

THE RELATIONSHIP BETWEEN PERCEIVED SENSE OF COMMUNITY AND SELF-
EFFICACY IN SPECIAL EDUCATION TEACHERS: A QUANTITATIVE
CORRELATIONAL STUDY

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ABSTRACT

Teacher attrition is a worldwide problem. Teachers leave education for reasons other than retirement, and many retire before the generally accepted retirement age of 65. Further, special education teachers are at an even higher risk of premature exit than their general education counterparts. Self-efficacy is related to teacher burnout and other reasons for leaving the profession. One missing piece in the literature is role of sense of community in special education on teachers' self-efficacy. The purpose of this correlational study is to investigate possible predictive relationships between sense of community and self-efficacy in special education teachers. Further, relationships between group identity and self-efficacy and shared domain and self-efficacy were studied. Two hundred special education teachers from a Mid-Atlantic state were surveyed using the Sense of Community in School Scale and the Teachers' Sense of Efficacy Scale. Pearson's r was used to identify the correlations. The results of the study indicated a small to moderate positive relationship between sense of community and self-efficacy.

Keywords: Sense of Community, Self-Efficacy, Special Education, Sense of Community in School Scale, Teachers' Sense of Efficacy Scale

Dedication

This dissertation, my doctoral journey, and my life are dedicated to my Lord and Savior, Jesus Christ, without Whom I would be nothing. God, my Savior, supported me with ideas, clarity, and wisdom. Thank you, Jesus, for your provision.

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List of Abbreviations

Group Identity (GI)

English as a Second Language (ESL)

Emotional Safety (ES)

Functional behavior assessments (FBA)

Individualized Education Program (IEP)

Institutional Review Board (IRB)

Interactional Repertoire (IR)

Manifestation Determination (MD)

Meaningful Relationships (MR)

National Center for Education Statistics (NCES)

Ohio State Teacher Efficacy Scale (OSTES)

Reevaluation Report (RR)

Shared Domain (SD)

Teacher Sense of Efficacy Scale, Short (TSES)

The Sense of Community in School Scale (SCSS)

Tolerance for Individual Differences (TID)

CHAPTER ONE: INTRODUCTION

Overview

Introduced in this chapter is the study investigating whether there is a relationship between sense of community and self-efficacy in special education teachers. The researcher provides background regarding teacher turnover and burnout and the consequences, as well as an overview of the ideas of sense of community and teacher self-efficacy. The problem and purpose of the study, as well as its significance are presented.

Background

Teacher turnover and teacher burnout are worldwide concerns (Aloe, Amo, & Shanahan, 2014; Hong, 2012; Simon & Johnson, 2013). Ten percent of teachers beginning their careers in 2007-2008 did not teach in 2008-2009, 15 percent of novice teachers in 2009-2010 did not teach in 2010-2011, and 17 percent of new teachers in 2010-2011 did not teach the next school year (Gray & Taie, 2015). Special education teachers are leaving schools due to early retirement and resigning at alarming rates (McKnab, 1995; National Association of State Directors of Special Education, 1990; Steinhardt, Smith Jaggars, Faulk, & Gloria, 2011). High rates of teacher turnover and burnout are detrimental to students because it presumably lowers student performance, educational quality, and is organizationally disruptive. For instance, schools with high turnover have a larger percentage of new teachers who, as a result of being inexperienced, are less effective than more seasoned teachers (Sass, Flores, Claeys, & Perez, 2012). Additionally, high teacher turnover results in a lack of continuity of instruction and stable staff relationships, which are needed for a strong sense of community. Finally, schools with high turnover must continually recruit and train more teachers to take the places of those who left leading to classroom and school instability (Simon & Johnson, 2013).

Because teacher turnover and attrition are frequently caused by burnout, further study is needed to investigate the causes and preventative measures teachers and administrators can take to avert burnout and attrition. Maslach and Leiter (1997) defined burnout as a group of symptoms related to emotional exhaustion, cynicism, depersonalization, and dissatisfaction, which make professionals feel as if they can no longer give of themselves at a psychological level. Burnout and teacher self-efficacy have been linked in numerous studies. Higher self-efficacy relates to less burnout and attrition (Aloe et al., 2014; Høigaard, Giske, & Sundsli, 2012; Hong, 2012; Skaalvik & Skaalvik, 2010; Skaalvik & Skaalvik, 2014).

Self-efficacy is teachers' beliefs in their ability to affect the expected outcome of student performance (Isbell & Szabo, 2015). Rooted in social learning theory, behaviorism, locus-of-control theory, and social-cognitive theory, Bandura (1977) developed a general theory of self-efficacy in 1977. While dependent upon an abundance of variables and influenced by many factors, personal self-efficacy determines what activities individuals will seek out or avoid (Bandura, 1977). Those with strong self-efficacy for certain tasks will seek out those tasks. Conversely, those with low self-efficacy will avoid tasks in which they do not feel able to meet demands or expectations (Bandura, 1977).

Although teacher self-efficacy does not directly correlate to student performance (Bandura, 2012), it is a component in student outcomes. Teachers with high self-efficacy will persevere with difficult students (Anderson, Greene, & Loewen, 1988; Armor et al., 1976; Ashton & Webb, 1986; Gibson & Dembo, 1984; Moore & Esselman, 1992; Podell & Soodak, 1993; Ross, 1992; Soodak & Podell, 1993). Additionally, self-efficacy affects teacher performance in better classroom management, improved instructional strategies, and increased student engagement (Allinder, 1994; Ashton & Webb, 1986; Berman, McLaughlin, Bass, Pauly, &

Zellman, 1977; Chu, 2011; Meijer & Foster, 1988; Guskey, 1988; Stein & Wang, 1988; Tschannen-Moran & Hoy, 2001). Further, Allinder (1995) found that special education teachers with high self-efficacy set higher goals for their students than do special education teachers with lower self-efficacy. In addition, there was a significant relationship between teachers with high self-efficacy and their students' scores on curriculum-based math measures (Allinder, 1995). There is a relationship between high teacher self-efficacy on student achievement but not a direct effect.

Since Bandura's (1977) introduction of self-efficacy, researchers studied teacher self-efficacy and found numerous benefits of strong teacher self-efficacy to both teachers and students. Teacher benefits of strong self-efficacy include lower rates of burnout (Aloe et al., 2014; Sariçam & Sakız, 2014), increased perseverance and resilience (Ashton & Webb, 1986), and better planning and organization (Allinder, 1994). Although individual self-efficacy does not directly relate to student achievement (Bandura, 2012), collective efficacy (the perceived ability of a group) does influence student achievement (Moolenaar, Slegers, & Daly, 2012). Teachers with strong self-efficacy are more willing to consider new ideas to help their students (Berman et al., 1977; Guskey, 1988; Stein & Wang, 1988). Studies show strong relationships between effective teachers with strong self-efficacy and student benefits of increased motivation (Midgley, Feldlaufer, & Eccles, 1989), improved self-efficacy (Anderson et al., 1988), and other student results, such as higher reading levels and student achievement (Armor et al., 1976; Ashton & Webb, 1986; Moore & Esselman, 1992; Ross, 1992). Further, teachers with strong self-efficacy are less critical (Ashton & Webb, 1986), more willing to invest time in struggling students (Gibson & Dembo, 1984), and more willing to be involved in decision-making and improved school climate (Moore & Esselman, 1992). Additionally, these teachers are less likely to refer

difficult or culturally- and linguistically-diverse students to special education (Chu, 2011; Meijer & Foster, 1988; Podell & Soodak, 1993; Soodak & Podell, 1993). Therefore, strong teacher efficacy and self-efficacy benefits teachers, students, and the school community as a whole.

Self-efficacy theory derives from behaviorism, locus-of-control theory, social cognitive theory, and social learning theory (Isbell & Szabo, 2015). Skinner (1948) proposed the behaviorist theory. Skinner believed that, if used properly, the use of positive reinforcement would produce successful students. From behaviorist theory, Rotter (1954) introduced locus-of-control theory. Locus-of-control theory denotes that personal belief leads to specific behavior. Bandura (1977) added behaviorism and locus-of-control theory to his social cognitive and social learning theories and produced self-efficacy theory. This study will focus on Bandura's self-efficacy theory.

Bandura (1986) explained the relationship of self-efficacy and social cognitive theory. The ability to anticipate consequences is one cognitive origin of motivation. Individuals will engage in activities in which they predict favorable outcomes but avoid pursuits where they foresee failure. Another cognitive origin of motivation is making self-rewarding choices (Bandura, 1977). Bandura (1977) stated, “. . . the concept of self-efficacy is assigned a central role, for analyzing changes achieved in fearful and avoidant behavior” (p. 193). An individual's self-efficacy predicts future performance because self-efficacy provides an expectation of success or failure, and those expectations determine how much effort the individual makes. Further, the higher the self-efficacy, the greater effort will be made (Bandura, 1977).

In addition to self-efficacy, this study investigated sense of community and how it relates to self-efficacy. At creation, God stated that it was not good for man to be alone (Genesis 2:18

New International Version [NIV]). Solomon, the wisest man ever, expounded on the benefits of not being alone.

Two are better than one, because they have a good return for their labor: If either of them falls down, one can help the other up. But pity anyone who falls and has no one to help them up. Also, if two lie down together, they will keep warm. But how can one keep warm alone? Though one may be overpowered, two can defend themselves. A cord of three strands is not quickly broken. (Ecclesiastes 4:9-12 NIV)

When Jesus began His ministry on earth, He invited a group of followers to be part of a community with Him, the 12 disciples and 120 other close followers (Mark 3:13; Acts 1:15 NIV). Additionally, the early church provided a close community which met spiritual, physical, and emotional needs (Acts 2:42-47 NIV). Community is a concept God identified as a human need since the beginning of time and demonstrated throughout the Bible. God made the first community, inspired writers of the Bible to tell of the benefits of community, and lived in community Himself.

The idea of sense of community, also called psychological sense of community, began in 1986 with the work of McMillan and Chavis (Peterson, Speer, & McMillan, 2008). Sense of community is a four-aspect theory that includes *membership*, *influence*, *integration and fulfillment of needs*, and *emotional connection* (McMillan & Chavis, 1986). *Membership* includes the concepts of boundaries, security, belonging and identification, personal investment, and a common symbol (McMillan & Chavis, 1986). The notion of *influence* is bi-directional. The group and individuals consent to join and influence each other at the same time to create a bond (McMillan & Chavis, 1986). A strong community provides *reinforcement* and *fulfillment* of individuals' needs. Status, community success, and member competence provide effective

community reinforcement. Individual values drive the group's ability to prioritize and organize need fulfillment (McMillan & Chavis, 1986). *Shared emotional connection* relates to the quantity and quality of individual interaction within the group to build strong bonds. Individual and group interactions need definition, purpose, and closure or the bond will weaken. Difficulty or tragedy, as well as common religious beliefs increase the community bond. Finally, individual investment and intimacy increases group cohesiveness (McMillan & Chavis, 1986).

Teachers' perceived sense of community directly relates to their self-efficacy (Collie, Shapka, & Perry, 2012; Moolenaar et al., 2012). Strong sense of community has been shown to produce high self-efficacy, which can improve teacher performance and persistence as well as improve student outcomes (Aloe et al., 2014; Collie et al., 2012; Moolenaar et al., 2012; Sariçam & Sakız, 2014; Tschannen-Moran & Hoy 2001). The present study provided further research in the relationship between sense of community and self-efficacy by focusing on the educational subgroup of special education teachers.

Problem Statement

Self-efficacy studies have been conducted for a myriad of skills. Self-efficacy studies in education address student and teacher feelings about technology, math, science, distance learning, response-to-intervention, and inclusion (Isbell & Szabo, 2015; Savolainen, Engelbrecht, Nel, & Malinen, 2012). Self-efficacy in special education teachers has been linked to higher goal setting and a relationship to higher curriculum based measure scores (Allinder, 1995). Additionally, special education teachers with more interactions with persons with disabilities, teacher training, and teaching experience have higher self-efficacy than their colleagues with less (Malinen et al., 2013).

Researchers studied the concept of *sense of community* in a variety of circumstances. In education, many studies are related to online learning (Kuo, Walker, Schroder, & Belland, 2014; Rovai & Gallien, 2005; Rovai, 2002). More related to the current study, Simon and Johnson (2013) found that the high teacher turnover rate in urban and minority school districts is an escape from difficult working conditions, most importantly, collegial relationships. Participant teachers viewed cooperation and competence in collegial and mentorship relationships as the most important aspect of education that kept teachers in their positions (Simon & Johnson, 2013).

Research showing relationships between self-efficacy and sense of community is limited. Vieno, Santinello, Pastore, & Perkins (2007) found a connection between school sense of community and self-efficacy in Italian early adolescents. Studies of professional learning communities show relationships between sense of community and self-efficacy. Professional learning communities are groups of teachers and administrators focused on ensuring students learn, creating a culture of collaboration for school improvement and removing barriers to success, and focusing on results (DuFour, 2004). Mintzes, Marcum, Messerschmidt-Yates, and Mark (2013) found an increase in self-efficacy in elementary science teachers who participated in professional learning communities. However, it was difficult for this researcher to find a direct link between sense of community and self-efficacy, especially in the population of special education teachers, due to the scarcity of such studies. Additionally, Rashidi and Mognadam (2014) found conflict with earlier studies relating to teacher self-efficacy and student satisfaction and achievement. Maslow (1943) described in his hierarchy of needs theory that a sense of belonging is needed before feelings of esteem and self-actualization. Therefore, it is reasonable to believe that a feeling of belonging, or sense of community, precedes feelings of self-worth or self-efficacy. The problem is that further research is needed in finding and studying other causes

of strong self-efficacy as called for by Rashidi & Modhadam (2014). This study aimed to find a direct relationship between sense of community and self-efficacy in special education teachers.

