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The Impact of Social-Emotional Training on Social-Emotional Development in Students Based on Student Grade and Teacher Experience

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ABSTRACT

Research suggests that early childhood is a sensitive developmental period for social and emotional development, and early intervention leading to social-emotional skills in preschool years is significantly associated with positive outcomes later in life. Many preschool children are reported to already experience social-emotional problems, but very few teachers have received training to implement social-emotional development programs. Educational institutions must carry the responsibility of promoting children's social and emotional development because most young children spend the majority of their time learning and socializing in school. This study sought to add to current literature by looking into the effects of student grade level as well as teacher training and experience on the efficacy of the implementation of social-emotional skills training. Results suggested that students ($N = 241$) demonstrated a trend of decreasing negative behaviors and increasing positive behaviors after the social-emotional skills training interventions. Pre-kindergarten students showed a greater decrease in negative behaviors than kindergarten children after intervention. Students in classrooms with experienced teachers presented less negative behaviors when compared to students in classrooms of teachers with no experience. These preliminary results supported the general effectiveness of the adapted intervention, but also suggested the need for additional intervention to produce meaningful and sustained behavioral gains for higher-need students.

The Impact of Social-Emotional Training on Social-Emotional Development in Students Based on Student Grade and Teacher Experience

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I dedicate this thesis to my family for their constant encouragement and persevering love through it all.

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CHAPTER I

INTRODUCTION

Young people today are often said to spend too much time on screen and not enough time engaging in "real" social interactions with others. They are frequently perceived as spoiled, socially deficient, and emotionally incompetent. These labeling characteristics seem to be interconnected in that they are all encompassed in social-emotional development. In current society where most young children spend the majority of their time in school and where most of their social interactions occur in academic settings, educational institutions must increasingly carry the previously unspoken responsibility of promoting children's social and emotional development. Furthermore, whether schools explicitly and intentionally teach these skills or not, children are constantly learning from their environment and adding to their mental repertoire. This and evidence that early social and emotional learning has long-lasting effects on children indicate that the current social-emotional development of children is an important research subject.

As research increasingly shows the effectiveness and importance of social-emotional development in education settings, the United States government has gradually moved toward supporting social-emotional learning programs in schools. With the passing of the Every Student Succeeds Act in 2015, federal policies have since required states to develop accountability systems for schools that include at least one non-academic indicator of student success or school quality (Eklund, Kilpatrick, Kilgus, &

Haider, 2018). Studies revealed that about three quarters of American children under five years old currently attend formal child-care or preschool establishments (Green, Malsch, Kothari, Busse, & Brennan, 2012). At this young age, about 20% of children have already been reported to experience social-emotional problems (Conners-Burrow, Patrick, Kyzer, & McKelvey, 2017) while only the same percentage of teachers have received training to implement social-emotional development programs (Poulou, 2017). Social-emotional skills training has been empirically shown to improve young children's prosocial behaviors, emotional understanding, and school adherence while decreasing anti-social behaviors, emotional distress, and aggression (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Eklund et al., 2018; Lang, Mouzourou, Jeon, Buettner, & Hur, 2017; O'Conner, De Feyter, Carr, Luo, & Romm, 2017). Children who lack social-emotional skills training also often demonstrated an increase in problem behaviors and mental health concerns. Social-emotional development in early childhood is an essential component of education that will continue its effects throughout the individual's life.

CHAPTER II

LITERATURE REVIEW

Definition of Social-Emotional Development

Broad Concept

Social-emotional development is defined as "a broad, multifaceted concept characterized by growth in various proactive skills and behaviors, including recognizing and managing one's emotions, developing positive relationships with others, making responsible decisions, handling challenging situations, and feeling empathy and concern for others" (Roberts, LoCasale-Crouch, Hamre, & DeCoster, 2016, p. 643). Social and emotional skills involve the capacity to both manage one's own experience of emotions as well as accurately interpret and respond to others' emotional experiences in prosocial ways. Additionally, social-emotional competence includes the ability to anticipate the occurrence of and to think through problematic social situations so that the individual may be prepared to manage them or steer them in a desirable direction (Kam, Greenberg, & Kusche, 2004). Children who possessed an understanding of their own emotional states and had the skills to regulate their emotions were better able to successfully and accurately process the emotional content of a situation while regulating their emotional arousal so that they could think through the problem (Kam et al, 2004). The logical conclusion from this definition is that social-emotional development is also characterized by an absence or a decreased occurrence of problem behaviors, including emotional distress and conduct problems. Socially and emotionally competent children are able to

not only assess social situations and generate the appropriate steps to carry out, but they also have the emotional control and skills to implement the desirable responses. Thus, successful social-emotional development involves both the learning of helpful social and emotional coping skills as well as the application of those skills to various social situations and decisions. The mastery of social-emotional skills essentially shifts an individual's locus of behavioral control from external factors to internalized beliefs and values, which ideally include caring and concern for others, good decision-making, and responsibility for personal choices and behaviors (Durlak et al., 2011).

Two Skill Groups

Social and emotional development can be further understood to include two groups of skills, namely social skills and emotional skills (Conners-Burrow et al., 2017). Social skills include relationship skills and responsible decision-making. Relationship skills involve clear communication, attentive listening, and conflict negotiation, while responsible decision-making skills incorporate the making of beneficial and respectful personal choices with the ability to evaluate foreseeable consequences and consider the well-being of both oneself and others. Emotional skills include self-awareness, self-management, and social awareness. Competence in self-awareness encompasses the capacity to recognize one's own emotions and the self-efficacy and confidence to manage them. This differs from self-management skills, which consist of the proficiency to regulate one's emotions through controlling impulses, motivating oneself, and persistence toward goals. An individual who is socially aware is able to demonstrate respect, empathy, and understanding for others and their diverse perspectives. Thus, social-

emotional competence addresses a conglomeration of skills, behaviors, and beliefs that together promote the well-being of an individual.

