did not support Hypothesis H^{1b}. The random student externalizing scores on the SRSS from general education students who participated in a PBIS ECSE program consisted of 50 students. The sample

contained 28 males, 22 females, eight students with F/R lunch status, nine students who received EL services, 20 students with a birthdate range of March through July, and 30 students with a birthdate range of August through February. The students who participated in a PBIS program had a lesser sum (56 compared to 59) and mean (1.12 compared to 1.18) on the fall SRSS scores. The researcher expected the outcome; as stated in Chapter Two, Hatcher et al. (2012) noted, "A major outcome of preschool includes increased readiness of children for kindergarten in social/emotional and academic aspects" (p. 2).

The random sample of student externalizing scores on the SRSS from general education students who did not participate in a PBIS ECSE program consisted of 50 students. The sample contained 27 males, 23 females, 14 students with F/R lunch status, six students who received EL services, 20 students with a birthdate range of March through July, and 30 students with a birthdate range of August through February. However, the data did not contain any information on whether the students had attended another preschool program, daycare, or other childcare setting prior to kindergarten entrance.

The students who participated in a PBIS program (n=56) had a lesser sum and mean of 1.12 on the fall SRSS scores; the results aligned with the researcher's expected outcome. As stated in Chapter Two, Wildenger and McIntyre's 2012 study proposed for a more successful transition period to kindergarten, children who demonstrated the most success in adapting and adjusting to kindergarten previously participated in a high quality preschool program. Wildenger and McIntyre (2012) described access to early childhood

education programs as a "variable that may be especially important for children's school readiness and early adaptation to elementary school" (p. 169).

Hypothesis H^{1c}: There is a difference in the values of externalizing scores between female students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Although the researcher found an observable difference in the values of externalizing scores between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. The *t*-test assumed unequal variances, and the *t*-value 1.41 was less than the critical value 2.02; the researcher did not support Hypothesis H^{1c}. The random student externalizing scores on the SRSS from female students who participated in a PBIS ECSE program consisted of 35 students, and had a higher sum (49 compared to 31) and mean (1.4 compared to 0.62) than females who did not participate in a PBIS ECSE program; another unexpected outcome. The sample contained six students with F/R lunch status, 13 students who received special education services, four students who received EL services, 15 students with a birthdate range of March through July, and 20 students with a birthdate range of August through February.

The random sample of student externalizing scores on the SRSS from female students who did not participate in a PBIS ECSE program consisted of 50 students. The researched sample contained 16 students with F/R lunch status, two students who received special education services, 16 students who received EL services, and 23 students with a birthdate range of March through July, and 27 students with a birthdate

range of August through February. Again, the higher sum and mean from female students who participated in a PBIS ECSE program was not the expected outcome of the researcher; as stated in Chapter Two, girls of kindergarten age had greater behavioral engagement levels and self-regulation skills than male counterparts (Garwood et al., 2017; Searle et al., 2014). According to Wildenger and McIntyre's 2012 study, children who demonstrated the most success in adapting and adjusting to kindergarten previously participated in a high quality preschool program. The female group who participated in a PBIS ECSE program contained 30 students whose birthdate was between March and July. The researched birthdate range may have helped to explain the greater sum and mean, since, as stated in Chapter Two, studies found an increase in social-emotional and academic skills for students who were older than younger classmates (Datar & Gottfried, 2013; Huang & Invernizzi, 2013; Whitmore-Shazenbach, & Howard-Larson, 2017).

Hypothesis H^{1d}: There is a difference in the values of externalizing scores between male students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Although an observable difference existed in the values of externalizing scores between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. The researcher found the *t*-value (0.22) was less than the critical value (2.009) and did not support Hypothesis H^{1d}. The random student externalizing scores on the SRSS, from male participants in a PBIS ECSE program, consisted of 50 students, and had a higher sum of 89 compared to 83 and mean of 1.78 compared to 1.66. The stated results were not the researcher's expected outcome

even though, as stated in Chapter Two, males were more likely than females to exhibit challenging behaviors (Montes et al., 2012). The researcher hoped to find similar results as Wildenger and McIntyre's (2012) study, where children who demonstrated the most success in adapting and adjusting to kindergarten previously participated in a high quality preschool program. The sample contained 14 students with F/R lunch status, 31 students who received special education services, six students who received EL services, 22 students with a birthdate range of March through July, and 28 students with a birthdate range of August through February. The male group who participated in a PBIS ECSE program contained 31 students who received special education and related services, which may have helped to explain the greater sum and mean. As stated in Chapter Two, Benner et al. (2013) and Gower et al. (2014) discussed students with emotional and behavioral disorders and the gap in achievement in comparison to non-disabled peers.

The random sample of student externalizing scores on the SRSS from male students who did not participate in a PBIS ECSE program consisted of 50 students. The sample contained 17 students with F/R lunch status, two students who received special education services, five students who received EL services, 15 students with a birthdate range of March through July, and 35 students with a birthdate range of August through February.