Purpose Statement

The purpose of this quantitative correlational study was to determine what the relationship is between special education teachers' perceived sense of community and their self-efficacy. The criterion variable is self-efficacy, and the predictor variable is perceived sense of community. Self-efficacy in teachers is their belief in their ability to affect the expected outcome of student performance (Isbell & Szabo, 2015). Sense of community is a four-aspect phenomenon, which includes membership, influence, integration and fulfillment of needs, and emotional connection (McMillan & Chavis, 1986). The population studied was special education teachers from suburban and suburban-rural school districts in a Mid-Atlantic state. The researcher used the Sense of Community in School Scale (Admiraal & Lockhorst, 2012) and the Teacher Sense of Efficacy Scale, Short (Tschannen-Moran, & Hoy, 2001) to measure sense of community and self-efficacy in the study sample. The researcher investigated the predictive relationship of *sense of community* (predictor variable) on teacher *self-efficacy* (criterion variable) by focusing on the unexplored population of special education teachers.

Significance of the Study

Simon and Johnson (2013) found that the high teacher turnover rate in urban and minority school districts is not a result of teachers fleeing their students but of an escape from difficult working conditions. Working conditions that promote retention directly relate to positive relationships between teachers (Billingsley & Cross, 1991; Sass et al., 2012; Simon & Johnson, 2013). These relationships create a high sense of community. Types of relationship building,

such as collaboration and support networks, affect self-efficacy and improve sense of community (Collie et al., 2012; Moolenaar et al., 2012).

Strong teacher self-efficacy has benefits to all school stakeholders. Benefits to teachers include lower incidence of burnout (Aloe et al., 2014; Sariçam & Sakız, 2014), greater perseverance (Ashton & Webb, 1986), openness to new ideas (Berman et al., 1977; Guskey, 1988; Stein & Wang, 1988), and better planning and organization (Allinder, 1994). Student benefits include increased motivation (Midgley et al., 1989), greater self-efficacy (Anderson et al., 1988), and less critical teachers, which will promote better self-esteem in students and inspire them to work to the best of their abilities (Ashton & Webb, 1986). Further, school districts as a whole benefit when teachers feel connected and important because they are willing to persevere through difficult circumstances for the benefit of the school and students. This present study is significant because administrators can facilitate opportunities for building community that in turn will improve teacher self-efficacy, which will improve the whole school system.

If the results of this study show a relationship between sense of community and self-efficacy, school administrators can use the information to cut down on teacher turnover. District administrators and special educators can make an effort to develop a sense of community in schools by increasing the quality of mentorship programs, establishing professional learning communities, and allowing for improved collaboration between teachers. When a higher sense of community is established, stronger self-efficacy will follow, which will have positive consequences such as less burnout, better classroom management (Aloe et al., 2014; Sariçam & Sakız, 2014), higher job satisfaction and teaching efficacy (Collie et al., 2012), and possibly, higher student achievement (Moolenaar et al., 2012).

It is assumed that the participants answered the surveys honestly. Surveys were anonymous and confidential. Teachers in more than one school district were surveyed, so demographic information did not provide sufficient clues to determine who completed which survey. This study was limited by the convenience sample. Study findings cannot be generalized to populations outside the United States, the Mid-Atlantic state from which the surveys were garnered, or urban or high minority or low socioeconomic status school districts. Further, participants volunteered to participate in the study, and responses may have been tainted by an especially good or bad circumstance for participating teachers. The findings in this study are limited to correlation between sense of community and self-efficacy, not causation. The results of this study cannot be generalized beyond this present study.

Research Questions

RQ1: Is there a statistically significant relationship between special education teachers' perceived sense of community within the school and their sense of self-efficacy?

RQ2: Is there a statistically significant relationship between perceived sense of community and self-efficacy in high school special education teachers?

RQ3: Is there a statistically significant relationship between perceived sense of community and self-efficacy in elementary special education teachers?

Null Hypotheses

The null hypotheses for this study are:

H₀1: There is no statistically significant relationship between special education teachers' perceived sense of community within the school as measured by the Sense of Community in School Scale (SCSS) and their perceived sense of self-efficacy as measured by the Teacher Sense of Efficacy Scale, Short.

H₀₂: There is no statistically significant relationship between high school special education teachers' perceived sense of community within the school as measured by the Sense of Community in School Scale (SCSS) and their perceived sense of self-efficacy as measured by the Teacher Sense of Efficacy Scale, Short.

H₀₃: There is no statistically significant relationship between elementary special education teachers' perceived sense of community within the school as measured by the Sense of Community in School Scale (SCSS) and their perceived sense of self-efficacy as measured by the Teacher Sense of Efficacy Scale, Short.

Definitions

1. *Burnout* - Burnout is a group of symptoms related to emotional exhaustion, cynicism, depersonalization, and dissatisfaction, which make professionals feel as if they can no longer give of themselves at a psychological level (Maslach, & Leiter, 1997).
2. *Self-efficacy* - Self-efficacy is teachers' belief in their ability to affect the expected outcome of student performance (Isbell & Szabo, 2015).
3. *Sense of community* - Sense of community is a four-aspect phenomenon which includes *membership*, a perception of belonging, *influence*, a sense of meaning, *integration and fulfillment of needs*, support and benefit, and *emotional connection*, shared history, time, and experiences (McMillan & Chavis, 1986).
4. *Special education* - Special education is specially designed instruction to meet the unique needs of a child with a disability, which is free to parents (Individuals with Disabilities Act [IDEA], 2004).

CHAPTER TWO: LITERATURE REVIEW

Overview

Teacher burnout, early retirement, and leaving the field are concerns all over the world, not just in the United States (Aloe et al., 2014; Hong, 2012; Simon & Johnson, 2013). Special education teachers have difficult jobs and, therefore, higher rates of burnout and attrition than even that of general education teachers (McKnab, 1995). Sense of community in school is related to high self-efficacy and less burnout and lower rates of attrition when teachers perceive high levels of positive school climate, social-emotional learning (Collie et al., 2012), and teacher collaboration (Moolenaar et al., 2012). High self-efficacy, in addition to many other benefits, is also related to fewer burnout symptoms in teachers (Aloe et al., 2014; Skaalvik & Skaalvik, 2014), lower rates of intention to quit, and higher job satisfaction (Høigaard et al., 2012). Professional literature conclusively links sense of community to self-efficacy, but there is a gap in the literature showing how sense of community and self-efficacy affect special education teachers.

Theoretical Framework

Self-Efficacy

Self-efficacy theory derives from behaviorism, locus-of-control theory, social cognitive theory, and social learning theory (Isbell & Szabo, 2015). Skinner (1948) proposed behaviorist theory. Behaviorism is the science of behavior. Skinner believed that positive or negative consequences for actions will shape behavior, and, if used properly, the use of positive reinforcement would produce successful students. From behaviorist theory, Rotter (1954) introduced social learning theory. Social learning theory focuses the fact that primary ways of behaving are learned in social situations. Later, Rotter (1966) introduced locus-of-control theory.

According to Adeyemi-Bello (2001), “Locus of control is the extent to which individuals attribute the events in their lives to actions or forces beyond their control” (p. 25). Bandura (1977) added behaviorism, social learning theory, and locus-of-control theory to his social cognitive theory and produced self-efficacy theory.

In an effort to unite the behavior change theories, Bandura (1977) developed the theory of self-efficacy. Bandura (1977) looked at efficacy expectations, its dimensions and sources, and the cognitive processing of information to develop his self-efficacy theory. In his examination of the dimensions of efficacy expectations, Bandura (1977) studied people’s individual impression of mastery in a particular area rather than the ideal. Bandura (1977) found that self-efficacy expectations are not always the same in the areas of magnitude, generality, and strength. Additionally, Bandura (1977) delineated four sources of self-efficacy expectations as performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal.

Previous research has shown that learning and behavior change are cognitive processes. Behaviorism relates how learning and shaping of behavior comes from cognitively processing consequences. Learners (not exclusively students or humans) determine through consequences what to do in order to “. . . gain beneficial outcomes and to avoid punishing ones” (Bandura, 1977, p. 192). Thus, seeking or avoiding certain consequences shapes behavior. In addition to consequences, goal setting and reactions to self-evaluation mediate other cognitive processes that motivate behavior change. Motivation of the individual to anticipate rewards or penalties allow individuals to increase the level of self-expected performance. Therefore, two cognitive behavior change processes are consequences and the self-motivation to achieve higher levels of performance.

Efficacy expectations are “. . . the conviction that one can successfully execute the behavior required to produce the outcomes” (Bandura, 1977, p. 193). As such, self-efficacy, or “. . . expectations of personal mastery” (Bandura, 1977, p. 193) will influence individual decisions to begin and persevere with particular tasks. Therefore, self-efficacy is a primary motivator of task choice, effort expended, and persistence toward completion (Bandura, 1977; Tschannen-Moran & Hoy, 2001).

Three varying dimensions of efficacy expectations shown in past research include magnitude, generality, and strength (Bandura, 1977). Self-efficacy depends on the magnitude of the task. Self-efficacy may be high for simple tasks but diminish for moderate or high difficulty activities. Self-efficacy also fluctuates depending on the specificity or generality of tasks. Finally, self-efficacy ranges from weak to strong. Those with weak self-efficacy are more likely to end a task, and those with strong self-efficacy are more likely to persevere when faced with difficulty (Bandura, 1977). For example, students who think they are not good at making speeches or writing papers will avoid these activities, if possible, and if not possible, they will throw something together just to be done. Similarly, special education teachers who do not think they are good at completing paperwork will not do it at all or do it quickly but not necessarily well.

Sources of self-efficacy include performance accomplishments, vicarious experiences, verbal persuasion, and emotional arousal. Performance accomplishments are experiences of personal achievement. These accomplishments, or lack thereof, increase or decrease self-efficacy. Performance accomplishments are the strongest sources of self-efficacy expectations because they are first-hand experiences. The accomplishments are realized through participating

in experiences, performance desensitization and exposure, and self-instruction performance (Bandura, 1977; Conley, 2015).

Next, vicarious experiences are less able to influence self-efficacy than performance accomplishments and are not used in isolation. Vicarious experiences are occurrences where individuals witness others partake in certain activities without detrimental outcomes. Vicarious experiences occur through live or symbolic modeling. These experiences can bolster willingness to initiate and persist in difficult circumstances, thus affecting self-efficacy (Bandura, 1977, Conley, 2016). For instance, in education, newer teachers spend time observing veteran teachers. The act of observing can increase the newer teachers' self-efficacy.

Another weaker source of self-efficacy expectations is verbal persuasion. Verbal persuasion includes suggestion, exhortation, self-instruction, and interpretive treatments. The purpose of verbal persuasion is to raise the self-efficacy of others. Unfortunately, if personal failure occurs after persuasion, the persuader loses credibility (Bandura, 1977, Conley, 2015). This source is like having a cheerleader who encourages when the team is doing well and when there is no hope for victory. Teacher self-efficacy increases when colleagues or supervisors praise teachers' effectiveness.

The last source of self-efficacy, emotional arousal, is able to influence a person's self-efficacy when dealing with difficult situations. Heightened states of emotion serve to cripple performance and exacerbate fear and anxiety. Arresting emotional arousal comes from identifying fear or anxiety triggers, relaxation or biofeedback, and symbolic desensitization and exposure. Some studies have used mislabeling of fear symptoms to make performers believe what they experienced was not anxiety and that they could act with boldness. However, this trickery is only able to work on those with mild fears. Those with high anxiety would ascribe

their fears to extraneous sources. Reduced fears will allow performers to act, and when they experience success, self-efficacy will increase (Bandura, 1977; Conley, 2015). In the life of teachers, a certain student, subject, or class may cause a heightened state of arousal due to low teacher mastery or behavior problems. However, if aroused teachers use calming techniques or positive self-talk, they can deescalate and believe they are able to meet expectations.

Foundational theories differ on their perspectives of the origin and motivation of self-efficacy. Expectancy theory states that self-efficacy evolves solely through the performers' actions. Social learning theory asserts that self-efficacy arises from various direct and indirect experiences (Bandura, 1977; Conley, 2015). Regarding the process of achieving self-efficacy, motivation theory and social learning theory are in opposition. Motivation theory, though not detailed enough for full comparison with other theories and their thoughts related to self-efficacy, maintains that new experiences stimulate efficacy motivation and continue when inquiring and exploring behaviors cause more fresh experiences, thus continuing to spiral onward toward self-efficacy. In social learning theory, self-efficacy predicts the incidence, generality, and tenacity of coping in difficult activities. Therefore, "people will approach, explore, and try to deal with situations within their self-perceived capabilities, but they will avoid transactions with stressful aspects of their environment they perceive as exceeding their availability" (Bandura, 1977, p. 203).

Finally, self-efficacy is dependent on whether the performer attributes their success to ability or effort. Performance success through little effort increases self-efficacy because the performer infers greater ability. However, performance success brought about from great effort implies less ability, and, therefore, lower self-efficacy. Additionally, success at easy tasks does

not affect feelings of self-efficacy, because those experiencing minor setbacks will increase self-efficacy if there is progress over the long term (Bandura, 1977).