Effects of Social-Emotional Training

Positive Behaviors

Children benefit significantly from direct and universal, school-based training in social and emotional skills (Durlak et al., 2011). Studies have found that children display higher levels of emotion regulation, empathy, and social competence when their emotional expressions are validated with appropriate labels and safe ways of displaying their feelings, which occurs when adults consistently help them consider ways to lessen their negative emotions (Lang et al., 2017). Durlak and his colleagues found that children with social-emotional training consistently demonstrated improvements in academic achievement as well as positive behaviors such as making friends, being adaptive in peer interactions, and problem solving in social situations (Durlak et al., 2011). Students who received social-emotional training also demonstrated enhanced resilience, emotional functioning, conflict resolution skills, self-efficacy, and altruistic behavior (O'Conner et al., 2017). Furthermore, they exhibited skills such as improved emotion recognition, social skills, stress management, problem-solving, decision-making, empathy, self-concept, and positive self-image (O'Conner et al., 2017). A systematic review of the current literature indicates that young children who have participated in social and emotional learning programs demonstrate increased academic motivation, self-efficacy, and commitment to school (O'Conner et al., 2017).

Negative Behaviors

Additionally, children's negative behaviors, including conduct problems and aggression, are consistently decreased with social-emotional training. For instance, a literature review found that social-emotional training effectively and significantly reduced or prevented substance abuse, anxiety, depression, and suicidality as well as decreased disruptive classroom behavior, aggression, bullying, and delinquent acts (O'Conner et al., 2017). Studies have also observed a significant decrease in emotional distress and social withdrawal in young students with social and emotional skills training (O'Conner et al., 2017). Another study indicated that optimal learning occurs when children are attentive, exert maximum effort, persist in the face of difficulty, and deal constructively with the frustration of not understanding or getting something right the first time (Zigler, Gilliam, & Barnett, 2011). This occurs most effectively when children have obtained emotion regulation skills and prosocial behaviors, which help them to quickly and effectively manage social-emotional disturbances, in order to spend more time on academic learning (Honess & Hunter, 2014). For this reason, social-emotional development benefits children by helping them be better learners as well.

Social-Emotional Skills

While the presence and development of social-emotional skills have been scientifically supported to help children improve and succeed in life, the lack of these skills presents a harmful circumstance (Durlak et al, 2011). The National Association of School Psychologists has found that the consequences of poor social skills include:

> difficulties in interpersonal relationships with parents, teachers, and peers; highly negative responses from others that lead to high levels of peer rejection, which

> has been linked with school violence; signs of depression, aggression and anxiety; poor academic performance; and a higher incidence of involvement in the criminal justice system as adults. (NASP, 2002, para. 4)

Students who lack social-emotional competence risk becoming less connected to school as they grow older and this can negatively affect their academic performance, social behavior, and overall well-being (Durlak et al., 2011; Eklund et al., 2018). Individuals without social-emotional training tend to lack social skills such as empathy, good decision-making skills, relationship-building skills, and conflict resolution skills, and they are more likely to engage in multiple high-risk behaviors such as substance use, violence, sex, and attempted suicide (Durlak et al., 2011). They also demonstrate lower grades, lower overall achievements, more discipline referrals, more problematic behaviors, and poorer school attendance (Eklund et al., 2018). Currently, about one-fifth of preschool children are reported to have some type of emotional or behavioral problems (Conners-Burrow et al., 2017) and only about two-fifths of sixth to twelfth graders reported that they possess social-emotional competency skills (Durlak et al., 2011). Research predicts that if these socially and emotionally delayed children were to continue without intervention, they will develop social and academic problems later in life, including dropping out of school and adult incarceration (Conners-Burrow et al., 2017).

Case for Early Intervention

Early Childhood Years

During their preschool years, children have the opportunity to greatly expand their social and emotional aptitude as they develop their ability to recognize and manage their own emotions and behaviors as well as to communicate and sympathize with others

(Roberts et al., 2016). Research reveals that children begin to learn social and emotional skills even during infancy and early childhood years (Conners-Burrow et al., 2017). The early social-emotional development of young children, especially in areas such as emotional control, self-regulation, attention, and appropriate social skills, is directly linked to school readiness and the development of higher-order cognitive functioning later in childhood and adult life (Green et al., 2012). Research suggests early intervention that leads to social-emotional skills in preschool years is associated with positive outcomes later in life, specifically fewer behavior problems such as teen pregnancy and smoking in adolescence as well as increased health, wealth, and other personal outcomes in adulthood (Roberts et al., 2016). Consequently, early childhood social-emotional skills training is essential, especially for at-risk children who show early deficits in social-emotional development (Roberts et al., 2016). Therefore, one of the empirically supported goals of childhood social-emotional training is to counteract the potential consequences of social-emotional deficits by teaching children fundamental social-emotional skills as protective factors (Eklund et al., 2018). These programs strive to prevent specific, long-term externalizing behaviors such as substance use, interpersonal violence, and bullying through systematic instruction, modeling, and practice of prosocial skills (Durlak et al., 2011).

Young School Children

An increasing majority of young children in the United States, approximately 76%, are currently enrolled in some form of center-based child care or preschool prior to entering kindergarten (Green et al., 2012). This suggests that most young children spend much of their time around their peers and with adults who identify as their teachers.

These children, specifically preschool and kindergarten-aged children, are in the early and highly sensitive stages of learning a variety of social, emotional, and behavioral skills through their environment (Buettner, Jeon, Hur, & Garcia, 2016). Furthermore, the children's teachers are constantly facilitating their social and emotional development through emotion socialization practices (Hanson-Peterson, Schonert-Reichl, & Smith, 2016), whether or not these teachers' impact and modeling are intentional. Young children are primed to develop social-emotional skills, and teachers influence most of society's young children in what they learn through how they interact socially and emotionally with their students.

