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A Study of Empathy and Teacher Self-Efficacy Among Preservice Early Childhood Educators

A thesis

presented to

the faculty of the Department of Early Childhood Education

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Master of Arts in Early Childhood Education

by

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August 2020

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ABSTRACT

A Study of Empathy and Teacher Self-Efficacy Among Preservice Early Childhood Educators

by

Amy Wilson

The present study sought to examine empathy and teacher self-efficacy among preservice early childhood teachers. Participants were selected from two courses in East Tennessee State University's early childhood education program. A total of 18 students from their second year of study and 33 students from their fourth year of study participated. This totaled to 51 participants (92.2 % white, 2% African American and 2% Native American; 96.1% female, 3.9% male). An online survey that contained three sections, background information, the Interpersonal Reactivity Index, and the Teacher Sense of Efficacy Scale was sent to the participants. After online surveys were completed, the data was analyzed to observe the relationship between the four empathy subscales (Perspective-Taking, Fantasy, Personal Distress, and Empathic Concern) and total self-efficacy among both groups of students. Results indicated a significant positive relationship between Perspective-taking and total self-efficacy among students in their fourth year of study. The results also revealed a significant difference in the two groups self-efficacy scores. Students in their second year of study had higher self-efficacy then students in their fourth year.

TABLE OF CONTENTS

	Page
ABSTRACT.....	2
Chapter	
1. INTRODUCTION.....	7
Empathy.....	7
Self-Efficacy.....	7
Statement of the Problem.....	8
Research Questions.....	9
Hypotheses.....	9
Limitations.....	10
Definition of Terms.....	11
2. LITERATURE REVIEW.....	13
Empathy.....	13
Affective Empathy.....	13
Cognitive Empathy.....	14
Self-Reflection.....	15
Empathy in Education.....	16
Classroom Relationships.....	16
Diversity.....	17
Teacher Preparation for Bullying Prevention.....	18
Predictors of Empathy in Teachers.....	19
Gender.....	20

Prior Experience.....	20
Teacher Training.....	22
Self-Efficacy.....	23
Teacher Self-Efficacy.....	24
Job Burnout.....	24
Job Satisfaction.....	26
Student Characteristics.....	26
Student Academic Achievement.....	26
Student Behaviors.....	27
Sources of Self-Efficacy.....	28
Performance Activities.....	28
Vicarious Experiences.....	28
Verbal Persuasion.....	29
Emotional Arousal.....	30
Relationship Between Empathy and Teacher Self-Efficacy.....	31
Levels of Teacher Experience.....	33
Empathy.....	33
Teacher Self-Efficacy.....	34
Summary.....	36
3. METHODS.....	37
Introduction.....	37
Participants.....	38
Instruments.....	38

Demographic Information.....	38
Interpersonal Reactivity Index.....	39
Reliability and Validity of the IRI.....	39
Scoring Procedure for the IRI.....	40
Teacher Sense of Efficacy Scale.....	40
Reliability and Validity of the TSES.....	41
Using the TSES with Preservice Teachers.....	42
Procedure.....	42
Data Analysis.....	44
4. RESULTS.....	47
Demographic Characteristics of the Participants.....	47
Results of Inferential Statistics.....	49
The Relationship Between Empathy and Teacher Self-Efficacy.....	50
The Comparison of Second- and Fourth-Year Empathy Levels and Self- efficacy	
Beliefs.....	51
5. DISCUSSION.....	53
Introduction.....	53
Summary of the Results.....	54
Significance of the Study.....	55
Limitations.....	58
Future Implications.....	60
Practice Implications.....	60
Future Research.....	62

REFERENCES.....	65
APPENDICES.....	71
Appendix A: The Interpersonal Reactivity Index.....	71
Appendix B: The Teacher Self-Efficacy Scale.....	73
VITA.....	74

CHAPTER 1

INTRODUCTION

The quality of early childhood teacher education plays a large role in the future success of teachers. As diversity among students and families increases, teacher education programs must equip teachers to adapt to a variety of children's educational and emotional needs (Goroshit & Hen, 2016). Teachers need a larger tool belt to rise to new tasks and challenges. Research has previously focused on influencing teacher effectiveness through identifying factors that improve their knowledge and skills, while seeming to overlook the importance of emotional competence (Gavora, 2010). What are some personal characteristics that can help teachers tackle the difficulties they face in their profession?

Empathy

One important teacher characteristic is empathy. Empathy is the ability to recognize and connect to other people's emotions without judgement (Rogers, 1975). Some research has connected empathy to increases in teachers' ability to develop relationships with families and students (Roberts, 2017), intervene in bullying (Huang, Lui, & Chen, 2018), and work with diverse students (Cole, Case, Rios, & Curtin, 2011). Empathy enables teachers to effectively teach moral development and empathic behaviors to students (Bouton, 2016). Coursework on diversity and self-reflection can increase empathy among preservice teachers (Arizaga, Bauman, Waldo, & Castellanos, 2005; Boyer, 2010). As research focuses on the emotional competence of educators, empathy is one factor to consider.

Self-Efficacy

Another useful characteristic for teachers to possess is high levels of teacher self-efficacy. Self-efficacy is the personal belief that a person can do certain actions to lead to

specific outcomes and teacher self-efficacy specifically refers to the personal beliefs that teachers have about their ability to successfully teach (Gavora, 2010). Prior research has identified high teacher self-efficacy as a buffer against job burnout (Peck, Maude, & Brotherson, 2015; Schwarzer & Hallum, 2008). Further, high teacher self-efficacy is related to job satisfaction (Caprara, Barbarnelli, Steca, & Malone, 2006). Research also links high levels of teacher self-efficacy to higher student achievement (Demir, 2016). Teachers with high levels of empathy and efficacy have high levels of prosocial beliefs that help them create a prosocial classroom (Garner, 2017). Alongside empathy, research that focuses on teacher's emotional competency can also consider investigating teacher self-efficacy.

Statement of the Problem

Both high levels of empathy and teacher self-efficacy have been linked to teachers' successes in the classroom. Can teacher preparation programs increase these qualities among future teachers? How do these two teacher qualities, empathy and self-efficacy, relate to each other? Goroshit and Hen (2016) found that high levels of teacher self-efficacy can increase teachers' empathy. If future research discovers variables that influence teachers' self-efficacy, perhaps there will also be an effect on their empathy levels. It is important to understand the relationship between teacher empathy and teacher self-efficacy. Because there is limited research examining the relationship between empathy and self-efficacy among teachers (Goroshit & Hen, 2016), the present study seeks to further examine this relationship among preservice teachers. Former research has also examined the relationship between teachers' preparation and experience in the classroom and their levels of empathy (Goble, Horn, Atanasov, Williamson, & Choi, 2015; Huang et al., 2018). Perhaps teachers with more education and experiences in the classroom have higher levels of empathy. Do teachers' empathy levels increase as they gain

practical experiences? Prior research has also examined the effect of educational preparation and classroom experiences on teachers' self-efficacy beliefs. These studies suggest that experiences in classrooms do have a positive effect on self-efficacy beliefs (Bullock, Coplan, & Bosacki, 2015; Demir, 2016; Fives & Buehl, 2010).

Research Questions

The purpose of this study is to identify the relationship between empathy and self-efficacy among preservice early childhood teachers and compare empathy and self-efficacy among preservice early childhood teachers during different semesters in a teacher education program. The present study specifically asks the questions:

1. What is the relationship between empathy levels and teacher self-efficacy beliefs among early childhood education majors at East Tennessee State University during their second year?
2. What is the relationship between empathy levels and teacher self-efficacy beliefs among early childhood education majors at East Tennessee State University during their fourth year?
3. How do second year early childhood education major students' empathy levels compare to fourth year early childhood education major students' empathy levels?
4. How do second year early childhood education major students' teacher self-efficacy beliefs compare to fourth year early childhood education major students' teacher self-efficacy beliefs?

Hypotheses

There are four hypotheses that were created based on the research questions.

1. It is hypothesized that there will be a positive relationship between preservice teachers' empathy levels and self-efficacy beliefs during their second year.
Preservice teachers with high self-efficacy beliefs will also have high levels of empathy.
2. It is hypothesized that there will be a positive relationship between preservice teachers' empathy levels and self-efficacy beliefs during their fourth year.
Preservice teachers with high self-efficacy beliefs will also have high levels of empathy.
3. It is hypothesized that preservice teachers in their fourth year will have higher levels of empathy than preservice teachers in their second year.
4. It is hypothesized that preservice teachers in their fourth year will have higher levels of self-efficacy than preservice teachers in their second year.

Limitations

The current study only included students in East Tennessee State University's Department of Early Childhood Education. It included students taking classes during their second and fourth years of the undergraduate degree. Data was collected only from students enrolled in early childhood education courses during the fall of 2019. Another limitation of the current study is the use of two separate groups of students rather than following the same group of students throughout their time in the program. Data was collected from one group of students during their second year, while at the same time, data was collected from a second group of students during their fourth year.

Definitions of Terms

Affective empathy: Also referred to as emotional empathy, is the emotional aspect of empathy. It includes feeling another person's emotions (Gruen & Mendelsohn, 1986).

Cognitive empathy: Cognitive empathy and perspective-taking is used interchangeably, throughout the study. These two terms refer to the mental aspect of empathy. It is the process of one person placing himself or herself into another person's situation (Preston et al., 2007).

Emotional arousal: Strong or overwhelming feelings that affect someone's self-efficacy beliefs. This is a source of self-efficacy beliefs (Bandura, 1977).

Fourth-year students: Refers to early childhood education majors who are in their fourth year of undergraduate studies in East Tennessee State University's Early Childhood Education program. These students have already completed three years of undergraduate studies, including two years of the early childhood education program.

Mastery experiences: Activities that someone feels competent and able to complete because he/she has mastered the skills needed to accomplish that task. Mastery is gained through successfully accomplishing goals and activities. These experiences are sources of self-efficacy beliefs (Bandura, 1977).

Performance activities: Refers to any experience where someone feels that they were successful in accomplishing what they attempted to complete. As someone experiences more and more performance activities, they might gain mastery experiences. These experiences are sources of self-efficacy beliefs (Bandura, 1977).

PreK-3rd grade licensure concentration: Refers to students in the early childhood education department who have chosen the PreK-3rd grade licensure concentration. These are

students who are pursuing a teaching license for grades PreK- 3rd grade at the end of their program.

Preservice teachers: Refers to students who are enrolled in a teaching program that prepares them to become teachers in a classroom. These are students preparing to be professionals in the field of education.

Second-year students: Refers to early childhood education majors who are in their second year of undergraduate study. These students have completed one full year of undergraduate studies but are beginning their first semester of East Tennessee State University's early childhood education program.

Verbal persuasion: Words of encouragement that persuade someone to take a certain action. This is a source of self-efficacy (Bandura, 1977).

Vicarious experiences: Any experience where someone views another person accomplishing a task. These experiences are sources of self-efficacy (Bandura, 1977).