Hypothesis H^{1e}: There is a difference in the values of externalizing scores between EL students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Although an observable difference existed in the values of externalizing scores between EL students who participated in a PBIS ECSE program and those who did not

participate in a PBIS ECSE program, guided by the study design requirement for a sample size minimum of 30, the researcher did not apply a *t*-test for difference in means to analyze Hypothesis H^{1e}. The random student externalizing scores on the SRSS from EL students who participated in a PBIS ECSE program consisted of 11 students, and had a lower sum of 10 compared to 66 and a mean of 0.91 compared to 0.25, than EL students who did not participate in a PBIS ECSE program. The researcher expected the outcome, as stated in Chapter Two, Ansari and Lopez (2015) and Weiland and Yoshikawa (2013) found statistically significant differences for the social-emotional skills in Hispanic students who participated in pre-kindergarten programs and those who did not. However, the sample size of EL students who participated in a PBIS ECSE program was very small n = 11 compared to the sample size of EL students who did not participate in a PBIS ECSE program, n = 50. The sample contained seven males, four females, three students with F/R lunch status, two students who received special education services, five students with a birthdate range of March through July, and two students with a birthdate range of August through February.

The random sample of student externalizing scores on the SRSS from EL students who did not participate in a PBIS ECSE program consisted of 50 students. The sample contained 22 males, 28 females, 26 students with F/R lunch status, two students who received special education services, 23 students with a birthdate range of March through July, and 27 students with a birthdate range of August through February.

Hypothesis H^{1f}*:* There is a difference in the values of externalizing scores between students who are eligible to receive free and reduced lunch and who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Although the analysis revealed an observable difference in the values of externalizing scores between students who were eligible to receive F/R lunch and who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program, guided by the study design requirement for a sample size minimum of 30, the researcher did not apply a *t*-test for difference in means to analyze Hypothesis H^{1f}. The random student externalizing scores on the SRSS from students eligible for F/R lunch who participated in a PBIS ECSE program consisted of 23 students, and had a higher sum of 73 compared to 68 and a mean of 3.17 compared to 1.36, than students eligible for F/R lunch who did not participate in a PBIS ECSE program. The researcher described the result as unexpected, since, as stated in Chapter Two, researchers found students from low-income backgrounds who participated in a social-emotional curriculum in preschool were more likely to adjust to kindergarten academically and behaviorally (Nix et al., 2013; Weiland & Yoshikawa, 2013). However, the sample size of students eligible for F/R lunch who participated in a PBIS ECSE program, n = 23, was smaller than the sample size for students eligible for F/R lunch who did not participate in a PBIS ECSE program, n = 50. The sample contained 17 males, six females, 14 students who received special education services, four students who received EL services, eight students with a birthdate range of March through July, and 15 students with a birthdate range of August through February. Since the sample contained 17 males and 14 students who received special education services, these factors could have led to the differences in the sum and the mean. For example, as stated in Chapter Two, studies found males were more likely than females to exhibit challenging behaviors, and therefore, at a greater social-emotional behavioral risk (Montes et al., 2012; Stormont et al., 2015). Benner et al. (2013) and

Gower et al. (2014) discussed students with emotional and behavioral disorders and the gap in achievement in comparison to non-disabled peers.

The random student externalizing scores on the SRSS from students eligible for F/R lunch who did not participate in a PBIS ECSE program consisted of 50 students. The sample contained 22 males, 28 females, two students receiving special education services, 17 students receiving EL services, 18 students with a birthdate range of March through July, and 32 students with a birthdate range of August through February.

Hypothesis H^{1g}: There is a difference in the values of externalizing scores between students whose birthdate is between August and February who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Although the researcher found an observable difference in the values of externalizing scores between students whose birthdate was between August and February who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. The researcher found the *t*-value (2.09) was greater than the critical value (2.009); therefore, the researcher supported Hypothesis H^{1g}. This was the only subgroup category to contain a statistical difference. The random student externalizing scores on the SRSS from students whose birthdates were between August and February and who participated in a PBIS ECSE program consisted of 50 students. The sample contained 31 males, 19 females, 14 students who received free reduced lunch, 24 students who received special education services, and six students receiving EL services. The random sample of student externalizing scores on the SRSS from students whose birthdates were between August and February and who did not participate in a

PBIS ECSE program consisted of 50 students; 25 males, 25 females, 16 students receiving free reduced lunch, one student who received special education services, and 12 students who received EL services. However, the students who participated in a PBIS program had a greater sum of 109 compared to 51 and a mean of 2.18 compared to 1.02 on the fall SRSS scores; another unexpected outcome, as the researcher expected a lesser sum and mean than the subgroup of students who did not participate in a PBIS ECSE program. When the researcher compared students, whose birthdays were between March and July and had participated in a PBIS ECSE program, the subgroup of students whose birthdates were between August and February scored higher on the SRSS. The result opposed previous studies, which described an increase in social-emotional and academic skills for students who were older than younger classmates (Datar & Gottfried, 2013; Huang & Invernizzi, 2013; Whitmore-Shazenbach & Howard-Larson, 2017).