Effectiveness of PATHS

Promoting Alternative THinking Strategies

Extensive research recognizes the Promoting Alternative THinking Strategies (PATHS) curriculum as an effective program for universal, classroom-based social and emotional learning (SEL) programs both in the United States and internationally (Honess & Hunter, 2014). PATHS consists of systematic, developmentally-based lessons, materials, and instructions to facilitate emotional literacy, self-control, social competence, positive peer relations, and interpersonal problem-solving skills (Domitrovich, Greenberg, Kusche, & Cortes, 2004). PATHS operates under four assumptions, namely that 1) children's capacity to understand and discuss emotions is related to the development of both their communication skills and their self-control and behavior inhibition skills; 2) children's capacity to manage, understand, and discuss emotions is constrained by other developmental factors and socialization practices; 3) effective problem solving stems from children's competence in understanding their own

and others' emotions; and 4) the school and classroom environment is a central proponent of change (Kam et al., 2004). While these principles indicate that PATHS was designed to be consistently carried out by teachers and supported by staff throughout the school year, research has found that mental health clinicians can implement the program almost as effectively (Gibson, Werner, & Sweeney, 2015). Students have shown significant improvements in their emotional literacy and prosocial behaviors when trained by clinicians not affiliated with the schools (Gibson et al., 2015).

PATHS for Young Children

Growing evidence suggests that the explicit teaching of the skills outlined in the PATHS curriculum leads to positive outcomes in children of all ages, including those as young as preschool-aged students. Research reveals that PATHS helped older preschool children develop thinking and reasoning skills, increase positive language and dialogue, increase attention and concentration, and develop empathy (Hughes & Cline, 2015). Children have also been found to significantly increase their vocabulary for emotions as well as to improve in their understanding of and ability to verbalize these emotions (Honess & Hunter, 2014). Furthermore, these children were able to organically generalize their newly learned skills across various other settings, which points to the long-lasting effects of social-emotional training in young children.

Classroom Environment

Teachers have reported less aggressive student behavior and more self-control with the implementation of PATHS (Honess & Hunter, 2014). They also noted that their students gained the ability to stop, calm themselves down, and be more relaxed in the midst of emotionally charged situations after exposure to PATHS (Honess & Hunter,

2014). Aggressive behaviors were defined as some degree of cruelty and meanness toward others, disobedience, disturbance of others, and destruction of property (Achenbach, 2001). The intervention significantly decreased teachers' reports of internalizing as well as externalizing behaviors up to two years after the implementation of the program (Kam et al., 2004). According to the Child Behavior Checklist Teacher's Report Form used by Kam and colleagues, internalizing behaviors included self-consciousness, shyness, loneliness, and feelings of guilt (Achenbach, 2001; Kam et al., 2004). Conversely, externalizing behaviors encompassed disruptive classroom behaviors such as swearing, sleeping in class, defiance, and explosive behaviors (Achenbach, 2001). Children who received the SEL training also consistently reported fewer depressive symptoms themselves. Interestingly, teachers whose classrooms did not implement PATHS produced increased reports of externalizing behaviors as well as a slower decline in internalizing behaviors when compared to the intervention group (Kam et al., 2004). In addition to the improved prosocial skills, emotional vocabulary, and cognitive functioning in young children noted by teachers who implemented, a significant difference was also observed in the classroom environment. Both teachers and students in these classrooms indicated that the curriculum provided a more positive learning environment and less aggressive behaviors from peers according to student ratings (Honess & Hunter, 2014).

Teacher Social-Emotional Competence

Teacher's Emotional Competence

Recent research supports that early childhood teachers are able to provide better guidance and learning environments for children when they are emotionally capable and

competent (Hanson-Peterson et al., 2016). A study of the relationship between teachers' social-emotional capacity and children's social-emotional learning has found the teachers' psychological load, including depression, stress, and emotional exhaustion, is linked to their negative reactions toward children (Buettner et al., 2016). Specifically, teachers with a higher psychological load, or teachers who are more stressed, emotionally exhausted, and depressed, are more likely to punish, minimize, and respond negatively to children's negative emotions, which can negatively impact children's social-emotional learning. However, teachers' abilities for "reappraisal, emotion regulation, and problem-focused coping strategies are related to their positive reactions to children's negative emotions" (Buettner et al., 2016, p. 1018). Teachers' positive emotional reactivity has been shown to improve children's social-emotional learning (Lang et al., 2017). Furthermore, social-emotional competence benefits both teachers and students by allowing them to manage their relationships, their work, and themselves (Poulou, 2017). As a result, teachers can also effectively teach children to positively manage stress, anger, and social interactions while fostering a sense of safety and wellbeing in the children.

Teacher's Psychological Load

A teacher's social-emotional competence is also essential for developing and maintaining healthy teacher-student relationships (Poulou, 2017). Scientific evidence indicates that teachers' depressive symptoms can drastically impact children's social-emotional development in the classroom (Roberts et al., 2016). For instance, preschool children with teachers who report more depressive symptoms made significantly fewer gains in social-emotional skills according to both teacher and parent reports. In addition, depressed teachers are more withdrawn and less sensitive to their students, less likely to

interact effectively with them, and less likely to engage in interactions with them, all of which are detrimental to children's social-emotional development (Roberts et al., 2016). Although this group of teachers were not observed to be less emotionally supportive than their less depressed peers, depressed teachers were positively correlated with reports of more problem behaviors and less social skills in their students. This indicates that it is not the mere presence of teachers' emotional support but the consistency and quality of their emotional support in the classroom that positively impacts children's social-emotional development. Preschool teachers' own social-emotional competence influences various aspects of their students' social-emotional development. Research supports the notion that teachers' level of social-emotional awareness and competence is positively linked to the quality of young children's learning.

Teacher Emotional Intelligence

Emotional intelligence is closely related to social-emotional competence. It is defined by Poulou (2017) as the perception and the use of emotions to facilitate one's thinking, understanding, and management of emotions. By definition, emotional intelligence is different from social-emotional competence in that the former refers to the internal process of understanding one's emotions that may not have an obvious social component. One study found that teachers with high emotional intelligence are able to deal more constructively with negative situations involving students than colleagues with less emotional intelligence (Poulou, 2017). Teachers with higher ratings on emotional intelligence tended to perceive more closeness with their students. Conversely, teachers who routinely experience difficulties in establishing good working relationships with their students demonstrate a possible lack of emotional intelligence themselves (Poulou,

2017). Current research recognizes that teachers' emotions directly influence their attitudes toward students and their ability to provide a psychologically secure classroom environment, both of which significantly impact the social-emotional development of their young students.