CHAPTER 2

LITERATURE REVIEW

Empathy

Empathy is an essential skill for humans to possess (Peck et al., 2014). People commonly equate empathy with other related traits such as compassion or kindness. Although these are positive traits to possess, empathy encompasses more (Bouton, 2016). So, what is empathy? Empathy is an interpersonal skill that helps people connect and understand each other (Peck et al., 2014). Psychologist Carl Rogers created a definition of empathy, and it is still in use today. Through counseling experiences, he describes empathy as the process of being sensitive to another person's changing emotions without judgement. Rogers (1975) states that empathy is "temporarily living in his or her life" (p.4). Empathy includes listening, understanding, and completely accepting another person (Rogers, 1975). Empathy is a complex trait that contains two main components: affective and cognitive components (Kaya, 2016). Affective empathy refers to an involuntary emotional sensitivity towards other people who appear to be in distress. Emotional sensitivity means that a person easily recognizes and feels emotions. On the other hand, cognitive empathy refers to a cognitive decision to take another's perspective. Theories of empathy development propose that empathy begins as affective empathy and develops into the more complex form of cognitive empathy (Preston et al., 2007). It is important to understand these components of empathy, and how they affect preservice teachers as they prepare for a career in a classroom.

Affective Empathy

First, affective empathy, or emotional reactivity, is the experience of feeling another person's emotions (Bouton, 2016). The terms affective empathy, emotional reactivity, and

emotional empathy are interchangeable when defining this component of empathy. Unlike sympathy, which is a feeling of concern or compassion, emotional empathy is a process of matching emotions between the observer and the other person (Gruen & Mendelsohn, 1986). Affective empathy contains two aspects: personal distress and empathic concern. Observing another person in distress can cause the observer to feel negative emotions often referred to as personal distress. Personal distress causes observers to turn inward by focusing their attention on their own feelings (Cassels, Chan, Chung, & Birch, 2010). Personal distress can be difficult to manage and often leads the observer away from helping other people because the observer's focus has shifted toward his/her own distress instead of the other person's distress (Gladstein, 1983). On the other hand, empathic concern causes the observer to feel concern for the other person in the situation. The focus then shifts from the observer to the person in distress and is more likely to lead the observer to prosocial behavior toward the distressed person (Cassels et al., 2010). The levels of both personal distress and empathic concern affect the likelihood that the observer will help another person (Warren, 2013).

Cognitive Empathy

Cognitive empathy and perspective-taking are terms used to describe the same process. Perspective-taking is a brain process where an individual projects himself or herself into another person's story for a moment. This allows individuals to feel the other person's emotions as if they were their own (Preston et al., 2007). Perspective-taking is an intentional choice that requires a person to direct attention toward their own self and another person (Kaya, 2016). The observer must focus on the other person by imagining the other person's situation and the events that led to that situation. The observer must also direct attention toward himself or herself by

imagining the same situation and recognizing his or her own emotions as if he or she were in that situation (Batson et al., 1996).

Self-reflection. Self-reflection is the cognitive process of remembering and developing insight into one's own past experiences, emotions, and thoughts (Gerace, Day, Casey, & Mohr, 2017). Self-reflection is important in the development of cognitive empathy because cognitive empathy requires self-information. Perspective-taking is easier when someone can reflect on his or her own experiences (Gerace et al., 2017). Preston et al. (2007) conducted a brain imaging study to compare participants' self-reported emotional intensity and the brain's activity when asked to imagine different fear-inducing scenarios. In this study, two experiments took place. During the first experiment, the researchers instructed the participants to imagine a fearful personal situation. As the participants imagined a personal experience, the researchers collected neuroimages of the participants' brains. After this, the participants reported the intensity of their emotions related to the recall of their personal experience. Next, the researchers instructed the participants to select and imagine a fearful non-personal scenario from a list of 14 scenarios developed by the researchers. The researchers asked the participants to select the non-personal scenario that they could relate to the best. After imagining the scenario, the participants reported their emotional intensity again. For the second experiment, the researchers instructed the participants to select a scenario from a list of 14 scenarios that they could relate to the least. The researchers collected neuroimages while the participants imagined the selected scenario. After imagining a scenario that they related to the least, the participants reported their emotional intensity. The researchers then viewed the neuroimages for all three imaging sessions. The findings revealed that brain images and self-reported emotional states were similar for the participants' recall of a personal experience and imagining a scenario they related to the most.

Brain images and emotional states were not similar between recalling a personal experience and imagining the scenario they related to the least. This finding suggests that people feel and experience the perspective of another person better when they have been in a similar situation (Preston et al., 2007). Being able to make personal connections to someone else's experiences and reflect upon those experiences creates an easier avenue to cognitive empathy.

Empathy in Education

Although empathy extends across multiple fields such as psychology, medicine, and human services, there are some unique characteristics of empathic expression in the field of education. In both counseling and medical situations, professionals typically express empathy in a one-on-one setting between the counselor and the client or the doctor and the patient. Teachers have a different experience than these professionals when expressing empathy. A classroom with many children requires a teacher to be aware of multiple children's individual emotions at one time and respond with care, while still maintaining control over the entire classroom. Rather than focusing on one other person, a teacher must be aware of and empathic toward an entire classroom of students (Bouton, 2016).

Classroom relationships. Empathy is an important trait for teachers to possess for a number of reasons. Teacher empathy is necessary to facilitate healthy relationships. It plays a large role in developing healthy relationships within the classroom, both teacher-student relationships and teacher-family relationships (Peck et al., 2014). Roberts (2017) discusses the importance of empathy in building successful relationships with families. An educator will encounter a diverse range of families. To properly connect and gain a family's trust, a teacher must practice empathy. Through interviews with 33 early childhood teachers about their experiences with vulnerable children and families, teachers conveyed that empathy is crucial

because it provides an educator with a greater willingness to engage in learning experiences about people of different cultures. This willingness provides a teacher with a basis for strong relationships with a variety of families. Strong relationships between teachers and families allow families to open up about their needs and increase involvement in decision making about their child and classroom engagement (Roberts, 2017).

Diversity. Not only does empathy enhance relationships in the classroom, but it increases people's openness to different cultures. One study examined the relationship between cognitive empathy and students' willingness to promote diversity. This study also examined how diversity courses influenced freshmen students' beliefs and attitudes about racism (Cole et al., 2011). A sample of 173 first semester undergraduate students were divided into a control group and an intervention group. The intervention group enrolled in diversity courses that met the university's race and ethnicity course requirement, while the control group was not exposed to these courses. All the students took a survey at the beginning of the semester and at the end of the semester. The survey included several sections that analyzed beliefs about race. The survey also included a section that examined perspective-taking skills using 7 items from the Perspective-Taking subscale of the Interpersonal Reactivity Index (IRI). After analyzing the students' responses, the results indicated that perspective-taking skills were not related to whether a student took the diversity course or not. The findings did, however, reveal that high perspective-taking skills among both the control group and the intervention group were linked to a greater willingness to promote diversity. Regardless of taking the course, students' level of perspective-taking skills had an effect on their willingness to promote and learn about diversity (Cole et al., 2011).

Not only does empathy promote a willingness to learn about diversity but learning about diverse cultures can also give preservice teachers an opportunity to increase their perspective-

taking skills. A qualitative study conducted by Warren (2013) explored four white female high school teachers' interactions with black male students. The aim of this study was to examine the benefits of empathy in creating relationships between culturally diverse teachers and students. Through observations, three themes related to empathetic teachers appeared: risk taking, community and trust building, and proactive interactions. When teachers practiced empathy toward their diverse students, they enhanced their relationship with those students by actively taking the students' perspective. This helped the teachers better understand the students' culture and background. Empathy opened up teachers' willingness to adjust and violate social norms in favor of positive student outcomes. It also helped teachers take into account students' characteristics to inform instructional practice as well as advocate for individual students' needs and interests (Warren, 2013). Being able to take the perspective of a culturally different student enables teachers to understand their individual students, which informs their classroom practices with students.

Teacher preparation for bullying prevention. Several research studies demonstrated the importance of empathy in preparing educators to combat bullying (Craig, Henderson, & Murphy, 2000; Huang et al., 2018). Bullying is defined as any aggression, whether physical, relational, or verbal, that is meant to harm, isolate, or humiliate someone. Because bullying occurs in the preschool classroom, it is a problem that early childhood educators need to be prepared to tackle (Huang et al., 2018). A teacher's personal beliefs about bullying affect the likelihood that intervention will occur. Other research has found that empathy may affect how teachers perceive and identify bullying as well as respond to bullying scenarios. For example, Craig et al. (2000) found that preservice teachers with higher levels of empathy were more likely to identify bullying and perceive its seriousness, regardless of the type of aggression. This perception is

important because some forms of aggression are less overt but still need intervention. The researchers also found that teachers with high empathy levels were more likely to intervene when they witnessed bullying scenarios. Huang et al. (2018) conducted a study to observe the relationship between preservice preschool teachers' responses to physical, verbal, and relational bullying and their levels of cognitive and emotional empathy. The researchers also examined the participants' year of study (freshmen, sophomore, junior, and senior). The researchers administered surveys to a sample of Chinese undergraduate students to assess empathy and responses to bullying scenarios. To measure the students' responses to bullying, the participants took a questionnaire containing six stories that described different bullying scenarios. After reading a scenario, the participants were required to answer three questions that examined the severity of the incident, the amount of sympathy the participant feels, and their likelihood to intervene. The participants also took a Chinese version of the Interpersonal Reactivity Index (IRI) to measure their level of cognitive and affective empathy. This study did not reveal any significance between cognitive empathy and bullying intervention but did find significant differences among affective empathy and bullying intervention. Participants with high levels of emotional empathy showed greater sympathy for the victim in the scenario. On the other hand, participants with low levels of emotional empathy showed a decrease in sympathy towards the victim in the scenario. Teachers with high emotional empathy are more likely to intervene when they view bullying (Huang et al., 2018).

Predictors of Empathy in Teachers

Several other factors can affect people's empathy. Research has revealed how different factors can affect a teacher's empathy. A teacher's gender has a significant effect on teacher's empathy levels (Kaya, 2016). Both prior experiences and the type of training that a teacher

receives can also affect a teacher's empathy toward others (Arizaga et al., 2005; Eklund, Andersson-Straburg, & Hansen, 2009).

Gender. Studies have shown that different factors affect the levels of empathy in teachers. One of these factors is gender. Gender appears to have a significant effect on empathy levels among teachers. Kaya (2016) surveyed 87 female and 62 male preservice social studies teachers in Turkey to determine the relationship between gender, age, membership in a school social club and empathy levels. This study revealed that females score significantly higher in emotional reactivity than males. Emotional reactivity is sensitivity to an event that leads to empathic concern (Kaya, 2016). According to these findings, females have a higher tendency to experience emotional sensitivity toward another person than males (Kaya, 2016).