Conley (2015) echoed Bandura's (1977) findings in a study about principals' and teachers' beliefs about self-efficacy on student learning. Mastery experiences, vicarious experiences, social praise, and physiological experiences are all ways to improve self-efficacy (Conley, 2015). Teachers with high self-efficacy have greater motivation, expectations, and feelings of responsibility for student achievement. Teachers with low self-efficacy shift blame for poor performance, do not persevere in delivering good instruction, and are not motivated to improve (Conley, 2015).

Bandura (1986) explained the relationship of self-efficacy and social cognitive theory. The ability to predict future consequences is one cognitive origin of motivation. Another cognitive origin of motivation is making self-rewarding choices (Bandura, 1977). “. . . the concept of self-efficacy is assigned a central role, for analyzing changes achieved in fearful and avoidant behavior” (Bandura, 1977, p. 193). Self-efficacy predicts future performance since self-efficacy provides an expectation of success or failure in activities and expectations influence how much effort is put forth. Further, the higher the self-efficacy, the greater effort will be made (Bandura, 1977). Additionally, when assessing self-efficacy, measures should be environment and activity specific (Bandura, 1986), such as teacher self-efficacy scales to measure the self-efficacy of teachers.

Sense of Community

The idea of *sense of community*, also called psychological sense of community, began in 1986 with the work of McMillan and Chavis (Peterson et al., 2008). Sense of community is a four-aspect theory which includes *membership*, a perception of belonging, *influence*, a sense of

meaning, *integration and fulfillment of needs*, support and benefit, and *emotional connection*, shared history, time, and experiences (McMillan & Chavis, 1986).

Membership includes the concepts of boundaries, security, belonging and identification, personal investment, and a common symbol (McMillan & Chavis, 1986). The notion of *influence*, which affects a community member's sense of community, works in two directions. The individual influences group practice, and the group influences individual behaviors (McMillan & Chavis, 1986). Individuals join groups in which they can make a difference. The strength of the group-individual bond includes conformity and community. The group and individuals consent to join and influence each other at the same time to create a bond (McMillan & Chavis, 1986). A strong community provides *reinforcement* and *fulfillment* of individuals' needs. Status, community success, and member competence provide effective community reinforcement. Communities fill many needs. Individual values drive the group's ability to prioritize and organize need fulfillment (McMillan & Chavis, 1986). *Shared emotional connection* relates to the quantity and quality of individual interaction within the group to build strong bonds. Individual and group interactions need definition, purpose, and closure or the bond will weaken. Difficulty or tragedy, as well as spirituality shared by a group increase the community bond. Finally, individual investment and intimacy increases group cohesiveness (McMillan & Chavis, 1986). This present study will evaluate the sense of community in special education teachers and look for a relationship to self-efficacy.

Related Literature

Self-Efficacy

Although individual teacher self-efficacy does not directly relate to student achievement (Bandura, 2012), self-efficacy and collective efficacy (the ability of a group) do influence student

achievement (Holzberger, Philipp, & Kunter, 2013; Klassen & Tze, 2014; Moolenaar et al., 2012). Teacher self-efficacy is typically based on teachers' perception of their abilities in the areas of classroom management, instructional strategies, and student engagement (Shaukat & Iqbal, 2012; Tschannen-Moran & Hoy, 2001). Classroom management refers to the teacher's ability to establish and maintain order so that learning can be maximized (Emmer & Stough, 2001). Instructional strategies refer to the ways teachers present information. These strategies could include discovery, explicit instruction, and lecture. Student engagement is the extent to which students are emotionally involved in the instruction and learning (Skinner & Belmont, 1993). Perceived ability in these areas influence teachers' overall job satisfaction.

In order to determine whether teacher self-efficacy was an American, Western, or global concept, Vieluf, Kunter, & van de Vijver (2013) detailed the differences and similarities in the concepts of self-efficacy in 23 countries and analyzed the means of each country's teacher self-efficacy in relation to cultural values. Vieluf, Kunter, & van de Vijver (2013) related teacher self-efficacy to the four common components of job satisfaction, structuring teaching practices, student orientation teaching practices, and enhanced activities teaching practices. They found correlations between teacher self-efficacy and job satisfaction and between self-efficacy and structuring, student orientation, and enhanced activities teaching practices among countries. Thus, Vieluf et al. (2013) concluded that self-efficacy means the same thing in the different countries studied.

In comparing the countries' self-efficacy average scores, Vieluf et al. (2013) found extreme variance with Norway to have the highest ranking by far and the Republic of Korea the lowest. The results indicated that there was a negative correlation between self-efficacy and collectivism, leading the researchers to conclude that in countries that value interdependence,

teachers report higher levels of self-efficacy. Additionally, modesty, collectivism, and extremity scoring were related to each other and linked to self-efficacy. Vieluf et al. (2013) found that while self-efficacy means the same thing in different countries, teachers in particular cultures rate themselves differently. Lower mean scores in Korea and other collectivistic countries result from extremity scoring related to modesty, rather than low self-efficacy.

Causes and detriments to teacher self-efficacy. Many situations or occurrences in teachers' lives enhance or prevent the development of high self-efficacy. School administrators can help increase self-efficacy by providing teachers with autonomy (Skaalvik & Skaalvik, 2014) and creating a positive school culture and climate (Conley, 2015). Teachers themselves can boost their self-efficacy by mastering content and strategies (Skaalvik & Skaalvik, 2014). Conversely, toxic environments (Beavans, Bradshaw, Meich, & Leaf, 2007), lack of administrative support, and conflict with students and colleagues lower self-efficacy (Skaalvik & Skaalvik, 2016). Therefore, through differing circumstances, teacher self-efficacy can be enhanced or diminished.

Skaalvik and Skaalvik (2014) found that autonomy and self-efficacy positively correlate. Further, self-efficacy and autonomy were both positively related to engagement and job satisfaction. Because autonomy provides flexibility to choose instructional strategies, it makes teachers responsible for their choices and the consequences. Greater autonomy is then “. . . strongly related to engagement and job satisfaction for high self-efficacy teachers” (Skaalvik & Skaalvik, 2014, p. 70). Conley (2015) listed several ways to improve self-efficacy. First is to experience mastery of teaching skills. Mastery of concepts, strategies, or techniques boosts the feelings of ability to teach well. Watching and learning from others' successes in similar circumstances, affirmation from colleagues or superiors, and successful completion of psychological exercises such as positive self-talk and relaxation techniques increase self-efficacy.

Autonomy (Skaalvik & Skaalvik, 2014), mastery of teaching skills, observation, affirmation, and positive thinking (Bandura, 1977; Conley, 2015) increase teacher self-efficacy.

Additionally, school climate and culture affect self-efficacy (Conley, 2015). Creation of a positive school climate is the duty of the principal. Principals' transformational leadership shapes teachers commitment to the school due to the climate created by principals. The culture and climate built by principals allows teaching teams to believe that they, as a teaching group, can influence student achievement (Dumay & Galand, 2012). Good teaching follows a positive school climate. A noxious situation lowers self-efficacy while a healthy culture has positive influence on teacher self-efficacy (Beavans et al., 2007). In order to enhance school climate to improve teacher self-efficacy, Conley (2015) recommended that principals and teachers have input in school improvements and provide for practical needs and that principals are supported so they can enable teachers to develop mastery.

Taking an opposite approach, Skaalvik and Skaalvik (2016) looked at seven likely stressors (discipline problems, time pressure, low student motivation, conflict with colleagues, lack of supervisory support, value conflict, and student diversity) that relate to symptoms of burnout and lower self-efficacy. They found that participants who experienced value conflict, low student motivation, and lack of supervisory support also reported symptoms of burnout and low self-efficacy. Therefore, teachers who experience the studied stressors are more likely to have symptoms of burnout and have low self-efficacy.

Malinen et al. (2013) studied self-efficacy of teachers who taught students with disabilities in special education schools, pullout classrooms, and in regular education settings in Beijing, China, Eastern and Southwest Finland, and South Africa. The predictors of self-efficacy were experience in teaching students with disabilities, teaching experience, interaction with people with

disabilities, and the amount of training related to inclusive education. The three aspects of self-efficacy they investigated were instruction, behavior management, and collaboration.

Collaboration involved other teachers, parents, and other professionals.

Although the Malinen et al. (2013) study focused on other countries, many of the basic special education concepts are similar to those in the currently or historically provided in the United States. Special education services are provided for children with disabilities that affect their success in school. Pennsylvania supports and services, like many other states, include learning support, emotional support, autistic support, life skills support, multiple disability support, and others (Commonwealth of Pennsylvania Department of Education, Special Education, 2008). School districts provide services to special education students in three general settings. One is in the regular education setting, which is a classroom with typical students. Another is pullout classrooms, where students with disabilities are “pulled-out” of the regular classroom to receive specialized instruction. Yet another is a school whose sole population is students with disabilities. School districts choose the placement depending on the severity of the students’ disabilities.

The results from the teachers in China showed that teaching experience with students with disabilities significantly affected their efficacy in instruction, collaboration, and in behavior management. “Special education teachers considered themselves more efficacious in collaboration, while the mainstream teachers felt they were more efficient in managing student behavior than their colleagues in special education” (Malinen et al., 2013, p. 39). The researchers plausibly explained the discrepancy between special education teachers and their mainstream counterparts by the teaching context. The special education teachers worked with students who were more profoundly affected by their disabilities, whereas the students in the mainstream

classrooms were less disabled and more able to follow rules and attend to instruction. It is more difficult to teach and manage students with more severe disabilities; therefore, it is not surprising that teachers of mildly disabled students would have higher self-efficacy than would teachers of students with severe or profound disabilities.

In Finland, schools have provided inclusive education for many years as well as pullout programs. Teachers from special education only schools were not included in the survey. Finnish results showed that both experience teaching students with disabilities and the amount of training related to inclusive education influenced all three self-efficacy factors. Notably, male teachers rated themselves higher in their ability to prevent and manage student behavior problems than did female teachers (Malinen et al., 2013). Because of Finland's history of providing specialized education opportunities for students with disabilities, Finnish teachers showed high self-efficacy.

In South Africa, few of the studied schools provided separate classes for students with mild disabilities. Additionally, teachers from schools with only special needs students were included in the study. The results from South Africa showed that both experience in teaching students with disabilities and previous interactions with persons with disabilities affected all three self-efficacy factors. Remarkably, older teachers showed higher self-efficacy for behavior management than did their younger colleagues indicating that older teachers were able to get students to follow school rules (Malinen et al., 2013).

Previous research shows numerous causes of higher self-efficacy in teachers. Autonomy (Skaalvik & Skaalvik, 2014), positive school climate and culture (Beavans et al., 2007; Conley, 2015), input into school improvements, and supervisory support (Conley, 2015) cause teachers to have higher self-efficacy. General teaching experience, teaching and working with students with disabilities, and pre-service and in-service training cause special educators to have higher self-

efficacy (Malinen et al., 2013). Clearly, mastery of teaching skills, watching and learning from others, affirmation from colleagues and supervisors, and motivational strategies cause higher self-efficacy (Conley, 2015). Conversely, a toxic school climate (Beavans et al., 2007), value conflict, low student motivation, and lack of supervisor support decrease teacher self-efficacy (Skaalvik & Skaalvik, 2016).

Teacher benefits of high self-efficacy. The main teacher benefits of high self-efficacy are lower levels of burnout and increased job satisfaction. Aloe et al. (2014) found that when teachers have good classroom management self-efficacy, they have lower levels of emotional exhaustion, depersonalization, and (low sense of) personal accomplishment, three aspects of burnout. Self-efficacy positively predicted job satisfaction and negatively predicted emotional exhaustion (Skaalvik & Skaalvik, 2014).

Høigaard et al. (2012) studied how teacher self-efficacy influences job satisfaction, burnout, and the intention to quit. They found a negative correlation to self-efficacy and work engagement and job burnout. Vigor, meaning “. . . mental resilience and energy while working, and the willingness to invest effort in the work and persistence even in the face of difficulties” (Høigaard et al., 2012, p. 350) and dedication were negative predictors to job burnout. Thus, teachers with high self-efficacy are more satisfied with their jobs, have more vigor, fewer symptoms of burnout, and do not intend to quit teaching.

Høigaard et al. (2012) also found that vigor is negatively related to job burnout and the intention to quit but has little impact on job satisfaction. Additionally, they found that self-efficacy and work engagement positively correlated to job satisfaction. Self-efficacy and work engagement were negatively correlated to the intention to quit. Further, there is a negative correlation between self-efficacy and work engagement and intention to quit. Logically, there is a

positive relationship between job burnout and intention to quit. Finally, they found that vigor and dedication were negative predictors for intention to quit, yet, absorption, meaning the state of being fully focused and attached to work, is a positive predictor to burnout and intention to quit (Høigaard et al., 2012).

Additionally, Holzberger et al. (2013) and Klassen and Tze (2014) found that teachers with higher self-efficacy had higher instructional quality. Holzberger et al. (2013) studied the correlations between self-efficacy and the facets of instructional quality of cognitive activation, classroom management, and individual learning support as rated by both the teachers and students in short- and long-term time lapses. Study data showed positive correlations between teacher self-efficacy and instructional quality as rated by both students and teachers at both times. Intercorrelations within groups were different for students and teachers. For the short-term time, teacher ratings only correlated two of the three components of instructional quality, cognitive activation, and classroom management. For the long-term time, teacher ratings only correlated cognitive activation and individual learning support, whereas student ratings for all aspects of instructional quality were interrelated. Therefore, higher self-efficacy seems to lead to better instruction.