Hypothesis H^{1h}: There is a difference in the values of externalizing scores between students whose birthdate is between March and July who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

Although an observable difference existed in the values of externalizing scores between students whose birthdate fell between March and July and participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. The researcher assumed unequal variances, and found the *t*-value (1.45) was less than the critical value (1.99); the researcher did not support Hypothesis H^{1h}. The random sample of student externalizing scores on the SRSS from students whose birthdates were between March and July and who participated in a PBIS ECSE program

consisted of 41 students. The sample contained 26 males, 15 females, nine students who received F/R Lunch, 22 students who received special education services and five students who received EL services. The sum of the fall SRSS scores were higher than students who did not participate in a PBIS ECSE program, with a sum of 75 compared to 58, and a mean of 1.83 compared to 1.16.

The random student externalizing scores on the SRSS from students whose birthdates were between March and July and who did not participate in a PBIS ECSE program consisted of 50 students; 25 males, 25 females, 17 students who received free reduced lunch, four students who received special education services, and 12 students who received EL services. The outcome aligned with previous researchers who found an increase in social-emotional and academic skills for students who were older than the younger classmates (Datar & Gottfried, 2013; Huang & Invernizzi, 2013; Whitmore-Shazenbach & Howard-Larson, 2017). However, the researcher expected the sum of the SRSS scores for students who participated in a PBIS ECSE program to be less than the SRSS scores for students who did not participate in a PBIS ECSE program.

Hypothesis H^2: There is a difference in the number of office referrals between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program.

The researcher anticipated a minimum number of 50 office referrals from kindergarten; data retrieval only found six. All six office referrals were from students who did not participate in a PBIS ECSE program; all six were males, one student was eligible for special education, four were eligible for F/R lunch, two were EL students, and four had a birthday between March and July. A reason for the low number of office

referrals from kindergarten could have been due to a lack of formally tracking the referrals in the elementary schools. As stated in Chapter Two, Stormont et al. (2015) found office referrals were usually lower during the kindergarten year and only represented students who were at the most extreme risk for externalizing behaviors. As discussed in Chapter Two, researchers discovered many children who experienced difficulty during the transition to kindergarten (Bell-Booth et al., 2014; Cook & Coley, 2017; Feil & Frey, 2013; Kennedy et al., 2012; McIntyre et al., 2014; Miller, 2015; Podvey et al., 2013; van Lier et al., 2012; Welchons & McIntyre, 2015; Wildenger & McIntyre, 2012). Perhaps elementary administrators and kindergarten teachers focused on the kindergarten and elementary school expectations and the learning of those routines, rather than the discipline and consequences of a formal office referral. The researcher found the six office referrals were all from students who did not participate in a PBIS ECSE program; in addition, all six of the students were male. As stated in Chapter Two, males were more likely than females to exhibit challenging behaviors (Montes et al., 2012). In addition, four of the six students had birthdates between March and July, a similar finding with researchers who decribed an increase in social-emotional and academic skills for students who were older than younger classmates (Datar & Gottfried, 2013; Huang & Invernizzi, 2013; Whitmore-Shazenbach & Howard-Larson, 2017). Since the minimum number of office referrals between students who participated in a PBIS ECSE program and those who did not participate in a PBIS ECSE program was not met, guided by the study design requirement for a sample size minimum of 30, the reseacher did not apply a *t*-test for difference in means to analyze Hypothesis H^2.

Hypothesis H^3: There is a difference between the fall and spring ESP scores for students participating in a PBIS ECSE program.

Although the researcher's data analysis revealed an observable difference between the fall and spring ESP scores for students who participated in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. The researcher found the *t*-value as 1.52 and the *P* two-tail value as 0.14, and the researcher did not support Hypothesis H^3. The overall sample of students who participated in a PBIS ECSE program consisted of 50 students; 35 males, 15 females, four students with F/R lunch status, 20 students who received special education services, three EL students, 19 students with a birthdate range of March through July, and 31 students with a birthdate range of August through February. The sum of the fall ESP scores was 50, with a mean of one; the sum of the spring ESP scores was 76, with a mean of 1.52. The increase in the sum and the mean was not the researcher's expected outcome; however, as stated in Chapter Two, approximately 80% of the student population responded to Tier 1/universal systems (Coffey & Horner, 2012; FAQ, 2017; Horner & Sugai, 2015, p. 81, para. 1; Martens & Andreen, 2013, p. 314, para. 1). The fall and spring ESP scores from the PBIS ECSE program demonstrated the PBIS pyramid concept; 90% of students were in Tier 1 in the fall, and 84% were in Tier 1 in the spring. The researcher noted despite the lower number of students in Tier 1 from the fall to the spring n = 45 to n = 42, the percentage of the student sample remained above 80%.