Another study examined different characteristics of preservice preschool teachers and their empathy levels (Ahmetoglu & Acar, 2016). This study found a significant difference in empathy levels between men and women. Turkish preservice early childhood teachers participated by completing surveys that examined the relationships between personal characteristics, social competence, empathy and communication skills. Among the findings, empathy levels were significantly correlated with gender. Females had higher empathy levels than male preschool teachers (Ahmetoglu & Acar, 2016).

Prior experience. Another predictor of empathy level are prior experiences. Batson et al. (1996) conducted a study to examine the relationship between a prior experience and empathy toward other people who are experiencing a similar situation. The researchers produced an experimental situation where an actor performed a difficult task and pretended to receive an electrical shock when he or she made a mistake. The actor was the same for each participants' observation. Although the participants were deceptively informed that the actor was another

participant who was assigned the role of the worker, no participants actually performed the difficult task. The researchers split the participants into a prior experience group and a no prior experience group. The participants were told that they were assigned to one of two groups: a worker or an observer. The participants without a prior experience observed the worker, who was actually the actor, perform a difficult task and receive shocks when mistakes were made. The researchers told the second group that they were chosen to be the worker. Before beginning the task, the researchers explained that there was a mistake. The participants would actually observe instead. This deception created a feeling of similarity between the observer and the worker because the participants once believed that they would be the worker who would receive the electrical shocks for mistakes. Because of this belief, the prior experience group could easily imagine the situation as if they had to perform the task. After both groups observed the worker (actor) receive electric shocks for each mistake, the participants reported their own level of empathy and personal distress. The researchers compared the reports from both groups. For women, prior experience increased their reported empathy and distress. On the other hand, men with prior experience reported lower levels of empathy (Batson et al., 1996).

Eklund et al. (2009) examined prior experience by studying the difference between generally similar experiences and concretely similar experiences effect on empathy levels. An example of general similarity in this study is the general feeling of fear, whereas concrete similarity is a certain fear, such as the fear of snakes. A sample of undergraduate students and professors read four fictitious stories about fear and loss. They were asked to rate how similar each story was to their own personal experiences. The concreteness of the similarity between the participant's experiences and the character's experience in the story affected empathy. A self-report scale was used to measure empathy. The findings indicated that more concrete similar

experiences revealed a significantly higher effect on empathy levels than those that were more general. Similar prior experiences increase a person's empathy levels (Eklund et al., 2009).

Teacher training. As cultural diversity increases, empathy provides a hand up in building relationships with students (Warren, 2013). As teachers' empathy develops from emotional empathy to a more learned cognitive empathy, they can develop skills to self-reflect and take on other perspectives. Teachers need to learn ways to develop these more nuanced skills. Teacher education can play a role through developing coursework that enhances these abilities and increases empathy levels among preservice teachers. Arizaga et al. (2005) found that after taking a course on multicultural relationship enhancement, preservice teachers revealed higher empathic listening skills in both conflictual and non-conflictual situations. This shows that learning effective communication skills can help teachers increase their empathy towards diverse families and therefore create stronger relationships (Arizaga et al., 2005). Labbo (2007) created an undergraduate assignment to produce greater levels of cultural competence and empathy among her undergraduate preservice teachers. After the students participated in cultural self-reflection and reading about children from other cultures, Labbo (2007) reported an increase in the students' empathic awareness.

Boyer (2010) found similar results in a study that explored 180 reflective essays on the process of learning new information. Undergraduate education students participated in this study by writing reflective essays on diverse learning experiences. This process of self-reflection generated feelings of empathy toward those in difficult learning processes. The experience of learning something new and reflecting on it gave the participants the ability to take on the perspective of their future students as they struggle through the learning process (Boyer, 2010). Teacher education appears to have an impact on cognitive empathy. When teacher education

programs teach preservice teachers how to reflect on their own practice and take on the perspectives of others, preservice teachers can develop a pattern of empathic thinking. This shows the importance of teacher education in developing future empathic teachers.

Self-Efficacy

Bandura (1986) defines self-efficacy using his social cognitive theory. Bandura (1977) paired cognitive processes with performance-based mastery to create a clear human attribute. Self-efficacy is a personal judgment based on various cognitive processes (Bandura, 1986). It is the belief that one is able to “organize and execute a certain task” (Gavora, 2010, p. 2). This belief influences thoughts, actions, and feelings (Caprara, Alessandri, di Guinta, Panerai, & Eisenberg, 2010). Schwarzer and Hallum (2008) state that the distinction between self-efficacy beliefs and other similar self-concepts is that it is a functioning construct that is closely related to future behaviors and actual action, and it implies internal attribution. Internal attribution is the belief that the cause for certain events came from internal or personal sources rather than external situations (Schwarzer & Hallum, 2008). Bandura defines self-efficacy using two components. The first is efficacy expectation, which is a belief that one has the required skills to produce a certain outcome. The second is outcome expectancy, which is the belief that certain behaviors will lead to certain outcomes (Lightsey, 1999). Both of these components are crucial for successful results (Gavora, 2010). Self-efficacy beliefs play a role in both motivation and perseverance. First, self-efficacy beliefs affect motivation, therefore playing an instrumental role in whether certain behaviors or actions will occur and persist (Schwarzer & Hallum, 2008). Motivation is the cognitive ability to perceive a future consequence leading to the activation and persistence of a behavior (Bandura, 1977). Second, perceived self-efficacy can determine choice of action as well as the mechanisms needed to cope after the task has been initiated (Bandura,

1977). People with higher levels of self-efficacy have higher levels of perseverance to complete a task (Gavora, 2010). Because efficacy is based on competence and ability, people with high self-efficacy will decide to initiate more difficult tasks and invest the time and effort needed to reach completion (Goroshit & Hen, 2016). High self-efficacy leads people to set higher goals and perceive their abilities with optimism (Schwarzer & Hallum, 2008). On the other hand, people with low self-efficacy often feel helpless and are more likely to engage in pessimistic thinking about their performances leading to lower motivation to engage in difficult tasks (Schwarzer & Hallum, 2008).

Teacher Self-Efficacy

Self-efficacy beliefs can be broken down into more narrow constructs. Bandura (1986) wrote, “self-efficacy in psychological functioning is best elucidated by self-efficacy measures tailored to a particular domain of functions” (p. 372). Creating a specific domain to examine self-efficacy does not reduce the generality of the variable (Bandura, 1986). One of these specific domains is teacher self-efficacy. Some teachers appear to have the ability to rise above the stressors and difficulties of the classroom, while others buckle under the pressure. This difference may occur because of teacher self-efficacy levels (Schwarzer & Hallum, 2008). Teacher self-efficacy is the belief that teachers have in their ability to organize and implement strategies into the classroom as well as influence children's learning (Goroshit & Hen, 2016). It can influence the likelihood that a teacher will try new ideas, set goals, and persist in reaching the goal, and be enthusiastic about his or her profession (Goroshit & Hen, 2016).

Job burnout. Research has explored how teachers' level of self-efficacy influences both themselves and the classrooms they manage. One difficulty that teachers face is job burnout. Burnout occurs because of emotional exhaustion from repeated exposure to difficult social

situations (Schwarzer & Hallum, 2008). Teaching is a high stress profession, and teachers with high levels of stress and poor coping strategies are more likely to experience burnout (Herman, Hickmon-Rosa, & Reinke, 2018). Teachers can increase efficacy beliefs to deal with job stress and, therefore, avoid burnout. Schwarzer and Hallum (2008) found that high self-efficacy is a buffer against job stress and helps teachers avoid burnout. Teachers with a positive view of their professional performance can better protect themselves from job stressors. Teachers who believe in the effectiveness of their classroom management abilities are more likely to risk implementing new, more effective, classroom practices. Better classroom practices lead to positive student achievement outcomes and positive student achievement increase a teacher's feelings of efficacy, resulting in a positive feedback loop (Herman et al., 2018). Schwarzer and Hallum (2008) conducted a study where teachers from both Syria and Germany completed questionnaires examining the relationship between teacher self-efficacy and burnout. They used job stress as a mediator. The researchers conducted two studies that were a year apart to examine the relationship between self-efficacy and job burnout longitudinally. In the first study, the researchers surveyed 1,203 teachers and conducted a mediation analysis. The findings revealed that low self-efficacy is related to high job stress. For the second sample, 458 German teachers, from the original sample of teachers, responded to the original questionnaire. During the year in between studies, the teachers took part in a school innovation project about efficacious schools. Both studies had similar results. The second study further confirmed the original findings that showed that low self-efficacy was related to high job stress, which in turn was a predictor of teacher burnout. On the flip side, high self-efficacy reduces the negative effects of job stress, which reduces the likelihood of burnout. The data revealed that high teacher self-efficacy can prevent burnout by curbing the negative effects of job stress (Schwarzer & Hallum, 2008).

Job satisfaction. Self-efficacy beliefs affect job satisfaction among teachers. High teacher self-efficacy has been positively correlated with job satisfaction (Caprara et al., 2006). Sass, Seal, and Martin (2011) conducted a study to examine job dissatisfaction among 479 teachers from three districts in the southwest U.S. The participants responded to an online survey about teacher self-efficacy, social support, job stressors, and job satisfaction. This survey utilized the student engagement subscale of Tschannen-Moran and Hoy's (2001) Teacher's Sense of Self-Efficacy Scale. After collecting the data, the researchers discovered a strong positive correlation between teacher efficacy for student engagement and support from superiors. Teachers who felt strongly supported by their supervisors reported higher self-efficacy. High self-efficacy reduced stressors related to student engagement, which in turn reduced job dissatisfaction. This means that when teachers feel support from their supervisors and have high self-efficacy beliefs, they are more likely to be satisfied with their job (Sass et al., 2011).

Student Characteristics

Research also connects teacher self-efficacy to changes in the classroom (Caprara et al., 2006). Because teachers with high self-efficacy tend to be more enthusiastic, open to implementing new ideas to help their students, and organized to reach their goals, these teachers have a positive influence on their students (Caprara et al., 2006). Past research has revealed a positive relationship between teacher self-efficacy levels and student achievement, performance, motivation, behavior, and self-efficacy (Demir, 2016; Herman et al., 2018).

Student academic achievement. Caprara et al. (2006) examined how junior high school teachers' self-efficacy affected their students' achievement levels. The researchers collected the students' academic scores at the beginning and end of the school year to assess the students' overall academic performance. In the middle of the year, the researchers gave a sample of 102

Italian teachers a self-report questionnaire to determine their self-efficacy beliefs. Analysis indicated that there was a positive significant relationship between teachers' self-efficacy and students' academic scores. The researchers conclude that high teacher self-efficacy is correlated with high student academic achievement (Caprara et al., 2006).

Another study revealed a link between collective teacher self-efficacy and student achievement among a sample of 8th grade students (Tschannen-Moran & Barr, 2004). Collective efficacy is an overall group characteristic of a whole school. A highly efficacious school believes that the faculty as a whole can influence how well students learn. The results revealed a positive correlation between collective teacher efficacy and student achievement in math, English, and writing tests (Tschannen-Moran & Barr, 2004). These studies indicate that both individual teacher self-efficacy and a school's efficacy as a whole have an impact on students' academic achievement.