Dicke et al. (2014) found evidence that classroom management self-efficacy relates to classroom disruptions and emotional exhaustion. Their results showed that teachers with high classroom management self-efficacy reported fewer classroom disruptions. Further, they found that the number of classroom disturbances predicted emotional exhaustion. Therefore, high classroom self-efficacy means fewer classroom disruptions, which, in turn, means less emotional exhaustion.

Skaalvik and Skaalvik (2016) studied the predictability of stress and self-efficacy on engagement, emotional exhaustion, and motivation to leave teaching in Norwegian senior high school teachers. They found that self-efficacy negatively correlated with emotional stress and exhaustion. Alternately, they found that lack of supervisor support and confidence, low student motivation, and value conflicts directly affected self-efficacy and engagement, which influenced motivation to quit (Skaalvik & Skaalvik, 2016).

School and student benefits of high teacher self-efficacy. Higher teacher self-efficacy benefits students as well as teachers. Conley (2015) shared the benefits of positive self-efficacy in teachers. Teachers with high self-efficacy are persistent in their drive to be effective in teaching, regardless of background or learning difficulties. They develop positive relationships with students. Teachers with high self-efficacy find ways to improve instruction to benefit all students and have high motivation, expectations, and shared responsibility for student learning. Conversely, teachers with poor self-efficacy exhibit less motivation and effort to provide strong instruction, do not build relationships, blame others for difficulties, and are not self-motivated (Conley, 2015).

Studies show strong relationships between having a teacher with strong self-efficacy and increased student motivation (Midgley et al., 1989). These students also show improved self-efficacy (Anderson et al., 1988), higher reading levels, and increased achievement (Armor et al., 1976; Ashton & Webb, 1986; Moore & Esselman, 1992; Ross, 1992). Additionally, Klassen and Tze (2014) found in their meta-analysis of 43 studies moderate, yet significant, relationships between teacher self-efficacy and student achievement levels. So, many students who have teachers with high self-efficacy have greater motivation and higher levels of achievement.

Teachers with strong self-efficacy are more willing to consider new ideas to help their students (Berman et al., 1977; Guskey, 1988; Stein & Wang, 1988). Additionally, teachers with strong self-efficacy are less critical (Ashton & Webb, 1986) and more willing to invest time in struggling students (Gibson & Dembo, 1984). Further, teachers with high self-efficacy are less likely to refer difficult or culturally- and linguistically-diverse students to special education (Chu, 2011; Meijer & Foster, 1988; Podell & Soodak, 1993; Soodak & Podell, 1993).

In a study on resilience in new teachers, Hong (2012) found that teachers who left the field were lacking in self-efficacy. Teachers leaving education specifically commented on having poor classroom management self-efficacy. Teachers in this study with one difficult student or a group of troublemakers, in spite of good lesson plans, left teaching within five years.

Ways to increase self-efficacy. Teachers and school administrators can take particular actions to increase self-efficacy in teachers working with students with typical or special needs, and students with limited English proficiency. One way is to use the *lesson study* method of developing, implementing, evaluating, and adjusting lesson plans and teaching (Chong & Hong, 2012). Another way is to provide for positive experiences with students with special needs (Leyser, Zeigler, & Romi, 2011). Other ways to increase teacher self-efficacy include providing training, sufficient resources, and professional development (Kraut, Chandler, & Hertenstein, 2016).

In a study regarding the attrition of new science teachers, Hong (2012) found that supportive administration increased classroom management self-efficacy. One teacher in the study commented that she could “. . . call on anyone and they’ll help me take care of it, so [she didn’t] have to worry about anything, discipline, because the teachers and the administration trust [her] and [she trusts] them” (p. 428). Another teacher stated that she does not need to worry

about discipline. She refers offending students to the administration and the Assistant Principal resolves the issue. When school principals dealt with classroom discipline issues, the study participants' classroom management self-efficacy increased.

Chong and Hong (2012) found that the protocol and collaboration of the *lesson study* method of developing, implementing, evaluating, and adjusting lesson plans and teaching increase self-efficacy in teachers in Singapore. The lesson study method is a cyclical approach in which small groups of same grade or content area teachers work together to improve student learning. First, the team plans the lesson together. Then, one teacher presents the lesson to a class and the rest of the team observes and evaluates the quality of instruction. Later, the team discusses the lesson and observation and makes improvements. Next, another teacher presents the revised lesson to a different class while the rest of the team observes. "This cycle is repeated and typically takes 6-9 weeks to complete" (p. 266). This consistent teamwork and improvement of lessons increase the teachers' self-efficacy.

Chong and Hong (2012) cited previous studies that stated that there are particular attitudes, behaviors, and characteristics teachers with high self-efficacy display. Chong and Hong (2012) submitted that the lesson plan method of instruction provides many opportunities to develop, sustain, and support the attitudes, behaviors, and characteristics of teachers with high self-efficacy. For example, the lesson plan method requires lesson development as a team; therefore, teachers develop a sense of collective ownership. Observation and constructive criticism allow teachers to improve their lesson delivery. Increased teacher motivation occurred due to the safe atmosphere required in the lesson plan method. The lesson plan method supports increased teacher self-efficacy.

Leyser et al. (2011) found in their study of general and special education preservice teachers in Israel working with students with special learning needs that the number of years of college preparation did not increase general or personal teaching self-efficacy or self-efficacy for teaching students with special needs. However, teachers with more years of college did feel more successful in “. . . fostering positive peer interactions and [providing] a supportive social environment in the classroom” (p. 250). Confidence in promoting a positive social environment is important because, many times, students with special learning needs are included in the regular education environment to improve social skills.

Additionally, Leyser et al. (2011) found that having experience working with students with special learning needs demonstrated higher general and personal teaching self-efficacy, efficacy for socialization, and self-efficacy for teaching students with special needs. The experience garnered by teachers occurred in pre-field student learning experience, tutoring, mentoring, and summer camps. Finally, the amount of training in special education and inclusion affects self-efficacy. Student teachers with intensive training had higher personal self-efficacy and self-efficacy for teaching students with special needs. Teachers with little, no, or some training felt low self-efficacy for those two areas. However, those with some and those with intensive training felt similarly highly effective for general self-efficacy and social self-efficacy.

Contrary to the work of some researchers (Droogenbroeck, Spruyt, & Vanroelen, 2014; Skaalvik & Skaalvik, 2011; Zembylas & Papanastasiou, 2006) who found that conflict with colleagues negatively correlated with self-efficacy, Skaalvik and Skaalvik (2016) found in their study of Norwegian senior high school teachers that conflict with colleagues was not related to self-efficacy. One potential explanation is that the other studies included elementary and middle school participants while Skaalvik and Skaalvik (2016) only studied senior high school teachers.

This difference could mean that because of team-based teaching at the lower levels and not at the senior high level, colleague conflict does not have as great an influence on self-efficacy (Skaalvik & Skaalvik, 2016).

Kraut et al. (2016) evaluated the roles of training, access to resources, experience, and professional development on the self-efficacy of English as a Second Language (ESL) reading teachers. In this study, self-efficacy was limited to student engagement and instructional strategies. The mean score of the participants for student engagement efficacy was 3.6 out of 5. The mean score of the participants for instructional strategies efficacy was 4.11 out of 5. Kraut et al. (2016) found positive correlations between student engagement efficacy and the amount of training, access to useful resources, and years of experience. There was not a significant correlation between student engagement efficacy and the amount of professional development. Similarly, in regards to instructional strategies efficacy, Kraut et al. (2016) found positive correlations with the amount of training, access to useful resources, and years of experience, but not the amount of professional development. Kraut et al. (2016) noted that the teachers involved in this study received little or no professional development, but during the interview portion of the study, participants believed that a good way to improve their skills would be to receive high quality professional development that was “. . . ‘regular’ and ‘ongoing’ and [was] conducted by ‘expert teachers who specialize in ESL reading’” (p. 142).

From the Kraut et al. (2016) study, it can be deduced that training, access to useful resources, experience, professional development are ways to increase teacher self-efficacy. School districts have the ability to determine the amount and quality of these things. New teachers, generally, come to a position with the needed training to be successful. However, when they do not, school districts can offer reimbursement for college tuition for continuing education.

Districts also have the responsibility to provide teachers with useful resources to support teachers' and students' educational needs. Additionally, school districts can provide in-service professional development opportunities for teachers. Finally, by providing targeted professional development, school districts who work to prevent burnout and attrition will keep experienced teachers in the classroom where they can provide their valuable service.

From the Malinen et al. (2013) study it is understood that one commonality between the participants from China, Finland, and South Africa is teacher experience. This clearly shows the connection between experience and self-efficacy. The implication is that providing teachers with teaching experiences with students with disabilities will increase their self-efficacy for working with those students. However, Malinen et al. (2013) cautioned against providing experiences that would be too difficult or too easy for inexperienced teachers. Special education experiences without additional training and support that are too demanding could cause frustration and motivation to quit. Alternatively, special education experiences that are too easy could lead teachers to “. . . expect quick results and become soon discouraged when they encounter difficulties” (Malinen et al., 2013, p. 43).

Sense of Community

The idea of sense of community began in 1986 with the work of McMillan and Chavis (Peterson et al., 2008). Teachers' perceived sense of community directly relates to their self-efficacy (Collie et al., 2012; Moolenaar et al., 2012). Sense of community is a four-aspect theory which includes *membership*, a perception of belonging, *influence*, a sense of meaning, *integration and fulfillment of needs*, support and benefit, and *emotional connection*, shared history, time, and experiences (McMillan & Chavis, 1986). Within the idea of membership are also the concepts of

boundaries, security, belonging and identification, personal investment, and a common symbol (McMillan & Chavis, 1986).

From Billingsley and Cross's (1991) study of special education certified teachers who left special education classes to go to general education, one component of deterrents to staying in special education in was lack of support, which “. . . suggest[s] a sense of professional isolation. . .” (p. 505). Two items in the *lack of support* component related to lack of support provided by building and central office administration, and another item related to “Disagreement with special education policies/practices” (Billingsley & Cross, 1991, p. 504). Notably, three items related to support from colleagues—“Lack of cooperation regarding mainstreaming, Lack of understanding/appreciation for work from others, [and] Lack of interaction with other professionals/isolation” (p. 504). Administrative support components related to things administrators could control for both students and teachers, such as being knowledgeable and supportive, providing adequate related services (speech/language, occupational, and physical therapies, transportation, and psychological services), classroom materials and resources, and accurate disability diagnoses and placement of students (Billingsley & Cross, 1991). In this study, lack of support that caused special education teachers to leave special education included components of every aspect of the school community.

Culture, although different, is something related to sense of community. Four types of school culture, as described by Fullan and Hargreaves (1992), are individualism, contrived congeniality, Balkanization, and collaboration. In the individualism school culture, administrators encourage or allow teachers to complete their tasks alone. In the contrived congeniality culture, administrators mandate group work, which may, but not necessarily will, lead to genuine collaboration. In Balkanization, administrators actively isolate and conquer

individuals or groups of teachers. Finally, in true collaboration, teachers work together to provide support for each other. Additionally, types of school cultures range from positive to negative and aligned to misaligned (Kowalski, 2008). The type of culture lends itself to, or prevents, community building.

In his qualitative study in a Texas Catholic school, Madrid (2016) discovered connections between teacher friendships, retention, and enhanced instruction. Friendship between teachers allowed for confidences, venting, guidance, and encouragement. Principal leadership creates an environment that fosters inter-collegial friendships. Then, teachers work to provide support for each other year after year, which adds to the sense of community being built within the school.

Although not using the term sense of community, Skaalvik and Skaalvik (2011) “. . . examined the relations between teachers’ perception of six school context variables and their feeling of belonging, emotional exhaustion, job satisfaction, and motivation to leave the teaching profession” (p. 1036). The six school context variables studied were value consonance, supervisory support, relations with colleagues, parent relations, time pressure, and discipline problems. Skaalvik and Skaalvik (2011) found that value consonance, how teachers feel that their values agree with the norms of their place of employment, is directly and positively related to belonging as well as indirectly related to job satisfaction through belonging. Similarly, supervisory support, relations with colleagues, and parent relations are directly and positively related to belonging as well as indirectly related to job satisfaction through belonging. Not surprisingly, belonging is directly and negatively related to emotional exhaustion and motivation to leave the teaching field. Time pressure and discipline problems were not related to belonging.

Teacher benefits. Teachers benefit from a sense of community. New teachers with colleague support are more likely to stay in teaching and have lower rates of burnout than those

without that support (Jones, Youngs, & Frank, 2013). Inadequate collegial relationships negatively relate to teacher retention. Additionally, when new teachers, especially new special education teachers, feel like part of the school community, they are more likely to take advantage of professional resources found in the school, thus increasing their commitment to both their assignments and to their schools (Jones et al., 2013).

Another benefit of teacher friendships, and therefore, community, is the development of professional expertise (Madrid, 2016). Teachers share what they learned over the summer in various trainings with their colleagues, which stimulates ideas and excitement for the new school year. Intraschool friendships provide a venue for discussion and learning from each other. These friendships also allow teachers to share classroom success and talk about ways to make improvements and overcome difficulties.