Teacher-Child Relationship

The quality and closeness of the relationship between a teacher and a young child often shape the child's continuing adaptation to school as well as their social and emotional development (Poulou, 2017). Studies have found that close non-parent, caregiver-child relationships are associated with reduced problematic behavior and increased prosocial competence, including more positive and skilled peer interaction (Mortensen & Barnett, 2015). Relational conflict between a teacher and student is negatively correlated with the child's emotion regulation (Garner, Mahatmya, Moses, & Bolt, 2014).

Teacher Perception of Children

Teacher's Perception of Personal Readiness

"Teachers' perceptions of their students' developmental readiness to cope with and learn to regulate strong emotions are associated with teachers' motivation and willingness to engage their students in activities that can provoke strong emotions in their students" (Hanson-Peterson et al., 2016, p. 32). Teachers who feel less equipped to provide social emotional training to their students backed away from addressing those aspects of learning, which could inhibit or otherwise negatively affect young children's social emotional development (Hanson-Peterson et al., 2016). Studies agree that teachers' comfort level with implementing social-emotional learning practices in the classroom is

the most important predictor in teacher-student relationships (Poulou, 2017). Additionally, children demonstrate lower levels of social competence when their caregivers become distressed when the children show negative emotion (Lang et al., 2017), indicating that teachers who feel unprepared to provide social-emotional training to children can negatively impact them in this area of development. Research supports the notion that teachers who practice supportive emotional socialization, such as reacting to students' emotions in a positive way, are more likely to positively influence students' emotional competence. However, depressed teachers may view their students' social skills more negatively and thus hinder their social and emotional development (Roberts et al., 2016).

Child-Centered Beliefs

Child-centered beliefs are an important concept in the discussion of teachers' perceptions of their young students. Child-centered beliefs guide a teacher's perception of their children by placing their emphasis on the notion that children are competent learners who autonomously gather knowledge and skills by interacting with their surroundings and also that children learn best with teachers who are both sensitive and responsive to their interests and behaviors (Lang et al., 2017). Teachers with diminished levels of child-centered beliefs may be more likely to punish or dismiss children for displaying their negative emotions, which has been shown to lower children's social competence, emotional knowledge, expressiveness, and emotional regulation (Lang et al., 2017). Therefore, the beliefs that children are capable social-emotional learners and that teachers' emotional characteristics directly affect children's learning positively contribute to young children's optimal social-emotional development.

Teacher Experience and Training

Need for Teacher's Training

Due to the increasing recognition of social-emotional development as an essential part of education, most of the 50 states in the United States have developed standards of student learning that emphasize social and emotional competence for students in preschool through high school (Dusenbury, Zadrazil, Mart, & Weissberg, 2011; Eklund et al., 2018). However, research indicates that only a fifth of current early childhood education providers have received recent training on supporting children's social-emotional development and in implementing SEL programs (Conners-Burrow et al., 2017). As teachers are beginning to teach social-emotional skills to their students, they reported a need for more professional in-service training in order to improve their implementation of social-emotional skills training (Poulou, 2017). This feasible and desirable option is further supported by teachers' reports that receiving regular feedback through both internal and external observations tended to decrease their negative social guidance and increase their expressive encouragement in the classroom (Lang et al., 2017). Teachers further agreed that the training part of the social-emotional development curriculum is an important part of effective implementation (Honess & Hunter, 2014). While teachers generally acknowledge that they need and want more training specifically for educating their children in social and emotional skills, there has been limited work done in this relatively new addition to the traditional school curriculum.

Research on Teacher's Experience

Although there is little current research on the correlation between teachers' experience with social and emotional development training and young children's social-

emotional growth, extant studies find that teachers' years of teaching and classroom experience significantly predict ratings of higher peer social skills in pre-kindergarten children (Graves & Howes, 2011). Research also suggests that early childhood educators' lack of experience is related to them showing more unsupportive and less supportive responses to children's emotions (Denham, Bassett, & Miller, 2017). One particular study found that teachers who had taken early childhood education courses or any child development courses were less likely to engage in negative social guidance (Lang et al., 2017). Lead teachers and teachers with greater years of experience were also more likely to be engaged in positive social guidance with their students (Lang et al., 2017). This suggests that teachers' experience and training specifically in issues concerning children's social-emotional development is central to their ability and willingness to provide students with positive social-emotional skills training.

Current Study

This study focused on the effects of social and emotional learning programs on young children and the impact of teachers' experience with the program. The first purpose of this study was to evaluate the differences in effectiveness of the Promoting Alternative THinking Strategies (PATHS) system as a campus-wide intervention for young students when implemented alongside teachers who had previous experience with the curriculum versus teachers without experience. Secondly, this research evaluated the differences in outcomes between children in the pre-kindergarten and kindergarten levels. The first hypothesis was that students of teachers with at least one year's experience of observing the implementation of PATHS would show a significantly higher level of progress in social-emotional skills than students of teachers observing the implementation

of PATHS in their classroom for the first time. The second hypothesis was that PATHS was more effective for children at the pre-kindergarten level than for children at the kindergarten level. This research aimed to inform and guide clinicians toward a better understanding, development, and support of the elements that surround the social and emotional improvement of young students.

This study adds to the current literature in that it investigated the effects of teacher training and experience on the efficacy of the implementation of social-emotional skills training. While copious amounts of research support the positive effects of social-emotional development in children, little has been done to analyze the impact of teacher training on their students' social-emotional improvement. Additionally, no research could be found on the difference in social-emotional gains between pre-kindergarten and kindergarten children. This study anticipated its findings to replicate other studies on the effectiveness of PATHS. It also hypothesized that there would be significant interaction effects found between children's grade and successful implementation of PATHS and between teacher experience and successful implementation of PATHS.