Student behaviors. Previous research has also discovered a relationship between teacher self-efficacy and student behaviors (Herman et al., 2018). Herman et al. (2018) developed four different teacher groups (stressed/ low coping, stressed/ moderate coping, stressed/ high coping, and well-adjusted) using a sample of 121 kindergarten - 4th grade teachers from a large ongoing teacher classroom management study. The researchers developed the teacher groups by analyzing information collected from teachers' self-report measures of stress, coping skills, burnout, and self-efficacy. The teacher groups were linked to teacher-reported student behavioral outcomes. The findings revealed that high student behavior problems, disruptive behavior, and concentration problems were most present among the high stress/ low coping teacher group. On the other hand, the well-adjusted teacher group had the highest mean scores for student prosocial

behaviors. These findings suggest that high teacher efficacy does have a positive effect on students' behavior (Herman et al., 2018).

Sources of Self-Efficacy

Bandura's (1977) self-efficacy theory describes four sources of information that affect people's belief that they can successfully produce behaviors that will help them reach their desired outcome. These four sources are performance activities, vicarious experiences, verbal persuasion, and emotional arousal. Gavora (2010) describes these four sources as they relate specifically to teacher self-efficacy.

Performance activities. One source of information that affects self-efficacy is performance activities. If people are successful in a specific task, they tend to believe they will be successful in that task in the future (Bandura, 1977). For teachers, when they develop effective teaching strategies, they feel as though they are competent teachers. This feeling of mastery in the classroom will lead to higher self-efficacy. On the other hand, if teachers continually perceive their teaching strategies as failing, they will have lower levels of self-efficacy (Gavora, 2010). For example, when teachers set up experiences for the students and the students appear engaged, teachers feel more competent in their ability to engage the students with these experiences again in the future.

Vicarious experiences. The second activity that informs someone's level of self-efficacy is vicarious experiences. When someone sees another person accomplishing a difficult task without a negative consequence, the observer may expect to accomplish a similar task if he/she also attempts that task (Bandura, 1977). In education, teachers or preservice teachers can be given opportunities to observe successful colleagues. This, in turn, may increase their own self-efficacy through creating an expectation of their own success (Gavora, 2010). Classroom

experience has been shown to increase self-efficacy among preservice teachers. Liaw (2009) explored the impact of classroom experience among 26 preservice teachers from Taiwan. These teachers were part of a university teaching program that partnered with a local elementary school where the participants spent time in a real teaching context. The researchers collected data about the participant's self-efficacy using Tschannen-Moran and Hoy's Teacher's Sense of Efficacy Scale (TSES) as well as through interviews and teacher reflections. After spending time in a real classroom, preservice teachers reported increased confidence in their ability to motivate and engage students, therefore increasing their teacher self-efficacy. Classroom experiences provided these teachers with an opportunity to notice potential future classroom difficulties and see how more experienced teachers handled these issues (Liaw, 2009). Observing others' success can help teachers feel more confident in their own abilities.

Verbal persuasion. Verbal persuasion is a third factor that is instrumental in changing self-efficacy. Persuasions influence human behavior by suggesting certain beliefs (Bandura, 1977). Verbal encouragement and positive feedback can increase a teacher's belief in his/her effectiveness in classroom strategies as well as classroom relationships. According to Gavora (2010), "Emotional support builds a teacher's belief in teaching self-efficacy" (p. 3). Verbal encouragement among teachers and administrators can lead to beliefs that they can cope with current stressors that once overwhelmed them. Research has positively linked teacher collaboration to teacher self-efficacy (Guo, Justice, Sawyer, & Tompkins, 2011). A group of 48 preschool teachers completed a questionnaire examining their perceptions of teacher self-efficacy, sense of community, and children engagement. The researchers found a significant correlation between teachers' self-efficacy and teachers' perception of staff collaboration and their own influence in the school. When teachers feel a stronger sense of collaboration and

influence in their work environment, they have a higher sense of self-efficacy. This finding suggests that positive support and verbal communication can increase a teacher's sense of self-efficacy (Guo et al., 2011).

Emotional arousal. Emotional arousal also informs self-efficacy. This arousal affects people's expectation of success. Feelings of anxiety or vulnerability can increase expected stress when engaging in difficult activities. These feelings may lead to a lower sense of self-efficacy (Bandura, 1977). Teachers' emotional states may be inhibiting or promoting their self-efficacy beliefs regardless of their actual skills or knowledge. Positive feelings, such as excitement about an upcoming lesson, may increase a teacher's belief that it will be successful. On the other hand, negative emotional states may decrease a teacher's belief in his/her ability to accomplish a task (Gavora, 2010). For example, teachers who have experienced anxiety and stress in the past about managing their students on a field trip may have little confidence in their ability to successfully take the children on a trip in the future. They may find this task overwhelming and view themselves as unable to be successful in managing the children.

Teacher self-efficacy beliefs are important because of their effect on a teacher's practice. Because of this, teacher preparation programs need to place a focus on increasing future teachers' beliefs about their abilities. How can programs increase efficacy? From reviewing the literature there are components that can affect efficacy. The most effective influence on a teacher's self-efficacy is mastery experiences (Bandura, 1977; Bullock et al., 2015; Gavora, 2010). Teachers can gain mastery experiences over time (Bandura, 1977). When teachers successfully create activities that engage their students, they gain a greater sense of mastery from the experience. Although this can occur naturally as teachers advance throughout their career, there is limited knowledge about how to replicate this in a teacher education program. Preservice

teachers gain the majority of their efficacy through verbal persuasion and vicarious experiences (Gavora, 2010). Although these are reliable sources, they are less impactful than mastery experiences (Bandura, 1977). Because there is limited research on self-efficacy at different levels during an undergraduate program, there is no clear answer to how different experiences throughout a preparation program affect efficacy. Research literature with preservice teachers is limited and even more limited with early childhood preservice teachers. Perhaps time spent in the actual classroom as a student teacher can replicate these important mastery experiences.

Relationships Between Empathy and Teacher Self-Efficacy

A few studies have investigated the relationship between teachers' empathy and self-efficacy. Goroshit and Hen (2016) conducted a study using a convenience sample of a mix of elementary, middle, and high school teachers in Israel to determine if self-efficacy could predict teachers' level of empathy. Researchers used the Interpersonal Reactivity Index (IRI) to assess the teachers' level of empathy. From the data analysis, they discovered that there was a significant positive relationship between empathy and two types of self-efficacy (emotional and teacher). Interestingly, they discovered that the contribution of teacher self-efficacy on empathy levels was even higher than the contribution of emotional self-efficacy. Because teacher self-efficacy was a stronger predictor of empathy than emotional self-efficacy, the researchers suggested that perhaps emotional efficacy is also a piece of teacher efficacy. Emotional efficacy contributes to other teaching components to increase empathy. Rather than being different areas of efficacy, both emotional and teacher efficacy may contribute to each other (Goroshit & Hen, 2016). This is an important finding because it reveals a better understanding of the emotional intelligence aspects of teacher self-efficacy. These emotional aspects relate to empathy in teachers. Emotional intelligence is the ability to perceive emotions, understand emotions, and use

this understanding to influence actions and thoughts (Chan, 2003). According to Chan (2003), there are four factors of emotional intelligence: empathic sensitivity, positive regulation, positive utilization, and emotional appraisal. The first factor, empathic sensitivity, is important for this study. Empathic sensitivity is the ability to empathize with other people. Researchers have examined the relationship between emotional intelligence and teacher self-efficacy among 169 high school teachers in Italy (Di Fabio & Palazzeschi, 2008). Using Tschannen-Moran and Hoy's Teacher Sense of Efficacy Scale, they discovered that higher levels of emotional intelligence were linked to higher levels of the three dimensions of teacher self-efficacy (efficacy in instructional strategy, efficacy in classroom management, and efficacy in student engagement). This study found that when teachers have the ability to understand other peoples' emotions and respond appropriately, they have higher beliefs in their ability to manage a classroom, successfully instruct students, and engage in meaningful relationships with students (Di Fabio & Palazzeschi, 2008). Though research shows a link between empathy and teacher self-efficacy, there is a lack of research concerning the relationship between empathy and teacher self-efficacy among early childhood educators in the U.S. This lack of research is even more pronounced in the realm of teacher education programs (Goroshit & Hen, 2016). Future research should study empathy and teacher self-efficacy among preservice teachers to examine their relationship and role in preservice teachers' preparation.

Clifford (1999) discovered a relationship between empathy and teacher self-efficacy among people rather than within an individual. She examined relationships among 26 mentor-mentee pairs in a preservice teacher education program. The results showed that mentees whose mentors reported higher levels of empathy had a higher opinion of their mentor-mentee relationships and reported higher levels of self-efficacy beliefs. This indicates that empathy is an

important characteristic in good mentor-mentee relationships and helps mentees develop higher teaching self-efficacy.

Both empathy and self-efficacy are personal beliefs that a teacher can obtain through better training. Empathy, specifically cognitive empathy, is necessary for relationship building and cultural understanding. Having empathy for another person can be both scary and difficult. It requires a lot from people to put themselves in the shoes of another person at the risk of their own personal distress. Self-efficacy increases a teacher's likelihood to take risks and persevere to accomplish goals. Perhaps efficacious teachers will dive into empathy regardless of the personal risk because they have the belief that they are able to accomplish what it takes to build relationships with different students. There is, however, a gap in research on how empathy and self-efficacy among preservice teachers correlate. It was difficult to find literature that examined the relationship between these two characteristics among early childhood preservice teachers. Although there are a few studies that examine the relationship between these two characteristics, these studies took place in other countries. There was no related literature on research conducted in the U.S. Educational systems are diverse, and it is important to examine empathy and teacher self-efficacy among preservice teachers in the U.S. rather than trying to generalize from studies in foreign countries that might have markedly different education systems from the U.S.

Levels of Teacher Experience

Empathy

Goble et al. (2015) investigated early childhood teachers' knowledge and beliefs about children and teachers' levels of education. These educational levels were as follows: students working towards a Child Development Associate, students working on an associate degree, students working on a bachelor's degree, and graduates with bachelor's degrees. The participants

took several surveys to examine their knowledge of child development, teaching style, beliefs about self-esteem, beliefs about how children learn, and empathy toward children. Correlational analysis found that empathy and realistic expectations of young children tended to increase as education levels increased. Those who were further along in their educational preparation had higher levels of empathy, suggesting that more educational experiences help teachers develop more empathy towards their students.