School and student benefits. Schools and students benefit from teachers with high sense of community. Teacher friendships indirectly affect student performance (Madrid, 2016). Teachers with high sense of community are more likely to stay in their positions, which provides stability to the school community, and these teachers work harder to help achieve school goals than teachers with lower sense of community do (Jones et al., 2013). High sense of community allows teachers to improve their instructional methods and practices (Jones, Youngs, & Frank; 2013; Madrid, 2016). Finally, strong perceived sense of community directly relates to high teacher self-efficacy, which has many school and student benefits (Collie, Shapka, & Perry, 2012; Moolenaar, Slegers, & Daly, 2012). High sense of community in teachers advances schools and students goals.

According to Madrid (2016), teacher friendships indirectly affect student performance. Teacher friendships facilitate provision of superior learning environments and strategies. Teacher

collaboration provides support for meeting student learning and behavior difficulties or allowance for enrichment for gifted students. Further, teacher friendships model peace and cooperation in a working environment.

Coworker interaction such as support, collective responsibility, and fitting in with the group increases commitment to assignment and commitment to school. Teachers who are committed to their schools and assignments will work harder toward student achievement and school goals (Jones et al., 2013). For instance, schools with high turnover have a larger percentage of new teachers who, as a result of being inexperienced, are less effective than more seasoned teachers (Sass et al., 2012). Additionally, high teacher turnover results in a lack of continuity of instruction and stable staff relationships, which are needed for a strong sense of community. Finally, schools with high turnover must continually recruit and train more teachers to take the places of those who left (Simon & Johnson, 2013). A stable school workforce leads to increased student achievement.

Additionally, high sense of community allows teachers to improve their instructional techniques. The safety of a strong community allows teachers to take advantage of available resources without fear of judgement (Jones et al., 2013). The goals of professional learning communities are to improve schools and student learning through collaboration (DuFour, 2004). Finally, positive mentorship relationships encourage teacher improvement of teaching strategies and techniques (Martin, Buelo, & Hoffman, 2016). The safety of positive community, professional learning communities, and mentorships support teachers in improving instruction.

Further, a strong perceived sense of community directly relates to high teacher self-efficacy, which has many school and student benefits (Collie et al., 2012; Moolenaar et al., 2012). One school and student benefit of high teacher self-efficacy is lower burnout and attrition (Aloe et

al., 2014; Høigaard et al., 2012; Hong, 2012; Skaalvik & Skaalvik, 2010; Skaalvik & Skaalvik, 2014). Other school and student benefit of high teacher self-efficacy are better classroom management, improved instructional strategies, and increased student engagement (Allinder, 1994; Ashton & Webb, 1986; Berman et al., 1977; Chu, 2011; Meijer & Foster, 1988; Guskey, 1988; Stein & Wang, 1988; Tschannen-Moran & Hoy, 2001). High teacher sense of community relates to high teacher self-efficacy, which provides benefits to schools and students.

Teachers with high sense of community benefit schools and students. Student performance is indirectly affected by teacher friendships (Madrid, 2016). Teachers with high sense of community are more likely to stay in their positions, which provides stability to the school community and work harder to help achieve school goals than teachers with lower sense of community do (Jones et al., 2013). High sense of community allows teachers to improve their instructional methods and practices (Jones et al., 2013). Finally, strong perceived sense of community directly relates to high teacher self-efficacy, which has many school and student benefits (Collie et al., 2012; Moolenaar et al., 2012). Teachers with high sense of community advance school and student goals.

Ways to increase sense of community. Sense of community is something that teachers and school administrators can take steps to increase in teachers for the benefit of themselves and students. One way to increase sense of community is to develop and maintain genuine friendships in the school setting (Madrid, 2016). Teacher induction and mentoring programs are other ways to increase sense of community (Martin, Buelow, & Hoffman, 2016). The lesson study method of planning and delivery of lessons (Chong & Hong, 2012) and professional learning communities (Sass et al., 2012) are other ways to increase sense of community.

Increasing sense of community is something teachers and administrators can take an active role in accomplishing.

One way to develop sense of community in schools is through the pursuit of genuine friendship. Friendships between colleagues require personal commitment and time investment on teachers' part. However, schools need to implement policies and structures that support teachers' willingness to build friendships (Madrid, 2016). On the other hand, policies that inhibit friendship building “. . . are basing raises and contract renewal on standardized test performance, allowing parents to choose their children's teachers, providing preferred duties to favorite teachers and undesirable duties to the least favorite teachers, etc.” (p. 125). Principals establish the mood of safety and concern that enables positive sense of community to develop. Further, principals are part of the friendship system, not just a supervisor. Principals need to realize the part they play in the school community and consider cooperating with teachers as friends in order to maximize the benefits to the school (Madrid, 2016).

Another way to increase sense of community in schools is through teacher mentoring and induction programs, which provide support for new teachers. Martin et al. (2016) found that two types of mentors support middle school teachers. The first type of mentor is the one that provides basic, practical needs such as procuring supplies and helping with paperwork and orientation to the school building. The second type supports teaching methods and application. Relationships develop with the second type of mentoring. With these relationships, teaching improves through honesty and constructive criticism.

Another way to improve sense of community in schools is the use of the lesson study method of planning and delivering instruction. While Chong and Hong (2012) studied the role of the lesson study method in increasing self-efficacy, the protocols in the lesson study method

require collaboration and teamwork, which would increase sense of community. The lesson study method is a cyclical approach in which small groups of same grade or content area teachers work together to improve student learning. A small team of teachers develops a lesson plan. One teacher presents the lesson to students while the rest of the team observes and notes areas for improvement. The team makes the lesson improvements then another teacher presents the lesson and the others observe. This method provides a cooperative and safe atmosphere for lesson planning, delivery, and improvement.

A different way to encourage school community and reduce attrition is professional learning communities (Sass et al., 2012). Professional learning communities are groups of teachers and administrators who discuss classroom wins and challenges in a supportive environment with the purpose of improving instruction and classroom practices. Stoll, Bolam, McMahon, Wallace, & Thomas (2006) compiled a list of five key features of professional learning communities. First is shared values and vision, second is collective responsibility, third is reflective professional inquiry, fourth is collaboration, and last is promotion of group and individual learning.

Teachers, students, and schools benefit from a high sense of community in teachers. Teachers with high sense of community have lower rates of burnout (Jones et al., 2013). Therefore, they tend to stay in education longer (Jones et al., 2013; Sass et al., 2012). Further, high sense of community allows teachers to improve their teaching skills (Madrid, 2016; Sass et al., 2012). Lower burnout rates, lower attrition, and skill improvement benefits the entire school community. School district administrators can increase sense of community in their teachers by establishing professional learning communities (Sass et al., 2012), encouraging use of the lesson

study method (Chong & Hong, 2012), and becoming part of the friendship equation (Madrid, 2016).

Special Education Teachers

Special education teachers are a unique subgroup within the realm of educators. Special educators have many of the same responsibilities as general education teachers, such as providing instruction, creating and monitoring practice activities, creating and grading assessments, and creating a classroom environment conducive to learning. However, in special education, circumstances, such as the students' needs, parent expectations, and environment are more intense than what is experienced in regular education or are exclusive to the special education. As a result, experts realized the attrition of special education teachers was cause for concern sooner than they realized attrition was a problem for general educators and would be felt more deeply (McKnab, 1995; National Association of State Directors of Special Education, 1990).

In their seminal study, Billingsley and Cross (1991) surveyed 286 Virginia special education certified teachers who left special education to go to general education to find out why. Study participants shared that they found more satisfaction with their instructional duties in special education than their non-instructional duties. However, Billingsley and Cross (1991) found that when asked whether the teachers would be interested in returning to special education if they could choose a position, 36% of study participants said they would not be interested at all. Additionally, because of lack of administrative support, the excessive paperwork, discipline problems, and other factors, 25% said there was no incentive they could think of to lure them back to special education.

Distinctive duties. Special education teachers have many unique duties. In addition to teaching and grading papers, special education teachers have multiple layers of paperwork, such

as reevaluations done every two or three years, Individualized Education Plans (IEPs) to complete annually, and progress reports due quarterly. Also, special education teachers have additional meetings they need to schedule, organize, and attend (IDEA, 2004). Further, special education teachers are expected to write and modify curriculum and assessments so that students with disabilities have the same access to education as those students without disabilities. This study will focus on the relationship between sense of community and self-efficacy in special education teachers since they are a unique group of teachers.

Paperwork. Pennsylvania special education law, commonly called, Chapter 14, requires a variety of paper work (IDEA, 2004). IEPs are required to be renewed each year for every identified student, and revisions can happen at any time. Reevaluation reports occur at least every three years for students in most disability categories and every two years for students with an intellectual disability. Special education teachers monitor each of the students' goals for progress every week. Teachers compile progress reports approximately four times per school year to keep parents apprised of their children's progress toward their goals. Manifestation determinations identify whether student behavior that resulted in suspension was a result of the student's disability. Functional behavior assessments (FBA) aid in determining why students engage in certain behaviors. Often, following an FBA is a behavior plan (IDEA, 2004). This paperwork takes up 12% of teacher time in school (Jones et al., 2013). Klein (2004) estimated that special education teachers spend over 10 percent of their time on administrative duties. The onerous amount of administrative tasks is often a reason for special education teachers leaving the field. A study of special education certified teachers who left special education classes to go to general education rated *too much paperwork*, along with *too many students on caseload* as the highest deterrent to teaching satisfaction (Billingsley & Cross, 1991). *Too many students on caseload* is

directly related to *too much paperwork* because more students mean more IEPs, more progress reports, and more meetings.

In his study of novice special education teachers, Mehrenberg (2013) found that the teachers' feelings regarding paperwork were decidedly negative. The teachers said there was too much, and it was "overwhelming . . . and ridiculous" (Mehrenberg, 2013, p. 83). Problems teachers faced when dealing with paperwork were multi-tasking (teaching and writing multiple IEPs), time management, and ambiguity. Teachers find paperwork to be ambiguous because there are different interpretations of the state and federal guidelines. The teachers related that their pre-service instruction in paperwork completion was minimal. However, through colleague support, the novice teachers learned how to complete the paperwork and with practice became adept. If schools or individual teachers provide a positive sense of community to novice teachers by providing assistance and support with paperwork, new teacher self-efficacy should increase, thus lowering the chance new teachers will leave the field.

Meeting preparation and direction. Special education teachers need to schedule, prepare for, and run many meetings during the school year. While at least one regular education teacher is required to attend IEP (the annual renewal and revising of the Individualized Education Plan) and manifestation determination (the meeting to determine whether a student's behavior that led to suspension for 15 days was a manifestation of the student's disability or not) meetings, the special education case manager is required to attend all meetings (IDEA, 2004). Teachers found balancing meetings, paperwork, and instruction to be difficult (Jones et al., 2013; Mehrenberg, 2013). In addition to special education meetings, teachers are required to attend faculty meetings and multiple department meetings. One of this researcher's special education supervisors

conservatively estimated that preparation and wrap up of each meeting takes two and a half hours, which is not taking into account the meeting time itself.

Modifying curriculum. Special education teachers are regularly asked to adapt curriculum for individual student learning needs. Curriculum modifications are part of inclusive education (Janney & Snell, 2013). These modifications include changing tests from essay or short answer questions to matching or multiple choice for students with writing disabilities or adjusting test length for students with attention and focus difficulties. Some students need fewer options on multiple choice and matching assessments because they are easily confused or distracted by too many choices. Additionally, instructional modifications could include adding more manipulatives or representations to math lessons, including more visuals, or altering discovery-based learning to explicit teaching. Student success with the modifications would positively contribute to teacher self-efficacy (Bandura, 1977; Bandura, 1986; Conley, 2015).

Distinctive stressors. Jones et al. (2013) found that being a special education teacher is a significant predictor of teacher attrition. They asserted that new general education teachers' roles are defined and school districts provide support and mentoring to assist them in their transition from student to teacher. However, special education teachers' duties are less clearly defined than those of general education teachers. That ambiguity appears in the task of developing, modifying, differentiating, and delivering curriculum in multiple subjects at multiple levels. Further, special education teachers may be confused about how to balance responsibilities, prioritize, and find their place in the education system. These feelings affect teacher self-efficacy and their commitment to the school and students (Jones et al., 2013).

Parent interaction. Parents of special education students have needs that are as varied as the students' needs. Some parents try to effectively parent their children and navigate the special

education system while they themselves cope with learning disabilities, intellectual disabilities, or autism spectrum disorders. Some parents may provide difficulties for special education teachers for a variety of reasons. One teacher experienced hostile parents due to misplaced parent guilt, ongoing grieving, and denial of their children's true disabilities and needs for success.

Additionally, interference from outside agencies may polarize parent-teacher relationships.

Although both parties generally strive for student success, differing perspectives or goals can create or exacerbate disagreement. Although it was not high on the list of deterrents to teaching in special education, problems with parents is an obstacle to teacher satisfaction (Billingsley & Cross, 1991).

High-need students. Student related reasons for special education attrition include discipline problems and lack of progress. Lack of progress occurs when, due to the severity of students' disabilities, children do not make sufficient progress toward their goals even though the teachers work diligently to teach to the best of their abilities. Teacher and student success may be limited in spite of high teacher effort because of the paperwork load, high student-teacher ratios, and lack of support. One component of deterrents to staying in special education in Billingsley and Cross's (1991) study of special education certified teachers who left special education classes to go to general education was student concerns. These concerns are greater than similar concerns in regular education since special education teachers may work with a wide variety of student needs at one time and may spend more time with particular students than regular education teachers do. Items in this component of deterrents to returning to special education included demands of working with special education population, lack of student progress related to teacher effort, difficult and disruptive students, too much time with the same students, too much diversity of student need, and problems with parents.