As stated in Chapter Two, 10 to 15% of the student population responded to secondary interventions (Bruhn et al., 2013, p. 171, para. 1; Horner & Sugai, 2015, p. 81;

Martens & Andreen, 2013, p. 314, para. 1). The fall and spring ESP scores from the PBIS ECSE program demonstrated the PBIS pyramid concept for Tier 2/secondary interventions; 4% of the student sample were in Tier 2 in the fall, and 10% of the student sample was in Tier 2 in the spring. The researcher noted the number of students in Tier 2 increased from the fall to the spring (2 to 5), the percentage of the student sample remained in the 10% to 15% range. In the fall, the two students whose ESP scores were in Tier 2 consisted of a female student eligible for special education and a male student eligible for special education. Both students' ESP scores decreased in the spring to low or no risk. However, the five students in the spring whose ESP scores were in Tier 2 had increased from low or no risk in the fall; four were males, eligible for special education, and one female was found ineligible for special education.

As stated in Chapter Two, 5% or fewer of students in a school required Tier 3/tertiary interventions (Horner & Sugai, 2015, p. 81, para. 4; Martens & Andreen, 2013, p. 314, para. 1). The fall and spring ESP scores from the student sample remained at 6% in the fall and in the spring, which was 1% higher than the 5% or fewer of students in the school. The researcher noted the student sample of three students whose ESP scores remained in the extreme risk category were all males eligible for special education services. As stated in Chapter Two, males were more likely to exhibit challenging behaviors (Montes et al., 2012). However, Arnett (2016) found students eligible for special education had "social emotional strengths and challenges that mirrored that of the general population" (p. 2).

Hypothesis H^{3a}*:* There is a difference between the fall and spring ESP scores for students with disabilities who participated in a PBIS ECSE program.

Although an observable difference existed between the fall and spring ESP scores for students with disabilities participating in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. The researcher found the *t*-value as 0.08 and the *P* two-tail value as 0.93, and did not support Hypothesis H^{3a}. The random fall and spring ESP sample of students with disabilities who participated in a PBIS ECSE program consisted of 50 students. The sample contained 40 males, 10 females, 10 students with F/R lunch status, seven EL students, 19 students with a birthdate range of March through July, and 31 students with a birthdate range of August through February. The sum of the fall ESP scores was 122, with a mean of 2.44; the sum of the spring ESP scores was 124, with a mean of 2.48. Although the researcher noted a small difference in the sum and mean, the researcher found the result surprising. As stated in Chapter Two, Montes et al. (2012) found males were more likely to exhibit challenging behaviors; the sample of ESP scores (50) contained 40 males. The researcher noted the small observable difference in the fall and spring ESP scores; however, the ESP scores possibly indicated students had not increased to a higher risk category from the fall to the spring and therefore utilized the PBIS skills.

Hypothesis H^{3b}: There is a difference between the fall and spring ESP scores for general education students who participated in a PBIS ECSE program.

Although the researcher found an observable difference between the fall and spring ESP scores for general education students who participated in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. The researcher found the *t*-value as 1.26 and the *P* two-tail value as 0.21, and did not support Hypothesis H^{3b}. The random fall and spring ESP sample of

general education students who participated in a PBIS ECSE program consisted of 50 students. The sample contained 24 males, 26 females, six students with F/R lunch status, eight EL students, 24 students with a birthdate range of March through July, and 26 students with a birthdate range of August through February. The sum of the fall ESP scores was 13, with a mean of 0.26; the sum of the spring ESP scores was 25, with a mean of 0.5. The researcher did not expect the increase in the sum and mean; however, as stated in Chapter Two, Arnett (2016) found students eligible for special education have "social emotional strengths and challenges that mirror that of the general population" (p. 2). The ESP scores from general education students seemed to agree with Arnett's (2016) research.

Hypothesis H^{3c}*:* There is a difference between the fall and spring ESP scores for female students who participated in a PBIS ECSE program.

Although the researcher found an observable difference between the fall and spring ESP scores for female students participating in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. The researcher found the *t*-value as 0.36 and the *P* two-tail value as 0.72, and did not support Hypothesis H^{3c}. The random fall and spring ESP sample of female students who participated in a PBIS ECSE program consisted of 50 students. The sample contained three students with F/R lunch status, nine students who received special education services, eight EL students, 21 students with a birthdate range of March through July, and 29 students with a birthdate range of August through February. The sum of the fall ESP scores was 35, with a mean of 0.7; the sum of the spring ESP scores was 30, with a mean of 0.6. The researcher expected the decrease in the sum and mean;

as stated in Chapter Two, factors, such as gender and SES correlated with social-emotional behavior risks (Stormont et al., 2015). Graves et al. (2012) stated males were more likely than females to exhibit challenging behaviors, and teachers and parents were more likely to rate males as being at risk for aggression, hyperactivity, and inattention.

Hypothesis H^{3d}*:* There is a difference between the fall and spring ESP scores for male students who participated in a PBIS ECSE program.