An analysis of empathy among Chinese undergraduate preservice preschool teachers, also found a change in empathy at different education levels (Huang et al., 2018). The participants for this study were recruited from four different years of study (freshmen, sophomores, juniors, and seniors) in a preschool education university program. The analysis of years of study and empathy found that both empathic concern and perspective-taking decreased slowly in the first three years, but increased in the fourth, while personal distress increased until the third year and decreased in the fourth. From these results, the third year of study appears to be a “developmental turning point” for empathy levels (Huang et al., 2018, p. 6). This suggests that students in their final year of undergraduate study have higher levels of empathy than students in their earlier years.

Teacher Self-Efficacy

As professionals prepare for the field, they are building skills and strategies to be successful educators. Teachers' levels of professional experience can influence their self-efficacy beliefs. According to Bullock et al. (2015), an early childhood teacher's level of experience relates to self-efficacy in classroom management abilities. A sample of 359 early childhood educators reported their self-efficacy in classroom management on a subscale of Tschannen-Moran and Hoy's Teacher Sense of Efficacy Scale. A correlational analysis of teachers' years of

classroom experience and self-efficacy in classroom management indicated that teacher self-efficacy increases as their years of experience increase. Teachers who have been teaching in the classroom longer report higher levels of self-efficacy in classroom management (Bullock et al., 2015).

Demir (2016) conducted a meta-analysis of studies that examined self-efficacy beliefs and teacher characteristics. Both teacher experience and education level were positively correlated with teacher self-efficacy in student engagement, instructional strategies, and classroom management. Teacher self-efficacy beliefs appear to increase as a teacher's career increases.

Research from Fives and Buehl (2010) found that teachers with 10 plus years of teaching experience scored significantly higher in self-efficacy than the preservice students. These three studies found that self-efficacy beliefs increase with teaching experience (Bullock et al., 2015; Demir, 2016; Fives & Buehl, 2010). Self-efficacy is less stable during the learning process but becomes stable as one increases in experience (Tschannen-Moran & Hoy, 2007). Researchers have discussed a possible reason for these differences. Preservice teachers who have not yet entered the classroom gain their self-efficacy through vicarious experiences and verbal persuasions (Bullock et al., 2015). Novice teachers tend to rely more heavily on the support of peers and the community to develop their self-efficacy beliefs (Tschannen-Moran & Hoy, 2007). Over time, teachers enhance their self-efficacy through mastery experiences in the actual classroom, which are a greater source of self-efficacy information than vicarious experiences and verbal persuasions (Bullock et al., 2015). It is possible that preservice teachers' self-efficacy beliefs would increase as they enter into a student teaching experience because they can gain mastery experiences.

Summary

As shown in the research reviewed, teacher empathy and self-efficacy play an important role in a teacher's ability to positively influence their students. Research has shown that empathy enables teachers to build stronger relationships with both students and families. Empathy also helps teachers engage with diverse students through understanding and openness. The literature has shown that empathy also equips teachers with the awareness and willingness to intervene in bullying situations. Overall, research has shown that empathy helps teachers relate to their students. The research that was reviewed also shows the importance of teacher-self efficacy. Teacher self-efficacy can provide a teacher with job satisfaction and prevent job burnout. The research has also shown that a teacher's self-efficacy can affect students' academic achievement and behaviors. The research has shown that empathy and teacher self-efficacy do have a positive relationship and that both traits can be affected by a teacher's experiences in the classroom. The research reviewed reveals the importance of this current study because there is a gap in research on the relationship between empathy and teacher self-efficacy among preservice early childhood educators in the U.S. These two important teacher characteristics need to be better understood so that preparation programs can better equip the teachers of the future.

CHAPTER 3

METHODS

Introduction

This study aims to examine the relationship between empathy and teacher self-efficacy among preservice early childhood teachers. Two samples of undergraduate students from East Tennessee State University's Department of Early Childhood Education were used to examine empathy and self-efficacy beliefs among preservice teachers during their second and fourth year of undergraduate studies. This chapter will describe the methods that were used to answer four research questions:

- RQ 1. What is the relationship between empathy levels and teacher self-efficacy beliefs among early childhood education majors at East Tennessee State University during their second year?
- RQ 2. What is the relationship between empathy levels and teacher self-efficacy beliefs among early childhood education majors at East Tennessee State University during their fourth year?
- RQ 3. How do second-year early childhood education major students' empathy levels compare to fourth-year early childhood education major students' empathy levels?
- RQ 4. How do second-year early childhood education major students' teacher self-efficacy beliefs compare to fourth-year early childhood education major students' teacher self-efficacy beliefs?

This chapter includes a description of the participants, instruments, and data analysis process.

Participants

The participants for this study consisted of undergraduate students at East Tennessee State University. A total of 18 second-year students and 33 fourth-year students participated in the study. Of the participants, 92.2% reported being female and 3.9% reported being male. A total of 92.2% reported being white, 2% reported being African American, 2% reported being Native American, and 2% preferred not to say their ethnicity. For the sample, this study examined students enrolled in the Department of Early Childhood Education program. Specifically, it was a convenience sample of students enrolled in two courses in the PreK-3rd grade licensure concentration. The first course is taken in the fall semester when students first enter their program of study (second or sophomore year). The second course is taken during the fall semester in the last year of the program (fourth or senior year). Data from the students was collected throughout the fall semester.

Instruments

For this study, participants completed an online survey. The survey contained three sections. The first section included questions that provided demographic information on each participant. The second section contained the 28-item Interpersonal Reactivity Index (Davis, 1980). Finally, the last section contained the 24-item Teacher Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001). The survey was created on Google Forms in order to collect the students' responses.

Demographic Information

To obtain demographic information on the participants, the first section of the survey contained several questions that gathered information about the participant's age, sex, and ethnicity. This provided a basic description of the study participants.

Interpersonal Reactivity Index

Davis (1980) developed the Interpersonal Reactivity Index (IRI) (See Appendix A) to fill a gap left by previous tools that measure empathy. In the past, empathy assessment typically focused on either one separate component of empathy (affective or cognitive) or measured both empathy components as a single construct. The IRI is different because it measures both components individually. Davis (1980) developed this index to capture the variations in both affective and cognitive empathy in individuals through an easily administered survey. The IRI is a 28-item self-report measure that contains 7 items in each of the 4 subscales. The subscales are as follows: Perspective-taking, Fantasy, Empathic concern, and Personal distress (Davis, 1983). Participants answers are measured on a five-point scale from 0 (*does not describe me well*) to 4 (*describes me very well*) (Davis, 1980).

Reliability and Validity of the IRI. To determine the internal reliability of the IRI, a standardized alpha was computed and revealed that the subscales are reliable among both genders for each subscale: Fantasy (male = .78, female = .75), Perspective-taking (male = .75, female = .78), Empathic concern (male = .72, female = .70), and Personal distress (male = .78, female = .78). After determining internal reliability, the researchers assessed test-retest reliability, which resulted in high reliability for each subscale among both genders: Fantasy (male = .79, female = .81), Perspective-taking (male = .61, female = .62), Empathic concern (male = .72, female = .70), and Personal distress (male = .68, female = .76) (Davis, 1980).

Davis (1983) conducted a study to test the validity of the IRI by measuring it against the Hogan Empathy Scale (Hogan, 1969) and the Mehrabian and Epstein Emotional Empathy Scale (Mehrabian & Epstein, 1972). The results revealed that the Perspective-taking subscale of the IRI was correlated ($r = .40$) with the cognitive Hogan Empathy Scale. Both the IRI Fantasy and

Empathic concern subscales had small correlations with the Hogan Empathy Scale ($r = .15$, $r = .18$). The IRI Fantasy and Empathic concern subscales showed stronger correlations with the Mehrabian and Epstein Emotional Empathy Scale ($r = .52$, $r = .60$), whereas the Perspective-taking subscale had a lower correlation with this scale ($r = .24$). These results revealed that the IRI is a valid measure of both cognitive and affective empathy (Davis, 1983).

Scoring Procedure for the IRI. The IRI contains 19 positively scored questions and 9 reverse scored questions (3, 4, 7, 12, 13, 14, 15, 18, and 19) totaling to 28 questions. Each subscale contains 7 questions that are spread throughout the survey. Questions 3, 8, 11, 15, 21, 25, and 28 measure Perspective-taking; questions 1, 5, 7, 12, 16, 23, and 26 measure Fantasy; questions 2, 4, 9, 14, 18, 20, and 22 measure Empathic concern; and questions 6, 10, 13, 17, 19, 24, and 27 measure Personal distress. To score a participant's empathy level, the score from each item is summed to determine a total for each subscale. According to Davis (1980), the IRI was not created to determine a global score of empathy. Instead, he created the scale to represent different components of empathy. A higher score in each subscale represents higher levels of Perspective-taking, Fantasy, Empathic concern and Personal distress.

Teacher Sense of Efficacy Scale

Tschannen-Moran and Hoy (2001) created the Teacher Sense of Efficacy Scale (TSES), formerly called the Ohio State Teacher Sense of Efficacy Scale, to measure teachers' judgement of their ability to produce a desired outcome of student engagement and performance (Tschannen-Moran & Hoy, 2001). The researchers developed the TSES to fill a gap among other teacher self-efficacy scales. It provides a broader range of teaching tasks by using three dimensions of teaching. Previous scales have not used these dimensions (Tschannen-Moran & Hoy, 2001). The creators designed three subscales to measure three different areas of teacher

capabilities: instruction, management, and engagement. Each subscale contains 8 items, equating to a 24-item scale. The researchers also created a shorter form of the scale that includes 12 items. For this study, the full 24-item scale was used (See Appendix B). The survey uses a 9-point Likert scale beginning at 1 (*nothing*) with anchors at 3 (*very little*), 5 (*some influence*), 7 (*quite a bit*), and ending at 9 (*a great deal*) (Tschannen-Moran & Hoy, 2007).

Reliability and Validity of the TSES. A principal-axis factor analysis with varimax rotation of the subscales from the TSES 24 items showed reliable results (Tschannen-Moran & Hoy, 2001). The reliabilities were high for all three factors: instruction (.91), management (.90), and engagement (.87). The intercorrelations among the three subscales were also high: between instruction and management (0.60), instruction and engagement (0.70), and management and engagement (0.58).

Tschannen-Moran and Hoy (2001) assessed the construct validity using two other instruments that measure self-efficacy. The first instrument that was used to test the construct validity of the TSES was two items from a Rand survey of teacher characteristics (“When it comes right down to it, a teacher really can’t do much because most of a student’s motivation and performance depends on his or her home environment,” and “If I really try hard, I can get through to even the most difficult or unmotivated students,”). The second instrument was two factors from the Gibson and Dembo Teacher Efficacy Scale (personal teaching efficacy and general teaching efficacy). Correlations between the TSES total score and the Rand items were $r = .18$ (negative item) and $r = .53$ (positive item). Correlations with the Teacher Efficacy factors were $r = .64$ (personal teaching efficacy factor) and $r = .16$ (general teaching efficacy factor) providing sufficient evidence of the scales’ validity (Tschannen-Moran & Hoy, 2001).