CHAPTER III

METHODOLOGY

Participants

Pre-kindergarten and kindergarten teachers in a rural Texas independent school district were recruited through their school administrators to collaborate with graduate school psychology students to implement the PATHS curriculum in their classrooms. This partnership between the schools and professors who were also Licensed Specialists in School Psychology allowed for graduate students to work with teachers to implement PATHS. Parents of the children in the participating classrooms were informed of the curriculum and asked for informed consent for behavior report data to be collected on their child. Children in participating classrooms received the lessons included in the PATHS curriculum over one semester. Children who attended pre-kindergarten in the school district must have been at least four years old and must have met at least one at-risk criteria. These included having limited English proficiency, being educationally disadvantaged due to family income, being homeless, being a dependent member of the military, being a child in the state foster care system, or being a dependent member of an individual awarded the Star of Texas Award ("Wylie ISD Prekindergarten," n.d.). Children at this district's kindergarten represented the general population and must have been at least five years old to attend.

Demographics

The sample population consisted of 559 pre-kindergarten and kindergarten students from a rural Texas school district. There were 163 pre-kindergarten students and 385 kindergarten students, and 261 female students and 298 male students. Twenty-seven teachers were involved in this study, and 35 separate classes of students were evaluated over four consecutive academic semesters. Thirteen of these classes were excluded from the final data analyses because the teacher reported less than 10 individual recordings of behaviors for the entire class over the school year. The final analyzed population consisted of 313 students and 16 teachers. There were 142 female students, 171 male students, 103 in pre-kindergarten, and 210 in kindergarten.

PATHS Intervention

Promoting Alternative THinking Strategies (PATHS) is an intervention program implemented across the whole school focusing on the emotional literacy and social competence of students (Honess & Hunter, 2014). The three units of the original PATHS curriculum that were used in this study included the self-control unit, the feelings and relationships unit, and the problem-solving unit. The self-control unit taught and reinforced behavior inhibition and self-control through a series of lessons and exercises (Kam et al., 2004). The feelings and relationships unit taught children emotional and interpersonal understanding, beginning with basic emotions and progressing to more complex emotions through several lessons. Finally, the problem-solving unit taught children to analyze social situations, find alternative strategies of managing difficulties, and choosing and carrying out the best solution. PATHS has been shown to be a consistently effective social-emotional development program across the United States

(O'Conner et al., 2017). While PATHS was intended to be implemented solely by teachers and school staff, it has been shown to significantly increase students' emotional understanding and prosocial behaviors even when implemented by school mental health clinicians (Gibson et al., 2015).

In this study, 13 lessons were implemented from the PATHS manual, specifically the ground rules, normalizing feelings, specific emotions, behavioral coping skills, problem-solving skills, and the review and transition units. These were taught in each class over ten weeks during the fall or spring semester. The final four lessons were combined in the final session to prepare children to end the curriculum, solidify the training, and transition learned skills into their future semesters.

Procedures

For this study, school psychology graduate students collaborated with a rural Texas school district to provide social-emotional training to young children in pre-kindergarten and kindergarten classes. Informed consent was obtained from the parents of these children prior to the implementation of the training. The PATHS curriculum was implemented in pre-kindergarten and kindergarten classrooms through 10 sessions in rural Texas over one semester. Data was collected for two years with each class of students receiving PATHS for one semester. Each participant's behaviors were tracked by pre-existing, daily behavior logs developed independently by the teachers. These behavior logs varied from teacher to teacher but all included ratings of student positive and negative behaviors. Teachers in two early childhood schools participated in implementing PATHS for over 500 pre-K and kindergarten students by observing graduate school psychology students teach the program lessons to their students. The

curriculum was carried out in 25-minute sessions once every week for 10 weeks throughout the semester. Each student received one semester of the PATHS curriculum, and their progress was recorded by the frequency of their negative behaviors as well as their positive behaviors.

Data from both teacher and child participants over the three years were analyzed to discover the differences in the effectiveness of the PATHS social skills curriculum as it was applied to one or a combination of four groups: pre-K, kindergarten, teachers with no experience implementing PATHS, and teachers with at least one year's experience implementing PATHS. The daily behavior log data for more than 500 pre-K and kindergarten students were collected to enable analysis of student and classroom-wide behavior before and after exposure to the PATHS curriculum.

Data Analysis

The behavior logs were compared and analyzed for any differences in the rates of decrease of negative behaviors and the rates of increase of positive behaviors for students with experienced teachers versus inexperienced teachers. The logs were also analyzed to compare the changes in behavior for those who received PATHS earlier in their educational career as pre-kindergarten students and those who received it for the first time as kindergarteners.

The three hypotheses of this study were that (1) the implementation of PATHS for this study would be an accurate replication of its treatment effectiveness; (2) there would be a significantly greater improvement between baseline and intervention ratings in the pre-kindergarten population when compared to the kindergarten population; and (3) students in experienced teachers' classrooms would demonstrate significantly greater

gains in social-emotional skills. The first hypothesis was analyzed by utilizing a within-groups comparison of the baseline and intervention ratings. The second hypothesis was evaluated with a 2 (baselines vs intervention) x 2 (pre-K vs Kindergarten) Mixed Factorial analysis, comparing pre-kindergarten and kindergarten participants across the baseline and intervention assessments. The third hypothesis was assessed with two different analyses. The first analysis was a within-groups comparison of the baseline and intervention ratings, comparing students' first semester against their subsequent semesters in order to determine if there was an effect on student outcomes. The second analysis conducted was a between-groups comparison of first semester inexperienced teachers against teachers who had at least one semester of prior experience delivering the intervention. An additional analysis was conducted to evaluate any interaction effect of grade level and teacher experience on student learning.

Expected Findings

The findings of this study were anticipated to indicate that children in pre-kindergarten make significantly greater gains in social-emotional skills when compared to their kindergarten counterparts. It was also predicted that students in classrooms with teachers who had previous experience with the implementation of PATHS would demonstrate a higher level of social-emotional development. This research also anticipated that the interaction effect between grade and treatment and the interaction effect between teacher experience and treatment were more effective in improving the social-emotional development of the children.