Although the researcher found an observable difference between the fall and spring ESP scores for male students participating in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. The researcher found the *t*-value as 0.19 and the *P* two-tail value as 0.85, and did not support Hypothesis H^{3d}. The random fall and spring ESP sample of male students who participated in a PBIS ECSE program consisted of 50 students. The sample contained seven students with F/R lunch status, 25 students who received special education services, seven EL students, 15 students with a birthdate range of March through July, and 35 students with a birthdate range of August through February. The sum of the fall ESP scores was 59, with a mean of 1.18; the sum of the spring ESP scores was 62, with a mean of 1.24. The researcher did not anticipate the small observable difference in the ESP scores from the fall to the spring, even though the scores did increase. The researcher expected the scores for the male students to show a greater observable increase, although the results aligned with researchers as stated in Chapter Two; teachers and parents were more likely to rate males as being at risk for social and emotional behavioral risks (Graves et al., 2012; Stormont et al., 2015).

Hypothesis H^{3e}*:* There is a difference between the fall and spring ESP scores for EL students who participated in a PBIS ECSE program.

Although the researcher found an observable difference between the fall and spring ESP scores for EL students participating in a PBIS ECSE program, guided by the study design requirement for a sample size minimum of 30, the researcher did not apply a *t*-test for difference in means to determine a potential statistical significance for Hypothesis H^{3e}; the researcher was unable to gather the minimum number of ESP scores from the subgroup. The random fall and spring ESP sample of EL students who participated in a PBIS ECSE program consisted of 16 students. The sample contained 10 males, six females, three students with F/R lunch status, nine students who received special education services, three students with a birthdate range of March through July, and 13 students with a birthdate range of August through February. The sum of the fall ESP scores was 34, with a mean of 2.13; the sum of the spring ESP scores was 41, with a mean of 2.56. The increase in the sum and mean was an unexpected result of the researcher, as stated in Chapter Two, as previous researchers found a statistically significant relationship between the social-emotional skills in Hispanic students and participation in pre-kindergarten programs (Ansari & Lopez, 2015; Weiland & Yoshikawa, 2013).

Hypothesis H^{3f}*:* There is a difference between the fall and spring ESP scores for students who are eligible to receive free and reduced lunch and who participated in a PBIS ECSE program.

Although the researcher found an observable difference between the fall and spring ESP scores for students who were eligible to receive F/R lunch and who

participated in a PBIS ECSE program, guided by the study design requirement for a sample size minimum of 30, the researcher did not apply a *t*-test for difference in means to determine a potential statistical significance for Hypothesis H^{3f}; the researcher was unable to gather the minimum number of ESP scores from the subgroup. The random fall and spring ESP sample of students who were eligible to receive F/R lunch and who participated in a PBIS ECSE program consisted of 21 students. The sample contained 17 males, four females, 11 students receiving special education services, six EL students, eight students with a birthdate range of March through July, and 13 students with a birthdate range of August through February. The sum of the fall ESP scores was 33, with a mean of 1.57; the sum of the spring ESP scores was 34, with a mean of 1.62. The researcher expected a greater observable decrease in the sum and the mean of the ESP scores since as stated in Chapter Two, researchers found students from low-income backgrounds who participated in a social-emotional curriculum in preschool were more likely to adjust to kindergarten academically and behaviorally (Nix et al., 2013; Weiland & Yoshikawa, 2013).

Hypothesis H^{3g}*:* There is a difference between the fall and spring ESP scores for students whose birthdate is between August and February and who participated in a PBIS ECSE program.

Although the researcher found an observable difference between the fall and spring ESP scores for students whose birthdate was between August and February and who participated in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. The researcher found the *t*-value as -0.69 and the *P* two-tail value as 0.5, and did not support Hypothesis H^{3g}. The

random fall and spring ESP sample of students whose birthdate was between August and February and who participated in a PBIS ECSE program consisted of 50 students. The sample contained 33 males, 17 females, five students with F/R lunch status, 28 students who received special education services, and 10 EL students. The sum of the fall ESP scores was 93, with a mean of 1.86; the sum of the spring ESP scores was 82, with a mean of 1.64. The researcher expected the decrease in the sum and mean; as stated in Chapter Two, researchers found an increase in social-emotional and academic skills for students who were older than younger classmates (Datar & Gottfried, 2013; Huang & Invernizzi, 2013; Whitmore-Shazenbach & Howard-Larson, 2017).

Hypothesis H^{3h}*:* There is a difference between the fall and spring ESP scores for students whose birthdate is between March and July and who participated in a PBIS ECSE program.

Although the researcher found an observable difference between the fall and spring ESP scores for students whose birthdate was between March and July and who participated in a PBIS ECSE program, the researcher conducted a *t*-test for difference in means to determine a statistical significance. The researcher found the *t*-score as 0.32 and the *P* two-tail value as 0.75, and did not support Hypothesis H^{3h}. The random fall and spring ESP sample of students whose birthdate was between March and July and who participated in a PBIS ECSE program consisted of 50 students. The sample contained 25 males, 25 females, six students with F/R lunch status, 17 students who received special education services, and seven EL students. The sum of the fall ESP scores was 62, with a mean of 1.24; the sum of the spring ESP scores was 68, with a mean of 1.36. The increase in the sum and the mean was an unexpected outcome of the researcher; as stated

in Chapter Two, Ensey Hover (2014) noted early childhood educational programs could support students with late or summer birthdays. However, the sum and mean of the ESP scores for students with a birthdate between March and July was less than the sum and mean for students whose birthdates were between August and February. The finding contrasted with previous researchers who found an increase in social-emotional and academic skills for students who were older than younger classmates (Datar & Gottfried, 2013; Huang & Invernizzi, 2013; Whitmore-Shazenbach & Howard-Larson, 2017).