Using the TSES with preservice teachers. All three TSES subscales showed strong factor structure among in-service teachers, but “a less distinct” factor structure for preservice teachers (Tschannen-Moran & Hoy, 2001, p. 799). Therefore, the researchers determined that a single factor approach may be better for a preservice teacher sample. The total score appears to be a better gauge of efficacy among preservice teachers because they have not engaged in actual teaching responsibilities yet (Tschannen-Moran & Hoy, 2001). Fives and Buehl (2010) found similar results in a study of 102 in-service teachers and 270 preservice teachers, which used the 24-item TSES. The results indicated that although the three factors were significantly different among the in-service teachers the three factors were not individually meaningful among the preservice teachers’ sample. This finding suggests that a one-factor approach is more appropriate for a preservice sample (Fives & Buehl, 2010). This study with preservice teachers will use the total TSES score.

Procedure

Once the study was approved by the ETSU Institutional Review Board (IRB), the Chair of ETSU’s Department of Early Childhood Education was contacted to obtain information about two early childhood education courses. Data was collected from students in the Infant/Toddler Child Development (ECED 2110) course, which is taken by students during their first semester of the program and from students in the Residency 1 Clinical Experience and Seminar in PreK-3 class (ECED 4680), which is taken by students in their final year of the program. A PowerPoint describing the study was presented to all of the students in each course. After all of the students were given the chance to listen to the presentation about the survey, they were sent an email from their professor that contained a brief description of the study, a description of an opportunity for an incentive (a drawing for one of two \$30 Amazon gift cards), and a link to a 15-20-minute

online survey. At the beginning of the survey, there was a statement requesting permission to use the students' answers on the survey for this research. It included a short description of the study and a statement that informed the students that they may choose to continue or decline to continue to fill out the survey. Students agreed to participate in this study by continuing to answer the survey questions.

After two weeks, the students were emailed again to increase participation. The ECED 2110 students were emailed two more times to request participation. The ECED 4680 students were emailed one more time. The participation rate was still low after multiple requests. Because of this, the IRB was contacted, and an adaption was created for further approval to allow the students time during their class period to complete the survey. The principal investigator contacted the professors of the in-person courses to request 15-20 minutes of their class time to allow their students to complete the survey. All of the instructors granted permission. During the final week of the semester, the principal investigator returned to both classes to remind the students of the opportunity to participate in the survey. Both professors allowed their students time to complete the survey during their class time while the principal investigator was present to answer any questions or concerns. On the last day of the semester, the survey was closed, and the results were downloaded from Google Forms into an Excel spreadsheet where the data was organized and coded. Unfortunately, the participation rate was not recorded throughout the survey process, but a total participation rate was recorded when the survey closed. A total of 51 students participated in the study, 18 of 35 (51.4%) second-year students and 33 of 36 (91.7%) fourth-year students.

Data Analysis

The data was organized on an Excel spreadsheet. The background information was analyzed to describe the sample using Statistical Package for the Social Sciences (SPSS) to obtain descriptive statistics. To answer the research questions, the data was analyzed using SPSS to obtain inferential statistics.

A Shapiro-Wilk test was used to determine if the empathy and self-efficacy data had normal or non-normal distribution. This test revealed that the majority of the variables were not normally distributed. Therefore, a Spearman's Rho and Kruskal-Wallis statistics were used to analyze the data.

This study used two different data analysis methods to answer the research questions. First, a correlational analysis was used for this study to assess the relationship among the variables from the empathy subscales and total teacher self-efficacy for students in their second and fourth year of the program. A correlation was used to answer the following two questions:

1. What is the relationship between empathy levels and teacher self-efficacy beliefs among early childhood education majors at East Tennessee State University during their second year?
2. What is the relationship between empathy levels and teacher self-efficacy beliefs among early childhood education majors at East Tennessee State University during their fourth year?

A correlational analysis is used in research to “describe and measure the degree of association (or relationship) between two or more variables” (Creswell, 2012, p. 338). This study examined the association between empathy and teacher self-efficacy among two different groups (second-year students and fourth-year students). A Spearman's Rho, which is a nonparametric

correlation applied with non-normal data, was used between two quantitative, continuous variables that are measured on an interval scale (Creswell, 2012). Both empathy and self-efficacy are continuous variables that are measured on an interval scale. For this study, a Spearman's Rho was used to determine the relationship between empathy and teacher self-efficacy among early childhood education majors at ETSU during the second year of the program. A Spearman's Rho test was used to determine the relationship between empathy and teacher self-efficacy among early childhood education majors at ETSU during their fourth year of the program.

A Kruskal-Wallis H was used to compare students' empathy levels and teacher self-efficacy beliefs between the group of second-year students and fourth-year students to answer the questions:

1. How do second-year early childhood education major students' empathy levels compare to fourth-year early childhood education major students' empathy levels?
2. How do second-year early childhood education major students' teacher self-efficacy beliefs compare to fourth-year early childhood education major students' teacher self-efficacy beliefs?

According to Creswell (2012), a Kruskal-Wallis test is a nonparametric test that is used to compare the mean ranks for two independent groups. For this study, a Kruskal-Wallis test was used to compare the difference between second- and fourth-year students' empathy and teacher self-efficacy beliefs. Each group was a separate, independent group of participants. The mean rank of each groups' empathy subscale scores was compared to each other separately. The mean rank of each groups' total self-efficacy score was compared separately. A Kruskal-Wallis test was used to compare the second-year early childhood education major students' empathy levels to the fourth-year early childhood education major students' empathy levels. A separate Kruskal-

Wallis test was used to compare second-year students to fourth-year students for each of the four subscales of empathy: Fantasy, Perspective-taking, Empathic concern, and Personal distress. A Kruskal-Wallis test was also used to compare second-year early childhood education major students' teacher self-efficacy beliefs to fourth-year early childhood education major students' teacher self-efficacy beliefs. A total teacher self-efficacy score was used for the comparison. The H values were considered significant at the level $p < .05$.

CHAPTER 4

RESULTS

Demographic Characteristics of the Participants

A total of 51 students participated in this study. The first group of students, who were in their second year of study, equaled 18 participants of the total 35 students in the course (51.4%). The second group of students, who were in their fourth year of study, equaled 33 students of the total 36 in the class (91.7%). The demographic characteristics are listed below in Table 1. Of the total participants, 49 (96.1%) identified as female and 2 (3.9%) identified as male. Both groups contained one male student. In regard to ethnicity, 50 (98%) identified as white, 2 (3.9%) identified as black or African American, 1 (2%) identified as Native American, and 1 (2%) preferred not to identify their race. The mean age for group 1 was 20.06 years old ($SD = 6.75$), and the mean age for group 2 was 23.64 years old ($SD = 5.11$). A total of 8 students from group 1 (15.1%) reported having no previous experience teaching in a classroom, 6 (11.3%) reported having 1-3 years of previous experience, 3 (5.7%) reported having 4-5 years of experience, 1 (1.9%) reported having 10-14 years of previous experience teaching in a classroom. For group 2, a total of 12 (22.6%) students reported having no previous experience teaching in a classroom, 10 (18.9%) students reported having 1-3 years of previous experience, 9 (17.0%) 4-5 years of previous experience, 1 (1.9%) student reported having 6-8 years of previous experience, and 3 (5.9%) reported having 10-14 years of previous experience.

Table 1

Demographic Characteristics of the Second-Year Students and Fourth-Year Students

Characteristic	Second-year students		Fourth-year students		Full sample	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender						
Female	17	94.4	32	97.0	49	96.1
Male	1	5.6	1	3.0	2	3.9
Ethnicity						
White	16	88.9	31	94.0	47	92.2
Black or African American	1	5.6	1	3.0	2	3.9
Native American	1	5.6	-	-	1	2.0
Prefer not to say	-	-	1	3.0	1	2.0
Years of Experience						
0 years	8	44.4	12	36.3	20	39.2
1-3 years	6	33.3	9	27.3	15	29.4
4-5 years	3	16.7	9	27.3	12	23.5
6-8 years	-	-	1	3.0	1	2.0
10-14 years	1	5.6	2	6.0	3	5.9

Results of Inferential Statistics

The current study aimed to answer four different research questions using Spearman's Rho and Kruskal-Wallis tests.

The Relationship Between Empathy and Teacher Self-Efficacy

A Spearman's Rho was used to answer the first two research questions:

1. What is the relationship between empathy levels and teacher self-efficacy beliefs among early childhood education majors at East Tennessee State University during their second year?
2. What is the relationship between empathy levels and teacher self-efficacy beliefs among early childhood education majors at East Tennessee State University during their fourth year?

To answer the first research question, a Spearman's Rho was used to examine the relationship between the four subscales of empathy (Fantasy, Empathic Concern, Perspective-taking, and Personal Distress) and total self-efficacy among students in their second year of an early childhood education program. The results are shown below in Table 2.

Table 2

Results of Correlation of Total Self-Efficacy and Empathy Subscales for Second-Year Students

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Total self- efficacy	18	184.28	14.61	-				
2. Fantasy	18	23.39	7.0	.32	-			
3. Empathic concern	18	30.22	3.26	.14	.03	-		
4. Perspective- taking	18	27.17	4.15	.29	.52*	.40	-	
5. Personal Distress	18	17.83	4.61	.07	.34	.58*	.50*	-

* $p < .05$ significance level

The results indicated that there was no significant relationship between the empathy subscales and total self-efficacy. There were significant positive correlations within the four subscales of empathy, specifically between Perspective-taking and Fantasy $r = .52$, $n = 18$, $p = .03$, Personal distress and Empathic concern $r = .58$, $n = 18$, $p = .01$, and Personal distress and Perspective-taking $r = .50$, $n = 18$, $p = .04$.

To answer the second research question, a Spearman's Rho was used to examine the relationship between the four subscales of empathy (Fantasy, Empathic Concern, Perspective-taking, and Personal Distress) and total self-efficacy among students in their fourth year of an early childhood education program. The results for this analysis are shown in Table 3.

Table 3

Results of Correlation of Total Self-Efficacy and Empathy Subscales for Fourth-Year Students

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Total self-efficacy	33	166.28	24.71	-				
2. Fantasy	33	27.00	5.61	.09	-			
3. Empathic concern	33	28.97	4.38	.31	.17	-		
4. Perspective-taking	33	25.79	4.81	.39*	.21	.63*	-	
5. Personal Distress	33	20.38	3.77	-.08	-.16	-.12	-.16	-

* $p < .05$ significance level

To answer the second research question, there was a significant positive correlation between Perspective-taking and self-efficacy, $r = .39$, $n = 33$, $p = .03$. These results indicate that there is a positive relationship between the students' score for Perspective-taking and their total self-efficacy meaning that increases in perspective-taking were related to increases in self-efficacy beliefs. There was also a significant positive correlation between Perspective-taking and Empathic concern $r = .63$, $n = 33$, $p = .00$.