The high attrition rate of teachers of students with emotional and behavior disorders is well documented. However, administrative support in the areas of guidance and feedback, opportunities for growth, and appreciation, and trust, which were important to surveyed teachers, were higher for teachers who intended to stay in education for the long-term (Cancio, Albrecht, & Johns, 2013). Further, these types of administrative support increased job satisfaction and positive views about the school. When administrators provide teachers of students with emotional and behavior disorders with emotional support, such as guidance, appreciation, trust, and informational support, such as guidance and opportunities for growth and guidance and feedback, are more satisfied with their work and intend to stay in teaching longer (Cancio et al., 2013).

Many special education teachers work with students who have intense needs. The severity of need in certain special education populations causes stress on the teachers. Disciplinary problems, lack of student progress, and increased paperwork add to workload and emotional stress. These stresses can manifest themselves as burnout and culminate in special education teachers leaving the field.

Distinctive needs. Special education teachers have many of the same needs, such as administrative and collegial support, training and development, and appreciation, as their regular education counterparts, but they also have distinctive needs. Bettini et al. (2016) studied how the administrators in one particular school district created a culture of effective special education teachers. First, the administrators identified, defined, and taught the district's values of the worth of all people, the appreciation of service, and the esteem of relationships. After hiring talented and passionate teachers, the administrators continue to “. . . unify staff around a common mission, so that everyone's efforts are directed toward shared goals . . .” (p. 10). Additionally,

administrators provide a variety of supports including emotional support, communication, modeling, professional development, and help with problem solving and streamlining work.

Jones et al. (2013) contended that special education teachers, especially new teachers, depend on support provided by mentors and colleagues and often benefit more than general education teachers do. Further, new special education teachers are more likely to stay in special education when supported by their coworkers. Additionally, new special educators struggle to create and modify curriculum, clarify their assignments, and positively interact with general educators. Collegial support is necessary for new teachers to understand expectations; prioritize personal beliefs, professional expectations, and professional norms; and manage relationships and acquire support of colleagues (Jones et al., 2013).

Support of coworkers predicted special education teachers' commitment to their assignments. Conversely, the link between colleague support and assignment commitment for regular education teachers is minimal (Jones et al., 2013). Additionally, Jones et al. (2013) found that collective responsibility strongly predicted commitment to school for special education teachers but not for general education teachers.

In spite of all the difficulties in special education, teachers stay in schools with distinguished mentorship (Moore-Abdool & Voigt, 2007). First, an experienced colleague who exhibits professionalism and builds a relationship provides support for a new teacher that will increase longevity. Next, mentors and novices need to have ample time to meet, observe, and debrief. Mentors and new teachers should also be located in close proximity to each other. Mentorship programs must provide structure and flexibility. Finally, the main reason good mentors are needed is so novice teachers can learn from the experience of others to gain

confidence in all of the many tasks required of special education teachers (Moore-Abdool & Voigt, 2007).

Summary

High teacher attrition makes school environments non-cohesive which leads to inefficiency in producing student development and achievement (Schaefer, Long, & Clandinin, 2012). Special education teachers are especially susceptible to stressors that lead to burnout. For some teachers, dealing with high need students, difficult parents, paperwork, and meetings pushes them to their limits and beyond.

High sense of community has been linked to lower rates of burnout, and inadequate collegial support is related to higher rates of attrition (Jones et al., 2013). Students benefit indirectly by receiving improved instruction. School-sponsored community building includes professional learning communities, induction programs, and mentorship and new teacher induction programs.

Self-efficacy in teachers has many benefits for students, schools, and teachers. Student and benefits include increased motivation (Midgley et al., 1989) and their own increased self-efficacy (Anderson et al., 1988). Teacher benefits include increased instructional quality (Holzberger et al., 2013; Klassen & Tze, 2014), fewer classroom disruptions (Dicke et al., 2014), less burnout, lower rates of attrition (Aloe et al., 2014; Høigaard et al., 2012), and increased job satisfaction (Skaalvik & Skaalvik, 2014).

Although the duties and needs of special education teachers are well documented, there is a gap in the literature linking special education teachers and their sense of community in the school setting. Additionally, in spite of links between friendship, school culture, and self-efficacy, there is another gap in the literature providing a clear relationship between sense of

community and self-efficacy. Finally, the current study will investigate the possibility of a relationship between sense of community and special education teacher self-efficacy.

CHAPTER THREE: METHODS

Design

The research design for this study was a quantitative correlational design using one group and two instruments for comparison. Correlational design was appropriate for this study because “correlational research refers to studies in which the purpose is to discover relationships between variables through the use of correlational statistics” (Gall, Gall, & Borg, 2007, p. 332). The criterion variable was self-efficacy in special education teachers. The predictor variable was perceived sense of community.

Research Questions

RQ1: Is there a statistically significant relationship between special education teachers’ sense of community within the school and their sense of self-efficacy?

RQ2: Is there a statistically significant relationship between perceived sense of community and self-efficacy in high school special education teachers?

RQ3: Is there a statistically significant relationship between perceived sense of community and self-efficacy in elementary special education teachers?

Null Hypotheses

The null hypotheses for this study were:

H₀1: There is no statistically significant relationship between special education teachers’ sense of community within the school as measured by the Sense of Community in School Scale (SCSS) and their sense of self-efficacy as measured by the Teacher Sense of Efficacy Scale, Short (TSES).

H₀2: There is no statistically significant relationship between high school special education teachers’ perceived sense of community within the school as measured by the Sense of

Community in School Scale (SCSS) and their perceived sense of self-efficacy as measured by the Teacher Sense of Efficacy Scale, Short (TSES).

H₀₃: There is no statistically significant relationship between elementary special education teachers' perceived sense of community within the school as measured by the Sense of Community in School Scale (SCSS) and their perceived sense of self-efficacy as measured by the Teacher Sense of Efficacy Scale, Short (TSES).

Participants and Setting

The participants for the study were drawn from a convenience sample of elementary, middle, and high school special education teachers from school districts in a Mid-Atlantic state during the fall of the 2017-2018 school year. The school districts were non-city districts. The sample consisted of 21 male and 173 female teachers, approximately 90% female and 10% male.

Questionnaires from 88 elementary teacher participants and 72 secondary teacher participants were collected, which is in excess of the minimum of 66 as outlined by Gall et al. (2007). Additionally, 34 middle school teachers participated for inclusion in the *all* teachers category. According to Gall et al. (2007), for medium effect size with a statistical power of .7 and an alpha of .05, a minimum of 66 participants were needed.

Instrumentation

The Sense of Community in School Scale (SCSS) is a survey used to determine teachers' level of perceived sense of community in school. It was developed and validated by Admiraal and Lockhorst (2012). Cronbach's alpha reliability scores are below.

- Overall ($\alpha = 0.80$)
- Group Identity ($\alpha = 0.90$)
- Shared Interactional Repertoire ($\alpha = 0.70$)

- Shared Domain ($\alpha = 0.76$)
- Emotional Safety ($\alpha = 0.84$)
- Tolerance for individual differences ($\alpha = 0.81$)
- Meaningful Relationships ($\alpha = 0.79$)

The SCSS is a 33-question, five-point Likert type scale that ranged from Does Apply Very Much to Does Not Apply At All. Responses were as follows: Does Apply Very Much = 5 and Does Not Apply At All = 1. The SCSS was appropriate for use in this study because it measures sense of community in the school setting. While the scale has been validated for pre-service and in-service teachers (Admiraal & Lockhorst, 2011), this study was limited to in-service teacher sense of community. Items 4, 6, 10, 16, 21, and 33 relate to *group identity*. Items 7, 15, 17, 22, 30, 32 relate to *shared domain*. Items 5, 13, 25, and 27 relate to *interactional repertoire*. Items 2, 8, 18, 19, 26, and 31 relate to *emotional safety*. Items 1, 3, 9, 12, 20, and 29 relate to *tolerance for individual differences*. Items 11, 14, 23, 24, and 28 relate to *meaningful relationship*.

The SCSS was used in one other study (Wendt & Rockinson-Szapkiw, 2015). It is appropriate for use in this study because it measures teachers' sense of community. Permission to use the SCSS was granted and the permission letter can be found in Appendix A.

The Teacher Sense of Efficacy Scale, Short (TSES, short) also known as the Ohio State Teacher Efficacy Scale (OSTES) was developed by Tschannen-Moran and Hoy (2001). Cronbach's alpha scores are below.

- Over all ($\alpha = 0.90$)
- Efficacy for instructional strategies ($\alpha = 0.86$)
- Efficacy for classroom management ($\alpha = 0.86$)
- Efficacy for student engagement ($\alpha = 0.81$)

The TSES, short is a 12-question nine-point Likert type scale that ranged from A Great Deal to None At All. Responses were as follows: A Great Deal = 9, Quite A Bit = 7, Some Degree = 6, Very Little = 3, and None At All = 1. Additionally, demographic questions of sex, racial identity, subjects, grades, and levels taught, years of teaching experience, school context (urban, suburban, and rural), and percentage of free and reduced lunch students are included. The possible scores on the TSES, short range from 12 to 108 points. A score of 12 points is the lowest possible score, meaning that the responder has very low self-efficacy. A score of 108 points is the highest, meaning that the responder has extremely high self-efficacy. Items 2, 4, 7, and 11 relate to efficacy in student engagement. Items 5, 9, 10, and 12 pertain to efficacy in instructional strategies. Items 1, 3, 6, and 8 apply to efficacy in classroom management.

The instrument was used in numerous studies (Fives & Buehl, 2009; Skaalvik & Skaalvik, 2007; Tschannen-Moran, & Hoy, 2007). It is appropriate for use in this study because it measures teacher beliefs about self-efficacy. Permission to use the TSES was granted, and a letter can be found in Appendix A.

Procedures

First, Institutional Review Board (IRB) approval was secured. While in the process of and following IRB approval, letters were sent to superintendents of targeted school districts to request permission to survey their special education teachers. Permission from four school districts was granted, and an email with the survey link was sent for disbursement to special education teachers. Additionally, recruitment emails were sent directly to special education teachers in non-city school districts in the target state

Surveys were collected by Survey Monkey. When enough surveys were completed, the survey link was closed, and data analysis began. All surveys were anonymous.

Data Analysis

A bivariate correlation coefficient was used for this study because it “. . . is a statistic that enables us to describe in mathematical terms the strength of the relationships between two variables” (Gall et al., 2007, p. 137). Continuous data from both scales was used. The Pearson product moment coefficient was applied for this study because it is used with interval or ratio data (Gall et al., 2007).

The following are the assumptions for the Pearson product moment coefficient (Rockinson-Szapkiw, 2013, p. 24)

- (a) Normality: This assumption assumes that the population distributions are normal. Check for normality by creating histograms or by conducting normality tests, such as the Shapiro-Wilk and 21 Kolmogorov-Smirnov tests. On the histogram, normality is assumed when there is a symmetrical, bell shaped curve. For the normality tests, non-significant results (a significance level more than .05) indicate tenability of the assumption. That is, normality can be assumed.
- (b) Independent Observations: This assumption requires that the observations within each variable must be independent.
- (c) Linearity: This assumption assumes the relationship between the two variables is linear. Check for linearity using a scatterplot; a roughly straight line (no curve) indicates that the assumption is tenable.
- (d) Homoscedasticity: This assumption assumes the variability in scores in both variables should be similar. Check for homoscedasticity using a scatterplot; a cigar shape indicates that the assumption is tenable.

The effect size was reported. An alpha of .017 was used due to Bonferroni Correction in order to avoid making a Type 1 error (Warner, 2013).

This quantitative correlational study investigated the relationship between sense of community and self-efficacy in special education teachers. Eighty-eight elementary, 72 secondary, and 34 middle school special education teachers participated in the study by answering two surveys presented online. The Sense of Community in School Scale and the Teacher Sense of Efficacy Scale, Short were used in conjunction to find the study results.

CHAPTER FOUR: FINDINGS

Overview

This chapter will share the results of this study investigating the relationship between sense of community and self-efficacy in special education teachers. One hundred ninety-four special education teachers answered questions from two surveys. Descriptive statistics for the SCSS and TSES for all special education teacher participants, high school participants, and elementary participants are provided. Additionally, descriptive statistics for the subscales for each test for each group are given. Finally, the correlation data for each group is supplied.

Research Questions

RQ1: Is there a statistically significant relationship between special education teachers' sense of community within the school and their sense of self-efficacy?

RQ2: Is there a statistically significant relationship between perceived sense of community and self-efficacy in high school special education teachers?

RQ3: Is there a statistically significant relationship between perceived sense of community and self-efficacy in elementary special education teachers?

Null Hypotheses

The null hypotheses for this study were:

H₀1: There is no statistically significant relationship between special education teachers' perceived sense of community within the school as measured by the Sense of Community in School Scale (SCSS) and their perceived sense of self-efficacy as measured by the Teacher Sense of Efficacy Scale, short.

H₀2: There is no statistically significant relationship between high school special education teachers' perceived sense of community within the school as measured by the Sense of

Community in School Scale (SCSS) and their perceived sense of self-efficacy as measured by the Teacher Sense of Efficacy Scale, short.

H₀₃: There is no statistically significant relationship between elementary special education teachers' perceived sense of community within the school as measured by the Sense of Community in School Scale (SCSS) and their perceived sense of self-efficacy as measured by the Teacher Sense of Efficacy Scale, short.