Elementary administrators' perceptions of kindergarten students' behavior. As stated in Chapter Two, families of students transitioning to kindergarten had many concerns surrounding the change (Brown, 2013; McIntryre et al., 2014; Miller, 2015; van Lier et al., 2012). One administrator found the behavior of parents as a concern, and found family stress and traumatic backgrounds, as well as being in 'survival mode,' altered student behaviors. The administrator stated, 'we had parents who would show up to lunch and spoon feed the kids and try to help the students transition in the morning past the bell.' Researchers found the kindergarten transition was stressful for families (Brown, 2013; McIntryre et al., 2014; Miller, 2015; van Lier et al., 2012). Miller (2015) found the transition to kindergarten was more difficult for families of a lower SES. McIntyre et al. (2014) noted parents of students with disabilities also had difficulties with the transition process, as families had many more concerns and questions in comparison to families of children who were typically-developing.

Administrators also found the difference in behaviors of the kindergarten students attributed to 'prior experience,' 'students who have been in an academic environment,' and 'it was evident which students participated in prekindergarten schooling and which

ones did not.' The responses from the elementary administrators did not give details about what types of preschool programming was the most effective, as evidenced by student behaviors, such as a PBIS public preschool or another community preschool. However, the administrators believed the students who had participated in preschool prior to kindergarten were more familiar with the school setting and had been introduced to social-emotional skills.

Kindergarten teachers' perceptions of kindergarten students' behavior. As stated in Chapter Two, children who demonstrated the most success in adapting and adjusting to kindergarten previously participated in a high quality preschool program (Wildenger & McIntyre, 2012). One teacher stated a factor in the difference in behaviors of the kindergarten students was participation in preschool. Another teacher found kindergarten students who attended preschool were 'used to a formal, day-long school environment.' Although the surveys lacked specificity in the type of preschool programming was best, as evidenced by student behaviors, the responses remained consistent that kindergarten teachers agreed prior participation in preschool provided students with an advantage over peers who did not participate in preschool. Researchers found "a major outcome of preschool includes increased readiness of children for kindergarten in social/emotional and academic aspects" (Hatcher et al., 2012, p. 2). As stated in Chapter Two, researchers found a foundation in social-emotional skills predicted school readiness and later school success (Ashdown & Bernard, 2012; Brown, 2013; Denham et al., 2014; Feil & Frey, 2013; Jones & Bouffard, 2012; Lee & Goh, 2012; Meadan et al., 2016; Montes et al., 2012; Nix et al., 2013; Shala, 2013; Telfair & Shelton, 2012).

Reflection on the Study

This mixed-methods investigation regarding the generalization of social-emotional skills from the preschool to the kindergarten setting included 175 fall and spring ESP scores from students who participated in a PBIS ECSE program during the 2015-2016 school year, 460 externalizing SRSS scores from the fall of students' 2016-2017 kindergarten year, six office referrals from the fall of students' kindergarten year, and responses from four of the eight adults in anonymous surveys. The district IT department rapidly and efficiently provided the secondary data sources for the study, and the adult participants returned the anonymous surveys within the allotted time. Overall, the study was informative from the secondary data sources of the SRSS and ESP screeners and office referral data and through the adult surveys from professionals who spent time observing and working with the students.

One aspect of the study not known to the researcher was if the preschool students who participated in a PBIS ECSE program had attended the researched district's main preschool building or one of the preschool classroom locations housed in district elementary schools. If the researcher collected the PBIS ECSE location data, information could have helped to identify locations where students were more likely to generalize PBIS skills. Another factor not known to the researcher was how long the student had participated in preschool, and if the student attended two, three, or four half days per week. If the researcher had included the information in the study, possibly further recommendations could have been made. For instance, if the data showed students who attended preschool for two full years and attended four half days per week were more likely to generalize PBIS skills, the researcher could have recommended students attend

preschool programming four half days per week instead of the options of two or three half days.

Although the researcher determined if a child was eligible for special education, the researcher did not know the educational categorical disability. For example, if a student was eligible in the specific categorical disabilities of Autism, Intellectual Disability, or Multiple Disabilities. Knowing the type of disability could have helped to explain the SRSS and ESP behavior screener scores and the movement or lack thereof in the scores from fall to spring. Another factor not known to the researcher was which students participated in Tier 2 or Tier 3 interventions in the PBIS ECSE setting. Collecting intervention data could have been instrumental in gauging if the interventions were successful with students and if the interventions directly correlated with the child's ESP or SRSS scores.