The Comparison of Second- and Fourth-Year Empathy Levels and Self-Efficacy Beliefs

Kruskal-Wallis tests were used to answer the third and fourth research questions:

3. How do second-year early childhood education major students' empathy levels compare to fourth-year early childhood education major students' empathy levels?

4. How do second-year early childhood education major students' teacher self-efficacy beliefs compare to fourth-year early childhood education major students' teacher self-efficacy beliefs?

To answer the third research question, a Kruskal-Wallis test was used to compare second- and fourth-year students' empathy scores for each of the four subscales: Fantasy, Empathic concern, Personal distress, and Perspective-taking. A $p < .05$ was used to determine the significance of the results. There were no significant differences between the two groups on the empathy subscales: Fantasy ($H(1) = 3.163, p = .075$), Empathic concern ($H(1) = .58, p = .45$), Perspective-taking ($H(1) = .98, p = .32$), or Personal distress ($H(1) = 3.39, p = .07$).

To answer the fourth research question, a Kruskal-Wallis test was also used to compare second- and fourth-year students' total self-efficacy scores to indicate whether there was a significant difference in student's self-efficacy beliefs during their second or fourth years of the early childhood education program. A $p < .05$ was used to determine the significance of the results. The results revealed a significant difference between the two groups' level of self-efficacy ($H(1) = 7.79, p = .005$). The mean rank for the students in their second year of the program was 33.17 and the mean rank for the students in their fourth year of the program was 21.19. This indicates that students in their fourth year had significantly lower self-efficacy than students in their second year.

CHAPTER 5

DISCUSSION

Introduction

Because previous research has linked both teacher empathy and teacher self-efficacy to so many classroom successes, the present study aimed to examine how these teacher qualities relate and change among preservice teachers. Two samples of undergraduate students were recruited to examine the relationship between empathy and teacher self-efficacy among students in an early childhood education program. This study also examined teacher self-efficacy and empathy in the groups of students who were in two different years of an early childhood education program to determine if there was a significant difference between the two groups' scores. The study answered four research questions:

1. What is the relationship between empathy levels and teacher self-efficacy beliefs among early childhood education majors at East Tennessee State University during their second year?
2. What is the relationship between empathy levels and teacher self-efficacy beliefs among early childhood education majors at East Tennessee State University during their fourth year?
3. How do second-year early childhood education major students' empathy levels compare to fourth-year early childhood education major students' empathy levels?
4. How do second-year early childhood education major students' teacher self-efficacy beliefs compare to fourth-year early childhood education major students' teacher self-efficacy beliefs?

Summary of Results

The sample for this study was homogenous. The majority of the participants were white females with an average age between 20-23 years old. There were two male participants. Two students reported that they were African American and one reported being Native American. Of the total participants, about 40% of the students indicated that they had no previous experience teaching in an early childhood classroom. On the other hand, over half of the students reported that they had at least one year of experience teaching in a classroom. There did not seem to be a notable difference between each group's years of experience. Both the second-year and fourth-year students had different years of previous experience teaching in classrooms.

One research question sought to answer: What is the relationship between empathy levels and teacher self-efficacy beliefs among early childhood education majors at East Tennessee State University during their second year? For students in their second year of the program, there was no significant relationship between the empathy subscales and teacher self-efficacy. This finding indicates that among students in their second year of study, empathy and self-efficacy did not have a statistically significant relationship. There were three significant relationships found among the empathy subscales. There was a positive relationship found between Perspective-taking and Fantasy as well as between Perspective-taking and Personal distress. There was also a significant positive relationship between Personal distress and Empathic concern. Because these are all aspects of empathy, it is not surprising that they relate to each other.

A second research question sought to answer: What is the relationship between empathy levels and teacher self-efficacy beliefs among early childhood education majors at East Tennessee State University during their fourth year? One important relationship was found.

There was a significant positive relationship between Perspective-taking and teacher self-efficacy. This means that as one of these traits change, so does the other. If students' self-efficacy increases, so does their perspective-taking skills. The results indicated one other significant positive relationship between Perspective-taking and Empathic concern. These two variables are components of empathy that relate to each other.

The data analysis for the third and fourth research questions revealed significant results from the comparison of empathy levels and self-efficacy beliefs. This research sought to examine how empathy levels and teacher self-efficacy levels compare between second- and fourth-year early childhood education majors. A difference was found in the total self-efficacy scores between the groups. Interestingly, the second-year students' self-efficacy levels were significantly higher than the fourth-year students' self-efficacy scores. This means that students in their second year of study have a higher belief in their abilities to manage a classroom and influence children's learning than the students in their fourth year. There were no significant differences between the two groups' empathy scores, which indicate that students' empathy levels did not differ based on their year of study.

Significance of the Study

Previous research indicates that self-efficacy is less stable during the preservice years because it is based on vicarious experiences and verbal persuasions (Bullock et al., 2015), while in-service teachers gain more stable self-efficacy through mastery experiences (Tschannen-Moran & Hoy, 2007). For this study, students in their fourth year of study reported having lower self-efficacy than the students that were in their second year of study. This confirms previous research, which indicates that self-efficacy is more likely to fluctuate during the preservice years of a teacher's career (Tschannen-Moran & Hoy, 2007). Self-efficacy levels were significantly

different between two groups of preservice teachers. Contrary to the hypothesis that fourth-year students will have higher self-efficacy, students in their second year of study actually had higher levels of self-efficacy than those in their fourth year. There could be several possible reasons for this difference.

It is important to note that the year of study did not appear to affect the level of previous years of experience in an early childhood classroom. Both groups of students reported having similar amounts of previous experience teaching in a classroom. Previous research revealed that classroom experiences seemed to increase preservice teacher's self-efficacy beliefs (Liaw, 2009). Because there was little difference between each group's years of previous experience, there did not seem to be a change in self-efficacy based on each group's previous teaching experiences. Perhaps these fourth-year students have not been able to gain more mastery experiences than the second-year students. Rather, lower self-efficacy among the students in their fourth year of study may be related to other factors that would require further research.

One possible explanation for second-year students having higher self-efficacy beliefs than fourth-year students is based on the Dunning-Kruger effect (Schlosser, Dunning, Johnson, & Kruger, 2013). This is a psychological idea that people who have low competence in an area of study overrate their abilities because they are unable to recognize the mistakes and errors that they are making. It claims that the knowledge that someone needs to perform well is the same knowledge that they need to be able to assess their own performance well (Schlosser et al., 2013). Perhaps, because students in their second year of study are just beginning the program, they are unable to accurately rate their own abilities since they have little knowledge of how they would actually perform as a teacher. Students in their fourth year have more knowledge in their area of study and therefore, have a better understanding of the difficulties that teachers may face.

Because of this understanding, they may rate their self-efficacy as lower. Second-year students may be naïve and believe that teacher tasks are not as difficult as they seem.

As fourth-year students near the end of the program, they are preparing to graduate and begin careers in real classrooms. Through their residency experience, they are learning about teaching in the real world and it can be more intimidating. Having a better understanding of the reality of classroom tasks and what it takes to be a good teacher could cause students to underestimate their own abilities. The Dunning-Kruger effect also influences higher performers. Higher performers misjudge their own abilities because they overestimate how well others can do the same tasks as them. They do not believe that they are “that much better” than other people in their area of expertise and therefore underestimate their own abilities (Schlosser et al., 2013). Students in their fourth year of study may have forgotten how little they knew at the beginning of the program. Because of this, they may underestimate how much more knowledge they currently possess. As they are preparing to enter the field, they may be wary of their own knowledge and abilities because they are unable to recognize the skills they have gained throughout their studies. They may overestimate how much information students in the beginning of the program know which causes them to underestimate their own abilities.

Perspective-taking is a component of cognitive empathy that requires a person to make an intentional choice to take on another person’s point of view (Batson et al., 1996). It requires someone to observe another person and project oneself into that person’s experience by feeling their emotions as if they were someone’s own emotions (Preston et al., 2007). The present study found a significant positive relationship between Perspective-taking and self-efficacy among students in their fourth year of study. One possible reason for this finding could be that one source of self-efficacy is vicarious experiences (Bandura, 1977). Vicarious experiences are

created when one person sees someone else accomplish a difficult task and begins to believe that they can also accomplish that task (Bandura, 1977). This means that preservice teachers can gain self-efficacy by watching more experienced teachers tackle difficult tasks in their classrooms. For example, if a preservice teacher watches an expert teacher successfully calm a rowdy class by reading a book out loud, the preservice teacher may believe that this same strategy will work for them in the future. This would increase this preservice teacher's sense of self-efficacy in classroom management by watching another person succeed. It is possible that having the ability to take on another person's perspective could aid in gaining self-efficacy through vicarious experiences. If preservice teachers observe an experienced teacher in a classroom and are able to put themselves into that teacher's shoes, they may be able to gain more self-efficacy from that experience. For example, if the preservice teacher can successfully imagine what the expert teacher feels and thinks about the rowdy classroom, the preservice teacher may also be able to match the expert teacher's feelings about the successful solution. Being able to feel the expert teacher's success may even further increase the preservice teacher's self-efficacy beliefs. Therefore, perspective-taking skills may further increase self-efficacy by making vicarious experiences more personal and, therefore, more concrete forms of self-efficacy.

Limitations

There are several limitations in this study. One limitation of this study is the small sample size. Because the data was collected only from two courses taken during one semester at one university, the sample pool was very small. The survey was sent to a small number of students, and not all of these students chose to participate. The low number of participants limits the generalizations of this study. The number of participants in each group was also uneven. A total of 18 students from the second-year group participated while a total of 33 students participated

from the fourth-year group. Because of this, a comparison made between uneven groups of students may have skewed the results.

Another limitation of this study is the lack of diversity among the participants. Because of the time restraint for completing the study, a convenience sampling procedure was used, limiting the diversity of the sample. The sample was taken from a population of preservice early childhood students from East Tennessee State University, who were predominantly white females. This sample is not representative of the entire population of preservice teachers in the U.S. Because the sample is not very diverse, the results cannot be generalized to other populations. Future research should include a larger, more diverse group of students.

This was a cross-sectional study. The survey was only completed once during the same semester, therefore, there was no opportunity to assess how each students' individual empathy and self-efficacy levels changed throughout their experience in the program. This might have limited the results of the program's effect on an individual student. Rather than compare a student's change over time, the study compared two groups of students at different levels of a program to assess if there appeared to be a difference between their empathy and self-efficacy levels. Although this approach provided some interesting information, there are several unaccounted factors, such as transferring from another school or previous college experiences, which could explain differences between the two groups other than the amount of experience in the program. The study results are limited by not being a longitudinal study.

When collecting the data about the participants previous years of experience, the question on the survey was vague about what qualified as a previous year of study. This limits the accuracy of the reported previous years of experience data. Some participants may have thought that this question was asking how many years of experience they had observing or students

teaching, while other participants may have thought that it referred specifically to working as a teacher in a classroom. Because of this variance, the responses about previous years of experience are less accurate and may not represent students' actual previous experiences.