Descriptive Statistics

Table 1 shows the descriptive statistics for the responses of all teachers in the SCSS. The SCSS total scores range was 33-165. The mean of the total score was 120, which was 3.6 on the scale, indicating that overall, the teachers' sense of community was just below *does apply*. The mean of the Tolerance for Individual Differences (TID) subscale (6-30) was 21, which was 3.5 on the scale, indicating between *neutral* and *does apply*. The mean of the Emotional Safety (ES) subscale (6-30) was 22.8, which was 3.8 on the scale, indicating just below *does apply*. The mean of the Group Identity (GI) subscale (6-30) was 23.3, which was 3.9 on the scale, indicating just below *does apply*. The mean of the Shared Interactional Repertoire (IR) subscale (4-20) was 11.5, which was 2.9 on the scale, indicating just below *neutral*. The mean of the Shared Domain (SD) subscale (6-30) was 23.4, which was 3.9 on the scale, indicating just below *does apply*. The mean of the Meaningful Relationships (MR) subscale (5-25) was 20.3, which was 4 on the scale, indicating *does apply*.

Table 2 shows the descriptive statistics for the responses of all teachers in the TSES. The TSES, Short total scores range was 12-108. The mean of the total score was 86, which was 7 on the scale indicating that over all, the teachers' sense of efficacy was *quite a bit*. The mean of the Efficacy in the Student Engagement subscale (4-36) was 27, which was 6.75 on the scale,

indicating just under *quite a bit*. The mean of the Efficacy in Instructional Strategies subscale (4-36) was 29, which was 7.25 on the scale, indicating just over *quite a bit*. The mean of the Efficacy in Classroom Management subscale (4-36) was 29, which was 7.25 on the scale, indicating just over *quite a bit*.

Table 1

Descriptives for All Teachers Sense of Community in School Scale

	<i>M</i> SE	<i>M</i>	95 % CI		5% Trimmed <i>M</i>	Med.	Var.	<i>SD</i>	Min	Max	Range	IQ Range	Skewness	Skewness SE	Kurtosis	Kurtosis SE
			Lower	Upper												
Total Score	1.66	120.06	116.79	123.33	120.79	124.00	533.65	23.10	60.00	160.00	100.00	32.00	-.49	.18	-.56	.35
TID	.31	21.09	20.48	21.70	21.14	22.00	18.56	4.31	8.00	30.00	22.00	6.00	-.26	.175	-.25	.35
ES	.33	22.84	22.18	23.49	23.00	24.00	21.69	4.66	11.00	30.00	19.00	6.25	-.50	.18	-.55	.35
GI	.35	23.29	25.59	23.99	23.51	24.00	24.35	4.93	10.00	30.00	20.00	7.00	-.53	.18	-.59	.35
IR	.26	11.46	10.96	11.97	11.43	12.00	12.71	3.56	4.00	20.00	16.00	5.00	.00	.18	-.66	.35
SD	.35	23.36	22.66	24.06	23.61	24.00	24.48	4.95	10.00	30.00	20.00	7.00	-.68	.18	-.39	.35
MR	.27	20.28	19.75	20.81	20.47	21.00	13.96	3.74	10.00	25.00	15.00	6.00	-.57	.18	-.54	.35

Notes. TID=Tolerance for Individual Differences, ES=Emotional Safety, GI=Group Identity, IR=Shared Interactional Repertoire, SD=Shared Domain, MR=Meaningful Relationships, SE = Standard Error

Table 2

Descriptives for All Teachers Teacher Sense of Efficacy Scale

	<i>M</i> SE	<i>M</i>	95 % CI		5% Trimmed <i>M</i>	Med.	Var.	<i>SD</i>	Min	Max	Range	IQ Range	Skewness	Skewness SE	Kurtosis	Kurtosis SE
			Lower	Upper												
Total Score	.69	86.00	84.65	87.35	86.10	86.00	91.17	9.55	51.00	107.00	56.00	12.00	-.17	.18	.26	.35
IS	.31	21.09	20.48	21.70	21.14	22.00	18.56	4.31	8.00	30.00	22.00	6.00	-.26	.175	-.25	.35
CM	.27	29.47	28.94	30.01	29.57	29.00	14.22	3.77	12.00	36.00	24.00	5.00	-.42	.18	1.53	.35
SE	.30	27.18	26.59	27.77	27.25	27.00	17.60	4.20	12.00	36.00	24.00	6.00	-.25	.18	.27	.35

Notes. IS = Instructional Strategies, CM = Classroom Management, SE = Student Engagement

Table 3 shows the descriptive statistics for the responses of elementary teachers in the SCSS. The SCSS total scores range was 33-165. The mean of the total score was 124, which was 3.8 on the scale indicating that over all, the teachers' sense of community is just under *does apply*. The mean of the Tolerance for Individual Differences (TID) subscale (6-30) was 22, which was 3.7 on the scale, indicating just under *does apply*. The mean of the Emotional Safety (ES) subscale (6-30) was 19, which was 3.2 on the scale, indicating just above *neutral*. The mean of the Group Identity (GI) subscale (6-30) was 23.5, which would be 3.9 on the scale, indicating just below *does apply*. The mean of the Shared Interactional Repertoire (IR) subscale (4-20) was 11.6, which was 2.9 on the scale, indicating just below *neutral*. The mean of the Shared Domain (SD) subscale (6-30) was 23.7, which was 3.95 on the scale, indicating just below *does apply*. The mean of the Meaningful Relationships (MR) subscale (5-25) was 20.6, which would be 4 on the scale, indicating *does apply*.

Table 4 shows the descriptive statistics for the responses of elementary teachers in the TSES. The TSES, Short total scores range was 12-108. The mean of the total score was 87, which was 7 on the scale indicating that, over all, the teachers' sense of efficacy was *quite a bit*. The mean of the Efficacy in the Student Engagement subscale (4-36) was 27.8, which was 6.95 on the scale, indicating just under *quite a bit*. The mean of the Efficacy in Instructional Strategies subscale (4-36) was 29, which was 7.25 on the scale, indicating just over *quite a bit*. The mean of the Efficacy in Classroom Management subscale (4-36) was 29.9 on the scale, which was 7.5, indicating just over *quite a bit*.

Table 3

Descriptives for Elementary Sense of Community in School Scale

	<i>M</i> SE	<i>M</i>	95 % CI		5% Trimmed <i>M</i>	Med.	Var.	<i>SD</i>	Min	Max	Range	IQ Range	Skewness	Skewness SE	Kurtosis	Kurtosis SE
			Lower	Upper												
Total Score	2.50	124.13	119.16	129.09	124.88	127.00	549.21	23.44	61.00	164.00	103.00	37.50	-.38	.26	-.56	.35
TID	.44	21.84	20.97	22.72	21.92	22.00	17.08	4.13	11.00	30.00	19.00	6.00	-.27	.26	-.47	.51
ES	.41	19.31	18.49	20.13	19.46	19.00	14.93	3.86	10.00	25.00	15.00	5.75	-.34	.26	-.53	.51
GI	.50	23.45	22.45	24.46	23.65	24.00	22.39	4.73	13.00	30.00	17.00	7.75	-.48	.26	-.62	.51
IR	.38	11.59	10.83	12.35	11.52	12.00	12.96	3.60	5.00	20.00	15.00	5.00	.20	.26	-.59	.51
SD	.51	23.74	22.73	24.75	24.02	25.00	22.56	4.75	10.00	30.00	20.00	7.00	-.72	.26	-.15	.51
MR	.41	20.56	19.75	21.37	20.82	21.00	14.62	3.82	10.00	25.00	15.00	6.00	-.70	.26	-.23	.51

Notes. TID=Tolerance for Individual Differences, ES=Emotional Safety, GI=Group Identity, IR=Shared Interactional Repertoire, SD=Shared Domain, MR=Meaningful Relationships, SE = Standard Error

Table 4

Descriptives for Elementary Teacher Sense of Efficacy Scale, Short

	<i>M</i> SE	<i>M</i>	95 % CI		5% Trimmed <i>M</i>	Med.	Var.	<i>SD</i>	Min	Max	Range	IQ Range	Skewness	Skewness SE	Kurtosis	Kurtosis SE
			Lower	Upper												
Total Score	1.04	87.11	85.04	89.18	87.15	87.00	95.48	9.77	65.00	107.00	42.00	14.75	-.03	.26	-.51	.51
IS	.39	29.42	28.64	30.20	29.46	29.00	13.44	3.67	21.00	36.00	15.00	5.00	-.04	.26	-.59	.51
CM	.40	29.86	29.06	30.67	29.98	30.00	14.34	3.79	20.00	36.00	16.00	4.00	-.20	.26	-.27	.51
SE	.45	27.83	26.93	28.73	27.92	28.50	18.21	4.27	18.00	36.00	18.00	6.00	-.31	.26	-.36	.51

Notes. IS = Instructional Strategies, CM = Classroom Management, SE = Student Engagement

Table 5 shows the descriptive statistics for the responses of high school teachers in the SCSS. The SCSS total scores range was 33-165. The mean of the total score was 118.9, which was 3.6 on the scale indicating that overall, the teachers' sense of community was just below *does apply*. The mean of the Tolerance for Individual Differences (TID) subscale (6-30) was 17, which was 2.8 on the scale, indicating just below *neutral*. The mean of the Emotional Safety (ES) subscale (6-30) was 22, which was 3.7 on the scale, indicating just below *does apply*. The mean of the Group Identity (GI) subscale (6-30) was 22.8, which was 3.8 on the scale, indicating just below *does apply*. The mean of the Shared Interactional Repertoire (IR) subscale (4-20) was 11, which was 2.75 on the scale, indicating just below *neutral*. The mean of the Shared Domain (SD) subscale (6-30) was 22.7, which was 3.8 on the scale indicating just below *does apply*. The mean of the Meaningful Relationships (MR) subscale (5-25) was 19.9, which was 4 on the scale, indicating *does apply*.

Table 6 shows the descriptive statistics for the responses of high school teachers in the TSES. TSES, Short total scores range was 12-108. The mean of the total score was 85.8, which would be 7 on the scale indicating that over all, the teachers' sense of efficacy was *quite a bit*. The mean of the Efficacy in the Student Engagement subscale (4-36) was 26.8, which was 6.7 on the scale, indicating just under *quite a bit*. The mean of the Efficacy in Instructional Strategies subscale (4-36) was 29.5, which was 7.4 on the scale, indicating just over *quite a bit*. The mean of the Efficacy in Classroom Management subscale (4-36) was 29.5, which was 7.4 on the scale, indicating just over *quite a bit*.

Table 5

Descriptives for High School Sense of Community in School Scale

	<i>M</i> SE	<i>M</i>	95 % CI		5% Trimmed <i>M</i>	Med.	Var.	<i>SD</i>	Min	Max	Range	IQ Range	Skewness	Skewness SE	Kurtosis	Kurtosis SE
			Lower	Upper												
Total Score	2.96	118.86	112.97	124.76	119.30	124.50	629.30	25.09	67.00	164.00	97.00	35.50	-.38	.28	-.84	.56
TID	.46	17.06	16.14	17.97	17.10	17.50	15.04	3.88	7.00	25.00	18.00	6.00	-.29	.28	-.29	.56
ES	.55	21.97	20.87	23.07	22.10	23.00	21.83	4.67	11.00	30.00	19.00	7.75	-.41	.28	-.84	.56
GI	.60	22.82	21.63	24.01	23.02	24.00	25.76	5.08	10.00	30.00	20.00	8.00	-.45	.28	-.60	.56
IR	.45	11.11	10.22	12.01	11.09	11.50	14.50	3.81	4.00	19.00	15.00	6.00	-.08	.28	-.82	.56
SD	.64	22.68	21.40	23.97	22.89	24.00	29.88	5.47	11.00	30.00	19.00	9.00	-.49	.28	-.84	.56
MR	.44	19.86	18.98	20.74	19.96	20.00	13.95	3.74	13.00	25.00	12.00	5.75	-.39	.28	-.95	.56

Notes. TID=Tolerance for Individual Differences, ES=Emotional Safety, GI=Group Identity, IR=Shared Interactional Repertoire, SD=Shared Domain, MR=Meaningful Relationships, SE = Standard Error

Table 6

Descriptives for High School Teacher Sense of Efficacy Scale, Short

	<i>M</i> SE	<i>M</i>	95 % CI		5% Trimmed <i>M</i>	Med.	Var.	<i>SD</i>	Min	Max	Range	IQ Range	Skewness	Skewness SE	Kurtosis	Kurtosis SE
			Lower	Upper												
Total Score	1.01	85.78	83.76	87.80	85.79	85.50	73.84	8.59	66.00	106.00	40.00	12.00	.11	.28	-.10	.56
IS	.39	29.42	28.64	30.20	29.46	29.00	13.44	3.67	21.00	36.00	15.00	5.00	-.04	.26	-.59	.51
CM	.40	29.86	29.06	30.67	29.98	30.00	14.34	3.79	20.00	36.00	16.00	4.00	-.20	.26	-.27	.51
SE	.44	26.81	25.93	27.68	26.71	27.00	13.85	3.72	20.00	36.00	16.00	5.00	.42	.28	-.11	.56

Notes. IS = Instructional Strategies, CM = Classroom Management, SE = Student Engagement

Results

Null Hypothesis One

Correlation coefficients were conducted to evaluate the relationship between special education teachers' perceived sense of community within the school as measured by the Sense of Community in School Scale (SCSS) and their perceived sense of self-efficacy as measured by the Teacher Sense of Efficacy Scale, Short (TSES). Using the Bonferroni approach to control for Type I error across the correlations, a p value of less than .005 was required for significance. The result of the correlational analysis presented in Table 7 show that there was a low positive correlation between sense of community and self-efficacy in special education teachers. Null hypothesis one was accepted since the significance of .024 was more than .005.