CHAPTER IV

RESULTS

Intervention Effects of PATHS

The first hypothesis of this study was that PATHS is an effective intervention for social-emotional development. In order to test this hypothesis, a *t*-test was conducted comparing baseline and intervention behaviors.

Table 1

Intervention Effects of PATHS

	Negative Behaviors		Positive Behaviors	
	M	SD	M	SD
Baseline	3.078	6.099	0.863	2.205
Intervention	2.913	5.042	1.058	3.176

Note. $N = 241$.

As can be seen in Table 1, negative behaviors decreased from 3.08 to 2.91 with a mean difference of 0.17 ($d = 0.04$) and positive behaviors increased from 0.86 to 1.06 with a mean difference of 0.2 ($d = 0.09$). The analysis indicated that the intervention effect was not statistically significant, although it was noticeable despite a small effect size. Overall, no statistically significant difference was found between negative behaviors (t (240) = .554, p = .580). Similarly, no statistically significant difference was found between positive behaviors (t (240) = 1.321, p = .188).

Comparison of Gains Based on Student Grade

The second hypothesis stated that there were differences in gains between baseline and intervention ratings in the pre-kindergarten population compared to the kindergarten population. This was analyzed with a 2 (baseline vs intervention) x 2 (pre-K vs Kindergarten) Mixed Factorial analysis, with the independent variable being student grade level and the dependent variables being behavior ratings.

Table 2

Intervention Effects Based on Grade

	Pre-Kindergarten $n = 65$				Kindergarten $n = 176$			
	Negative Behaviors		Positive Behaviors		Negative Behaviors		Positive Behaviors	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Baseline	2.739	4.109	0.969	2.437	3.205	6.692	0.824	2.119
Intervention	2.185	3.885	0.969	2.784	3.182	5.392	1.091	3.316

Table 2 presents the findings from this analysis, which indicated a decrease in the pre-kindergarten mean frequency of negative behaviors from 2.74 to 2.18 and in the kindergarten population from 3.20 to 3.18 ($d = .003$). There was a simultaneous increase in the kindergarten mean frequency of positive behaviors from 0.82 to 1.09 but no increase in the pre-kindergarten population ($d = .003$). The effect size for these findings was very small, indicating that the differences did not affect most of the sample population. This analysis produced no main effect for grade between pre-kindergarten and kindergarten students for negative behaviors (F (1, 239) = .728, $p = .394$). Additionally, no main effect was found for grade for positive behaviors (F (1,

239) = 1.69, p = .423). This study found no interaction effect of grade on negative behaviors (F (1, 239) = .618, p = .433) or on positive behaviors (F (1, 239) = .644, p = .423).

Interaction Effects of Student Grade and Teacher Experience

The third hypothesis was that student gains in social-emotional skills within experienced teachers' classrooms was greater compared to those of students within inexperienced teachers' classrooms. This was measured with two different analyses. The first analysis was a within-groups comparison of the baseline and intervention ratings, comparing their first semester against their subsequent semesters in order to determine if there was an effect on student outcomes. The second analysis was a between-groups comparison of first semester inexperienced teachers against teachers who had at least one semester of prior experience delivering the intervention. An additional analysis was conducted to evaluate any interaction effect of grade level and teacher experience on student learning.

Table 3

Intervention Effects Based on Teacher Experience

	Negative Behaviors		Positive Behaviors	
	M	*SD*	*M*	*SD*
With Experience (n = 58)	2.103	3.013	0.121	0.378
No Experience (n = 14)	2.357	3.835	-	-

Table 3 presents the descriptive statistics from these analyses, which indicate that the mean frequency of negative behaviors was 2.10 in experienced teachers' classrooms (d = 0.698) and 2.36 in inexperienced teachers' classrooms (d = 0.615). The medium effect sizes for these findings indicated that these differences were clinically significant and affected a majority of the

sample population. The mean frequency of positive behaviors was .12 in experienced teachers' classrooms (d = 0.319). The effect size of this finding was small and to be expected due to the limited data. The mean frequency of positive behaviors for inexperienced teachers' classrooms was unavailable because the teachers did not report any positive behaviors over the school. There was no significant main effect of teacher experience on students' negative behaviors (t (70) = 268, p = .790) or positive behaviors (t (70) = .011, p = .239). This study also found no interaction effect of grade and teacher experience on student behaviors (F (1, 70) = .170, p = .681).

CHAPTER V

DISCUSSION

Summary

Current Literature

Research suggests that early childhood is a sensitive developmental period for social and emotional development, and early intervention leading to social-emotional skills in preschool years is significantly associated with positive outcomes later in life. According to the Every Student Succeeds Act, federal law mandates that schools are responsible for promoting children's social and emotional development (Eklund et al., 2018). However, most early childhood teachers do not feel equipped for this task, which is associated with negative impacts on the social-emotional development of children. One-fifth of preschool children are reported to already experience social-emotional problems, while only one-fifth of teachers have received training to implement social-emotional development programs. Although social-emotional development is a well-researched subject, little research has been done to determine the effects of teacher's experience with SEL programs on student gains. This study adds to the current literature by looking into the effects of student grade level as well as teacher training and experience on the efficacy of the implementation of social-emotional skills training.

Hypotheses from Current Study

There were three hypotheses in this study. First, it was hypothesized that the implementation of PATHS would be an accurate replication of its treatment

effectiveness. This was analyzed by utilizing a within-groups comparison of the baseline and intervention ratings. The second hypothesis was that there would be a significantly greater improvement between baseline and intervention ratings in the pre-kindergarten population when compared to the kindergarten population. This was evaluated with a 2 (baseline vs intervention) x 2 (pre-K vs Kindergarten) Mixed Factorial analysis. Finally, it was hypothesized that students in experienced teachers' classrooms would demonstrate significantly greater gains in social-emotional skills when compared to students in inexperienced teachers' classrooms. This was assessed first with a within-groups comparison of the baseline and intervention ratings. Then a between-groups comparison was conducted comparing first semester inexperienced teachers against teachers who had at least one semester of prior experience delivering the intervention. An additional analysis was conducted to evaluate any interaction effect of grade level and teacher experience on student learning.