Future Implications

The present study resulted in some significant findings that are important for both practical implications and future research in the field of early childhood education.

Practice Implications

The results of this study uncovered important practice implications. Students in their fourth year of study reported lower levels of self-efficacy than students in their second year of study. This is important because students in their fourth year of study are about to enter the field as teachers in their own classrooms. If they have lower beliefs in their capabilities, it could affect their willingness to attempt and implement new ideas as well as follow through when things appear difficult. Teacher preparation programs need to consider ways to ensure that students feel confident and competent at the end of their program. Teacher preparation programs need to place an importance on building students' self-efficacy as they advance through the program.

Awareness is often the first step in making important changes. Creating awareness among preservice teachers may be an important step in combatting the drop in self-efficacy. If students are informed at the beginning of their program that they may experience some decreases in their beliefs about their abilities as they learn more about what teachers face, they may be able to better prepare themselves. They may gain an understanding that it is normal to lose some confidence when learning new knowledge. This information may also be useful at the beginning of a teacher's career to prepare them for discouragement and doubts that they may experience. Teacher preparation programs could provide students with information about aspects of self-

efficacy and how it affects one's practice. Knowledge about self-efficacy and its effects may increase self-efficacy.

One important source of self-efficacy for preservice and beginner teachers is verbal persuasions (Gavora, 2010). Verbal persuasions include encouragement and support from someone's peers. In the educational arena, this could include principals, co-teachers, other school staff, families, and online teacher support groups. As a novice teacher, it is important to have a support system to help combat lower self-efficacy beliefs. Teacher preparation programs can encourage their students to find support and provide their students with resources about teacher support groups or online platforms for building teacher communities before they graduate and enter the field. Being equipped with practical resources for support may increase a new teacher's likelihood to seek out help when he or she is facing difficulties or doubts about his or her abilities.

The present study also found a significant relationship between teacher self-efficacy and perspective-taking abilities. This finding is important to teacher preparation programs because it provides an insight into another source of self-efficacy that can be cultivated. As students develop perspective-taking skills, they may also be gaining self-efficacy. Programs can reinforce this relationship by creating experiences that strengthen students' perspective-taking skills by developing activities that allow for students to place themselves in another's point of view. They can also provide students with opportunities to take on the perspective of expert teachers to build self-efficacy through vicarious experiences.

There are a variety of ways to build students' perspective-taking skills through various activities. Self-reflection is one important piece of perspective-taking. Boyer (2010) created a learning experience for university students by asking them to participate in writing self-reflective

essays about a time they struggled to learn something new. Teacher preparation programs could use this idea to encourage students to write self-reflective journals about various experiences with young children and teachers. Students could self-reflect on their own failures and successes to increase their ability to empathize with other teachers' failures and successes.

After building students' perspective-taking skills, teacher preparation programs can provide students with opportunities to observe successful teachers and step into their shoes. Teacher preparation programs can implement classroom observations or video observations of expert teachers so that students can see someone else struggle and succeed. Students can grow perspective-taking skills by writing self-reflective journals on how the teacher may have felt and how they might feel in that situation. This activity can allow students to gain self-efficacy by placing themselves in another teacher's shoes and imagine both the struggle and the success. This experience might increase students' beliefs that they can also be successful in the future even in difficult situations.

Future Research

There were very few previous studies on the relationship between teacher self-efficacy and empathy among preservice teachers in the U.S. More research on the relationship between these two teacher traits is needed to uncover how they impact preservice students sense of competency and how teacher preparation programs can develop these traits. More studies with larger and more diverse sample can provide more information for the field.

This research study also suggests some important starting points for future research. A limitation of this study was the small size and limited diversity of the participants. Future research could expand these limited findings by examining empathy and teacher self-efficacy among a larger, more diverse group of preservice teachers. More research with preservice

teachers across the U.S. will broaden the findings to make them more relevant to diverse groups of people with different experiences. The size of the sample also limited this study's capability to examine a trend in the data. Future research with larger and more diverse samples could ensure that the findings are more accurate and generalizable.

Another limitation of the current study was that the data was collected from two separate groups of students rather than from one group at two different times across the program. This method of data collection shows differences between two groups but does not accurately describe if the program influenced these differences. Self-efficacy has also been connected to important classroom benefits. From the findings, it did change between the two groups. Although it cannot be assumed that the change was based on the students' year of study, the data is limited in answering why the change occurred because it does not follow the same students throughout their undergraduate studies. Empathy has also been connected to many beneficial classroom successes. The present study did not find any differences between the two groups' empathy levels. Because the study did not follow the same students, other factors may have limited the results. Future research should examine these two traits among students throughout their undergraduate years of study. Longitudinal data could provide a more accurate picture of how changes occur from the beginning of a program to the end of a program.

The results indicated that teacher self-efficacy did change between students in their second year and fourth year of an early childhood program. This study revealed a difference but could not answer why there was a difference between these two groups of students. Future research could examine teacher self-efficacy to explain why and how self-efficacy changes among preservice teachers. One way to study this is by observing the changes of self-efficacy in relation to a student's years of previous classroom experience. In the present study, an

assumption was made that students in their fourth year of study would have a significantly higher level of classroom experiences than those in their second year of study. From the results, it was revealed that this was not the case. Because of this, to examine the relationship that classroom experience has on preservice teachers' self-efficacy, future research could narrow this assumption by specifically examining years of previous classroom experience instead of years of study in a teacher preparation program.

Overall, the present study appears to provide suggestions for teacher education programs to improve their training of preservice teachers and a base for future research on both empathy and teacher self-efficacy among preservice teachers. This study, as well as previous research, indicates that these two teacher characteristics are important in early childhood classrooms and should be built and nurtured in future teachers before they enter the education field.

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APPENDICES

Appendix A

The Interpersonal Reactivity Index

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E.

When you have decided on your answer, fill in the letter on the answer sheet next to the item number. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

ANSWER SCALE:

A	B	C	D	E
DOES NOT				DESCRIBES ME
DESCRIBE ME				VERY
WELL				WELL

1. I daydream and fantasize, with some regularity, about things that might happen to me. (FS)
2. I often have tender, concerned feelings for people less fortunate than me. (EC)
3. I sometimes find it difficult to see things from the "other guy's" point of view. (PT) (-)
4. Sometimes I don't feel very sorry for other people when they are having problems. (EC) (-)
5. I really get involved with the feelings of the characters in a novel. (FS)
6. In emergency situations, I feel apprehensive and ill-at-ease. (PD)
7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it. (FS) (-)
8. I try to look at everybody's side of a disagreement before I make a decision. (PT)
9. When I see someone being taken advantage of, I feel kind of protective towards them. (EC)
10. I sometimes feel helpless when I am in the middle of a very emotional situation. (PD)
11. I sometimes try to understand my friends better by imagining how things look from their perspective. (PT)
12. Becoming extremely involved in a good book or movie is somewhat rare for me. (FS) (-)
13. When I see someone get hurt, I tend to remain calm. (PD) (-)
14. Other people's misfortunes do not usually disturb me a great deal. (EC) (-)
15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (PT) (-)

16. After seeing a play or movie, I have felt as though I were one of the characters. (FS)
17. Being in a tense emotional situation scares me. (PD)
18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.
(EC) (-)
19. I am usually pretty effective in dealing with emergencies. (PD) (-)
20. I am often quite touched by things that I see happen. (EC)
21. I believe that there are two sides to every question and try to look at them both. (PT)
22. I would describe myself as a pretty soft-hearted person. (EC)
23. When I watch a good movie, I can very easily put myself in the place of a leading character. (FS)
24. I tend to lose control during emergencies. (PD)
25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while. (PT)
26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me. (FS)
27. When I see someone who badly needs help in an emergency, I go to pieces. (PD)
28. Before criticizing somebody, I try to imagine how I would feel if I were in their place. (PT)

NOTE: (-) denotes item to be scored in reverse fashion

PT = Perspective-taking scale
FS = Fantasy scale
EC = Empathic concern scale
PD = Personal distress scale

A = 0
B = 1
C = 2
D = 3
E = 4

Except for reversed-scored items, which are scored:

A = 4
B = 3
C = 2
D = 1
E = 0

APPENDIX B

The Teacher Sense of Efficacy Scale

Teacher Beliefs - TSES <i>Directions:</i> Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) "None at all" to (9) "A Great Deal" as each represents a degree on the continuum. Please respond to each of the questions by considering the combination of your current ability, resources, and opportunity to do each of the following in your present position.		This questionnaire is designed to help us gain a better understanding of the kinds of things that create challenges for teachers. Your answers are confidential.								
		None at all	Very Little	Some Degree	Quite A Bit	A Great Deal				
1.	How much can you do to get through to the most difficult students?	1	2	3	4	5	6	7	8	9
2.	How much can you do to help your students think critically?	1	2	3	4	5	6	7	8	9
3.	How much can you do to control disruptive behavior in the classroom?	1	2	3	4	5	6	7	8	9
4.	How much can you do to motivate students who show low interest in school work?	1	2	3	4	5	6	7	8	9
5.	To what extent can you make your expectations clear about student behavior?	1	2	3	4	5	6	7	8	9
6.	How much can you do to get students to believe they can do well in school work?	1	2	3	4	5	6	7	8	9
7.	How well can you respond to difficult questions from your students?	1	2	3	4	5	6	7	8	9
8.	How well can you establish routines to keep activities running smoothly?	1	2	3	4	5	6	7	8	9
9.	How much can you do to help your students value learning?	1	2	3	4	5	6	7	8	9
10.	How much can you gauge student comprehension of what you have taught?	1	2	3	4	5	6	7	8	9
11.	To what extent can you craft good questions for your students?	1	2	3	4	5	6	7	8	9
12.	How much can you do to foster student creativity?	1	2	3	4	5	6	7	8	9
13.	How much can you do to get children to follow classroom rules?	1	2	3	4	5	6	7	8	9
14.	How much can you do to improve the understanding of a student who is failing?	1	2	3	4	5	6	7	8	9
15.	How much can you do to calm a student who is disruptive or noisy?	1	2	3	4	5	6	7	8	9
16.	How well can you establish a classroom management system with each group of students?	1	2	3	4	5	6	7	8	9
17.	How much can you do to adjust your lessons to the proper level for individual students?	1	2	3	4	5	6	7	8	9
18.	How much can you use a variety of assessment strategies?	1	2	3	4	5	6	7	8	9
19.	How well can you keep a few problem students from ruining an entire lesson?	1	2	3	4	5	6	7	8	9
20.	To what extent can you provide an alternative explanation or example when students are confused?	1	2	3	4	5	6	7	8	9
21.	How well can you respond to defiant students?	1	2	3	4	5	6	7	8	9
22.	How much can you assist families in helping their children do well in school?	1	2	3	4	5	6	7	8	9
23.	How well can you implement alternative strategies in your classroom?	1	2	3	4	5	6	7	8	9
24.	How well can you provide appropriate challenges for very capable students?	1	2	3	4	5	6	7	8	9

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