Recommendations for the Program

The researcher developed recommendations for preschool programs, for elementary schools as teachers welcome new kindergarten students, and for early childhood and elementary schools implementing a PBIS approach. As stated in Chapter Two, Sugai and Simonsen (2012) found SWPBIS to "enhance academic and social behavior outcomes for all students" (p. 1). The study demonstrated the PBIS concepts of approximately 80% of the student population responded to Tier 1/universal systems and aligned with the then-current literature (Debnam et al., 2012, p. 142, para. 1; Positive Behavioral Interventions and Supports, 2017c, para. 4; Horner & Sugai, 2015, p. 81, para. 1; Martens & Andreen, 2013, p. 314, para. 1). For Tier 2/secondary interventions, the study demonstrated between 10% and 15% of the student population responded to

secondary preventions, such as Check In/Check Out also described in the then-current literature (Bruhn et al., 2013, p. 171, para. 1; Horner & Sugai, 2015, p. 81; Martens & Andreen, 2013, p. 314, para. 1). The study also demonstrated 5% or fewer students in a school required Tier 3/tertiary interventions as noted by previous studies (Horner & Sugai, 2015, p. 81, para. 4; Martens & Andreen, 2013, p. 314, para. 1).

Therefore, the researcher recommended preschools and elementary schools implement a PBIS approach; as stated in Chapter Two, Coffey and Horner (2012) found, "students at PBIS schools do not 'fall through the cracks' because educators, through the use of office discipline referrals and system wide communication, monitor all students who exhibit problem behaviors" (p. 410). SWPBIS helped schools to identify students in need of supports for externalizing or internalizing behaviors; research found internalizing behaviors were more difficult to detect (Garwood et al., 2017).

The researcher found a need for family supports and supports for students who entered kindergarten. Researchers suggested activities, such as participation in a preschool program, participation in a summer school kindergarten readiness program, additional family transition activities at the elementary school, increased communication between home and elementary school, and a behavioral screener and/or prevention program for students as they entered the kindergarten setting (Eisenhower et al., 2016; Ensey Hover, 2014; Kennedy et al. 2012; Miller, 2015; Podvey et al., 2013; Stormont et al., 2015). Other supports included visits from the preschool classes to the elementary buildings, additional communication between preschool and the elementary level, or an adjustment period in the first month of kindergarten where teachers focused on routines, expectations, and learning social-emotional skills in the larger kindergarten classroom

setting. The researcher concluded elementary schools would benefit to know the academic readiness of incoming kindergarten students, in addition to the social-emotional readiness of the student and family background.

Recommendations for Future Research

For future research, the researcher suggested including additional years be included with students who participated in a PBIS ECSE program and transitioned to kindergarten; the researcher could then identify how long the student had participated in preschool program and how many half days or full days per week the student attended. A researcher could focus solely on a qualitative study if the researcher obtained parent permission to identify students, in what category the child may be eligible for special education, and the PBIS Tier 2 and Tier 3 interventions students received to gauge if the interventions were successful and if interventions directly correlated with the child's ESP or SRSS scores. The researcher could also gauge if the student generalized the social-emotional learning in preschool and kindergarten by use of parent and teacher interviews and the results of the ESP and SRSS screeners. Parents could be surveyed about individual perceptions on the applied interventions and any feedback students and parents received from the school setting.

Reinke et al. (2013) stated, "Classrooms within schools utilizing SW-PBIS should be designed to support and extend the school wide system; however, there is a dearth of research on whether this actually occurs" (p. 42). In future studies, the researcher could collect social validity and self-assessment surveys to help determine teacher buy-in of the PBIS approach, or the researcher could conduct classroom observations to gauge the implementation of PBIS Universal systems. If the school system utilized a PBIS

Universal self-assessment survey specific teacher practices, such as the positive-to-negative interaction ratio, behavior-specific praise, and use of reinforcement could be outlined. For example, if a classroom indicated the PBIS Universals were solidly in place, then the behavior screener results and intervention results should correlate with the claim. If possible, the researcher could use a tool to assess rater reliability to measure the accuracy of the ESP and SRSS behavior screener scores, or investigate the school practices on how the screeners are completed; for instance, if the screener was completed by one teacher or a whole team that worked with the students. Another factor to investigate could be teacher experience, years of service, the length of PBIS implementation, and the Professional Development schools used as guidance in implementing SWPBIS. For future research, the study could also include internalizing scores from the SRSS-IE.

Interviews, instead of anonymous surveys with kindergarten teachers and elementary administrators could delve further into the preschool discussion, obtaining information regarding if preschool programming better influenced positive student behavior and generalization of social-emotional skills. For instance, did students who participated in a PBIS ECSE preschool class within the elementary building seem to greater generalize social-emotional skills over a student who participated in a PBIS ECSE preschool class in a different building? Did students who participated in another community preschool program (instead of a PBIS ECSE program) greater generalize their social-emotional skills than students who participated in a PBIS ECSE program? Further research could then be done into the preschool program formats, such as if a child

attended a preschool for five full days a week, were they more likely to generalize social-emotional skills over a child who attended preschool for four half days per week?