Results from Current Study

This study found no statistically significant results but produced data trends that demonstrated some clinical significance. There was a trend of decreased negative behaviors and increased positive behaviors after the implementation of PATHS. There was a greater decrease in the pre-kindergarten mean frequency of negative behaviors than in the kindergarten population. However, there was a simultaneous increase in the kindergarten mean frequency of positive behaviors but no increase in the pre-kindergarten population. Results also indicated that the mean frequency of negative behaviors was lower in experienced teachers' classrooms than in inexperienced teachers'

classrooms. Additionally, there appeared to be an interaction effect between student grade level and teacher experience on the social-emotional development of children.

Implications

Effectiveness of Social-Emotional Skills Training

The first within-groups analysis indicated that there was no statistically significant difference in behavior ratings between baseline and the intervention of PATHS. However, there was a trend that negative behaviors decreased and positive behaviors increased after the intervention. Although the effect size is small and the trends non-significant, this can be a clinically significant difference to teachers as a small effect size can make a great practical difference in a classroom. A small number of decreases in negative behaviors by one student can have an observable impact in a classroom even though it is unlikely to show up in a statistical analysis. Similarly, a small simultaneous increase in positive behaviors by a small number of students can have a vast practical impact.

Impact of Student's Grade Level

The mixed factorial analysis found that there was a greater decrease in the pre-kindergarten mean frequency of negative behaviors than in the kindergarten population. However, there was a simultaneous increase in the kindergarten mean frequency of positive behaviors but no difference in the pre-kindergarten population. It is interesting to note that the total number of negative behaviors in the kindergarten classes both before and after the intervention were higher than those in the pre-kindergarten classes. These findings indicated that early intervention (i.e., starting social-emotional skills training in pre-kindergarten rather than in kindergarten) might improve student gains specifically in

the area of negative behaviors. It might also suggest that pre-kindergarten children simply have not learned to practice positive behaviors as frequently as older children. Another possible indication was that negative behaviors were not as strictly monitored in pre-kindergarten classes because younger children were simply not expected to behave as well as older children. Furthermore, they might not have been held up to as many rules and classroom structures as the kindergarten children were.

Interaction between Student's Grade Level and Teacher's Experience

According to the third set of analyses, students in classrooms with experienced teachers presented more positive behaviors and fewer negative behaviors when compared to students in classrooms of teachers with no experience. Trends also indicated that there might be an interaction effect between student grade and teacher experience that might be statistically significant with more reliable data. These results implied that teachers with even just observational experience with the implementation of a social-emotional development program could produce decreases in negative behaviors and increases in positive behaviors among their students. These differences could be expected to gain statistical significance with more hands-on experience as well as with a greater sample size. Another notable difference in behavior ratings between experienced and inexperienced teachers was that the latter group did not record any positive behaviors throughout the year. This could indicate that inexperienced teachers were not as aware of positive behaviors as they were of negative behaviors, which drew attention to the possibility that inexperienced teachers did not understand and thus simply ignored positive behaviors. This could lead to a lack of reinforcement for desirable behaviors and consequently a further reduction of positive behaviors. Another possibility is that

inexperienced teachers were not trained to recognize their own emotional competence and psychological load, which could negatively affect their judgment of and reaction to students' behaviors.

Statistical Significance

Overall, the findings in this study lack statistical significance but present trends that support the effectiveness of social-emotional development for children as well as the training of teachers to implement these programs. Even though only a small sample of students and behavior ratings could be evaluated, results demonstrated that there were noticeable intervention effects in student behaviors due to the implementation of PATHS. Additionally, although teachers' experience with the program was limited to only observation, notable trends that supported the interaction effects of student grade level and teacher experience were recognized. Many real-life factors in the classroom, program implementation, and data-collection process can impact the collection of reliable data and thus influence the statistical analyses of the data.

Limitations

Behavior Monitoring Methods

There were several notable limitations in the design and implementation of this study. Primarily, the gathering of data on student behaviors was variable in many ways. For instance, teachers designed their own behavior logs employing their own individual understanding of specific behaviors that warranted monitoring. This meant that some significant behaviors that contributed to children's social-emotional development were possibly not monitored. Some teachers might have focused only on highly disruptive behaviors and overtly prosocial behaviors while others reported less disruptive behaviors

and subtle positive behaviors. The teachers' behavior logs were then coded by graduate students in order to categorize the behavior ratings for data analyses. Through this two-step coding process, some data could have been lost, misunderstood, or misinterpreted, leading to less certainty in the interpretation of the data and its analyses.

Limited Data for Analysis

Another shortcoming of this study was that only a limited part of the collected data was useful for analyses. Even though the overall sample population was of a significant size, the final sample size when data analyses were run was rather small. Almost half the classes had to be excluded because little to no data were collected for those students. For example, there were only 58 students in experienced teachers' classrooms and 14 students in inexperienced teachers' classrooms for whom data could be reliably analyzed. Only classes with ten or more ratings over the year were included in this study, but most classes contained up to 15-20 students. Consequently, if the population sample sizes were small, the number of behavior ratings was even smaller. Many students did not receive any behavior rating throughout the year, and since data analyses compared classes rather than individual students, the frequencies were rather diluted across the sample and the effect sizes were rather small.

Program Implementation by Graduate Students

The implementation of the PATHS program by graduate students rather than by teachers was another limitation that possibly contributed to the statistically non-significant findings in this study. The graduate students carried out only one 25-minute session each week and the teachers were provided with materials for the continuation of the skills training for their students. However, the implementation the continuation was

not required or verified to have been carried out. This strategy was employed to increase teacher participation and adherence to the project by not requiring them to train extensively to implement PATHS or to relinquish much of their class time for this program. This was a limitation because PATHS was originally meant to be implemented by teachers or a school mental health professional, who would have more contact with the students, over a greater length of time and with more frequency. Instead, the reduced dosage and length of the implementation likely did not produce the full impact that the program was designed to impart.

Obscure Distinction between Behavior Ratings

Another limitation of this study was that the distinction between baseline and intervention ratings was obscured due to the timeline of the data collection. The teachers involved in this study rated student behaviors daily throughout the year both before and after the intervention semester. However, the data was collapsed to represent average student performance throughout each semester. Thus, some students did not have true baseline ratings while others did not have true post-intervention ratings. The baseline behavior ratings were representative of the ratings collected throughout the intervention semester while the intervention behavior ratings were representative of the ratings collected throughout the post-intervention semester. This limitation could bring more ambiguity to the data and its interpretation.

Future Recommendations

Increasing Program Dosage

There are several changes that future researchers in this subject could implement in order to conduct a more refined and reliable study. Increasing the program dosage in

various ways could strengthen the study. For instance, students could have PATHS lessons for three 25-minute sessions each week throughout the semester, which could solidify their learning and social-emotional gains at a greater pace. The program could also be implemented for an hour each week instead of for 25 minutes. When interspersed with diverse activities, this one-hour session could help children to solidify and generalize their learning. Another possibility is for teachers to implement a 25-minute session at any other time during the week in addition to the graduate students' 25-minute lessons. The general principle is that the more consistent the implementation of the program, the greater the opportunity for children to learn and develop socially and emotionally. This may be a difficult task to achieve as it requires increased teacher training and adherence. Nevertheless, having the teachers themselves to be more involved in the implementation of PATHS poses significant benefits for both student and teacher outcomes. One way to relieve the teachers' burden, if they themselves were to implement PATHS, is to have graduate students monitor student behaviors instead. This switch in roles could produce more reliable data as well since it separates the implementation from the data collection and analyses.

Behavior Monitoring Logs

Future studies in this subject may also benefit from implementing additional training for teachers in recognizing and recording different behaviors as well as utilizing more structured ways of recording student behaviors. One recommendation for a study of this type is to utilize uniform behavior logs so that questions such as which behaviors should be monitored and how each behavior is defined are not left to interpretation. A structured, standardized behavior log that is easy to use would increase the reliability of

the data collected. This would also ensure that behaviors monitored are grade-level appropriate, which is important since younger children may not have the same level of mastery of positive behaviors as older children do. Furthermore, standardized behavior logs and ratings could be compared more reliably between both student and teacher groups.

Clear Distinction between Behavior Ratings

The timeline for the data collected in future studies comparing baseline and intervention ratings should distinguish more clearly between baseline, intervention, and post-intervention ratings. It is recommended that behavior ratings be collected for at least three semesters per student or teacher so that their progress can be compared with more certainty. This would provide one semester of baseline behavior ratings, one semester of intervention, and one semester of post-intervention ratings. Behavior ratings can then be clearly defined to infer association and causation between intervention effects and student behaviors. With parental consent and IRB approval, it could also be beneficial to analyze data on individual students rather than on entire classes, but this would be difficult to achieve, and sample sizes may be too limited for a significant or generalizable study. On the other hand, behavior ratings could be collected for entire classes rather than for individual students, which may not only increase teacher compliance but also decrease the number of null ratings. This could positively impact the statistical significance of the study without sacrificing treatment or statistical integrity.

Different Sample Population

Another consideration for future studies comparing experienced and inexperienced teachers is to implement social-emotional programs in a different

population, specifically one with a higher frequency of negative behaviors. This could include children in certain behavioral programs or at-risk populations. One of the reasons for this is that in order for statistically significant results to be found, there must be a relatively high number of behavior ratings collected from a sizable sample population. This is a difficult task to accomplish, especially in a normal population, because the frequency of negative behaviors cannot be expected to rise limitlessly before students are expelled from the classroom. More crucially, while severely at-risk populations and children in behavioral programs may be more difficult to access, research into their social-emotional development is important as it has relevant and long-lasting impact for them. At-risk children have a greater need than most for social and emotional skills training, and providing training to the teachers who provide for this population serves the important purpose of equipping both teachers and students. It prepares teachers to contribute to the social-emotional development of students and teaches the students essential skills for a successful life. Furthermore, what is learned from them may be beneficial for preventative measures in the future design and implementation of social-emotional development programs.

Conclusion

The current study focused on the impact of social and emotional learning programs on young children based on their grade level and on teachers' experience with the program. This research evaluated the differences in outcomes between children at the pre-kindergarten and kindergarten levels. This study also evaluated the differences in the effectiveness of PATHS when implemented alongside teachers who had previous experience with the curriculum versus teachers without the experience. The goal of this

research was to inform and guide clinicians toward a better understanding, development, and support of the elements that surround the social and emotional improvement of young students. Trends that emerged from this study included intervention effects of PATHS and interaction effects based on student grade level and teacher experience. While these trends were not found to be statistically significant, they should be considered as clinically significant and taken into consideration when implementing social-emotional skills training for young children. This study added to the current literature in that it investigated the effects of student grade level and teacher experience on the efficacy of the implementation of social-emotional skills training.

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APPENDIX A

Institutional Review Board Approval Letter

ABILENE CHRISTIAN UNIVERSITY
Educating Students for Christian Service and Leadership Throughout the World

Office of Research and Sponsored Programs
320 Hardin Administration Building, ACU Box 29103, Abilene, Texas 79699-9103
325-674-2885

August 17, 2018

Charles Wadlington

Department of Psychology

Box 28011, ACU

Dear Charles,

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled
"Implementation of the PATHS program at an Early Childhood campus"

was approved by expedited review (Category 7) on 8/16/2018 (IRB # 16-061). Upon completion of this study, please submit the Inactivation Request Form within 30 days of study completion.

If you wish to make any changes to this study, including but not limited to changes in study personnel, number of participants recruited, changes to the consent form or process, and/or changes in overall methodology, please complete the Study Amendment Request Form.

If any problems develop with the study, including any unanticipated events that may change the risk profile of your study or if there were any unapproved changes in your protocol, please inform the Office of Research and Sponsored Programs and the IRB promptly using the Unanticipated Events/Noncompliance Form.

I wish you well with your work.

Sincerely,

Megan Roth

Megan Roth, Ph.D.
Director of Research and Sponsored Programs