According to Landers et al. (2012), "There has been concern, however, about the degree to which the needs of students with severe disabilities are addressed in the universal/Tier 1 strategies for SW-PBIS, as well as the secondary/Tier 2 and tertiary/Tier 3 more intensive SW-PBIS strategies" (p. 2). In the study, the data results from the ESP and SRSS behavioral screeners for students with disabilities demonstrated a difference, but were not statistically significant for students generalizing social-emotional skills. The researcher could specifically investigate students with disabilities stratified by educational disability and cognition level and study the universal, secondary, and tertiary PBIS practices the students received.

The researcher could also conduct parent interviews to identify family concerns about each child's transition into kindergarten, and stratify the families by subgroup to analyze and plan for transition family activities and supports. Research found the kindergarten transition "may be more complex for families from lower-income backgrounds" (Miller, 2015, p. 214). McIntyre et al. (2014) determined families of students with disabilities had many more concerns and questions about the kindergarten transition than families of typically developing children.

Conclusion

Whitcomb and Parisi Damico (2016) emphasized, "Teaching children positive social, emotional, and behavioral skills is a critical challenge facing our society" (p. 4). At the time of the study social-emotional skills were increasingly the focus throughout educational settings, as was the trauma-informed school approach and more awareness of

mental health. With events of school violence and increased focus on programs, such as bullying prevention and identification of students in need of trauma support, mental health supports, self-regulation, and social skills, the need for teaching and monitoring of social-emotional skills in schools continued to increase. As Navo et al. (2015) stated, social-emotional learning can address the problem of bullying in our schools" (p. 8). Early intervention in social-emotional behavior and identification of students who were socially-emotionally at risk were examples of supports that began as early as preschool, and therefore, earlier than kindergarten entrance. Previous researchers determined links between social-emotional behavior concerns and deficits in academic skills (Benner et al., 2013; Ecklund & Dowdy, 2014; Feil & Frey, 2013; Gower et al., 2014; Grothaus, 2013; Hemmeter et al., 2013; Hirschland, 2015; McClelland & Cameron, 2012; Shala, 2013; Webster-Stratton & Reid, 2013). While many researchers concluded the social-emotional behavior skills were important for children's academic success and even long-term health and well-being (Ashdown & Bernard, 2012; Brown, 2013; Davies et al., 2016; Denham et al., 2014; Duran et al., 2012; Feil & Frey, 2013; Jones & Bouffard, 2012; Lee & Goh, 2012; Meadan et al., 2016; Montes et al., 2012; Nix et al., 2013; Pears et al., 2014; Shala, 2013; Telfair & Shelton, 2012; Sabol & Pianta, 2012; Weissberg & Cascarino, 2013). PBIS schools used behavioral screeners as a universal procedure to identify students in need of targeted interventions for internalizing and externalizing behaviors. The researcher concluded collaboration and communication between a child's family and the school were beneficial and in the best interest of the child.

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Appendix A: Survey Questions for Kindergarten Teachers

LINDENWOOD

Describe the behavior of the students in your classroom at the beginning of the school year.

Describe the behavior of the students in your classroom at the end of the school year.

Do you see any possible differences in the behavior of your students?

If there are differences, why do you believe there are differences?

Describe the Positive Behavior Interventions (if any) your students received during the school year.

Describe the outcome of the Positive Behavior Intervention on the student's behavior.

Describe any other behavioral interventions your students received during the school year.

Describe the outcome of the behavior intervention(s) on the student's behavior.

Please add any other comments below.

Appendix B: Survey Questions for Elementary Administrators

LINDENWOOD

Describe the behavior of the kindergarten students in your school at the beginning of the school year.

Describe the behavior of the kindergarten students in your school at the end of the school year.

Do you see any possible differences in the behavior of the kindergarten students?

If there are differences, why do you believe there are differences?

Describe the Positive Behavior Interventions (if any) the kindergarten students received during the school year.

Describe the outcome of the Positive Behavior Intervention on the student's behavior.

Describe any other behavioral interventions the kindergarten students received during the school year.

Describe the outcome of the behavior intervention(s) on the student's behavior.

Please add any other comments below.

Vitae

Colleges and Universities

2002: Bachelor of Science in Elementary Education with a minor in Theater Performance from Southern Illinois University Edwardsville; 2009: Master of Arts in Elementary Administration from Southeast Missouri State University; 2011: Educational Specialist in Educational Administration from Lindenwood University; 2018: Anticipated Doctorate of Education in Educational Administration from Lindenwood University

Employment History

2002-2003: Full-Day Kindergarten Teacher; 2003-2012: Half-Day and Full-Day Kindergarten Teacher; 2012-present: Director of Early Childhood

Awards

2011: Francis and Elizabeth Huss Graduate Award in Educational Administration, Lindenwood University

Presentations

2010: Let's Get Ready for Kindergarten

2014, 2016, and 2018: Early Childhood Programs That Work, Missouri School Board Association Conference

2016: Character Education Begins in Early Childhood, Missouri Character Education Conference

2016: Character Education in Early Childhood, Character Education Conference