Table 7

Correlations for Special Education Teachers

Measure		1	2
1. SCSS Total Score ($N = 72$)	Pearson's r	--	.162*
	p -value		.024
2. TSES Total Score ($N = 72$)	Pearson's r	.162*	--
	p -value	.024	

* Correlation is significant at the 0.05 level (2-tailed).

The assumptions tests for the Pearson product moment coefficient follow. Figure 1 and Figure 2 show that the distributions for all teachers on the SPSS were normal. Therefore,

normality can be assumed.

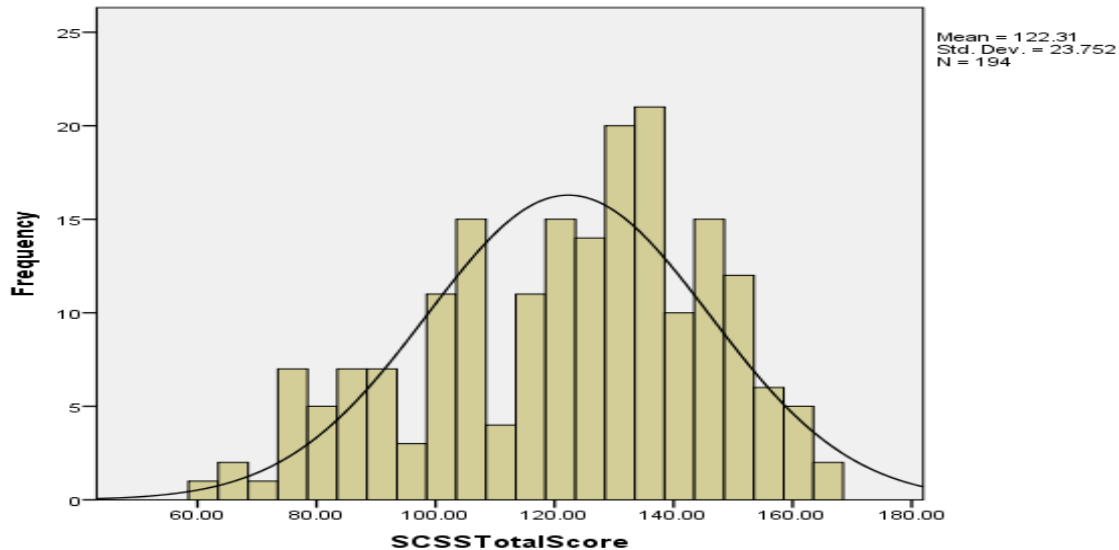


Figure 1. Histogram of SCSS Total Score for All Teachers.

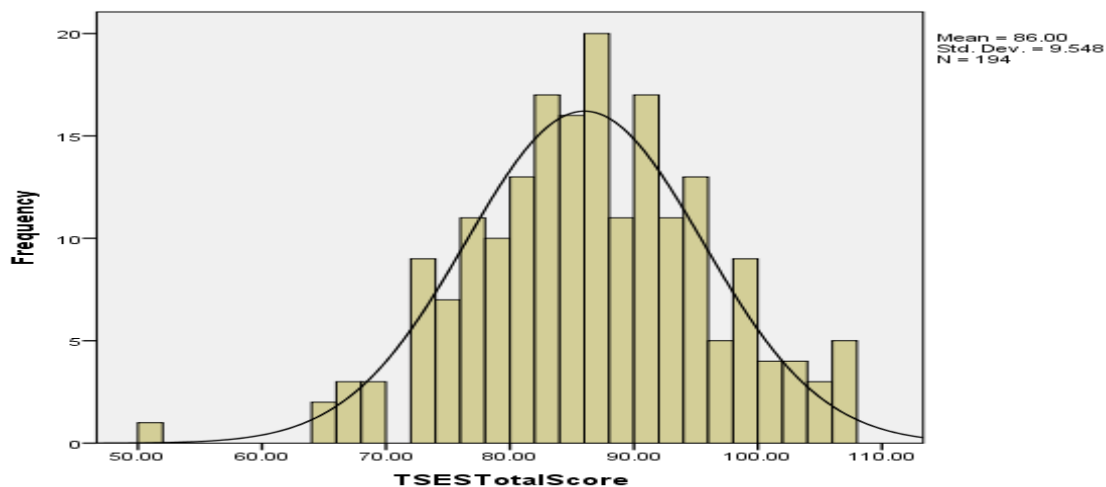


Figure 2. Histogram of TSES Total Score for All Teachers.

Figure 3 indicates the lack of linearity and the lack of homoscedasticity. The lack of a roughly straight line (no curve) indicates that the assumption is not tenable. The lack of cigar shape on this scatterplot indicates that the assumption of homoscedasticity was not tenable.

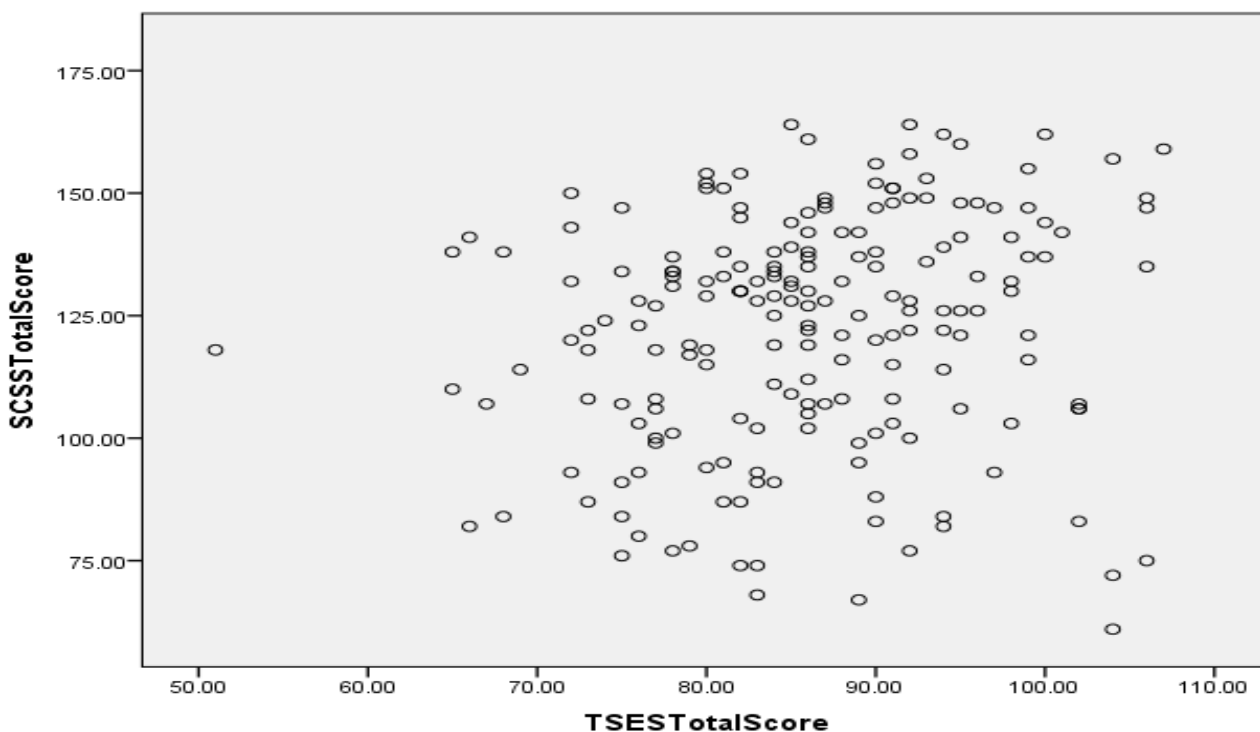


Figure 3. Scatterplot of SCSS and TSES Total Scores for All Teachers.

Null Hypothesis Two

Correlation coefficients were conducted to evaluate the relationship between high school special education teachers' perceived sense of community within the school as measured by the Sense of Community in School Scale (SCSS) and their perceived sense of self-efficacy as measured by the Teacher Sense of Efficacy Scale, Short (TSES). Using the Bonferroni approach to control for Type I error across the correlations, a p value of less than .005 was required for significance. The result of the correlational analysis presented in Table 8 show that there was a low positive correlation between sense of community and self-efficacy in special education teachers. Null hypothesis two was accepted since the significance of .190 was more than .005.

Table 8

Correlations for High School Special Education Teachers

Measure		1	2
1. SCSS Total Score (<i>N</i> = 72)	Pearson's <i>r</i>	--	.156
	<i>p</i> -value		.190
2. TSES Total Score (<i>N</i> = 72)	Pearson's <i>r</i>	.156	--
	<i>p</i> -value	.190	

The assumptions tests for the Pearson product moment coefficient follow. Figures 4 and 5 show that the distributions for all teachers on the SPSS are normal. Therefore, normality can be assumed.

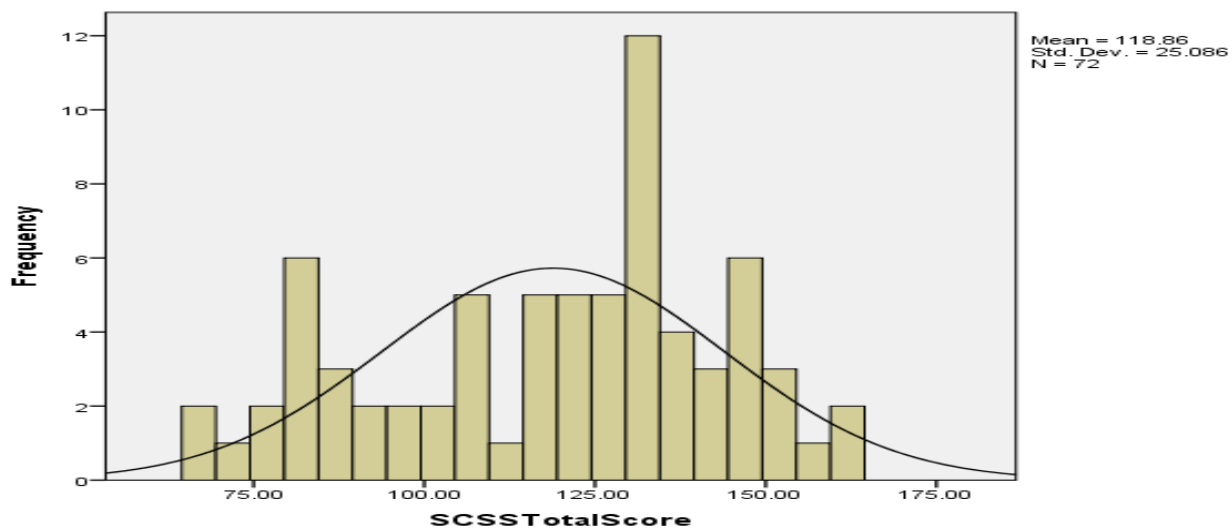


Figure 4. Histogram of SCSS Total Score for High School Teachers.

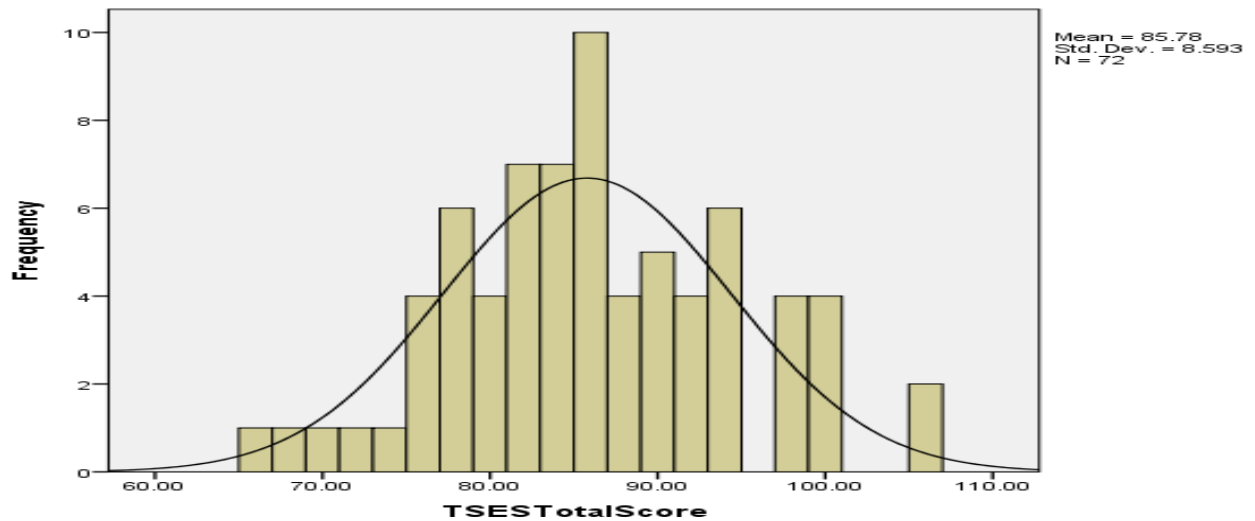


Figure 5. Histogram of TSES Total Score for High School Teachers.

Figure 6 indicates the lack of linearity and the lack of homoscedasticity. The lack of a roughly straight line (no curve) indicates that the assumption is not tenable. The lack of cigar shape on this scatterplot indicates that the assumption of homoscedasticity was not tenable.

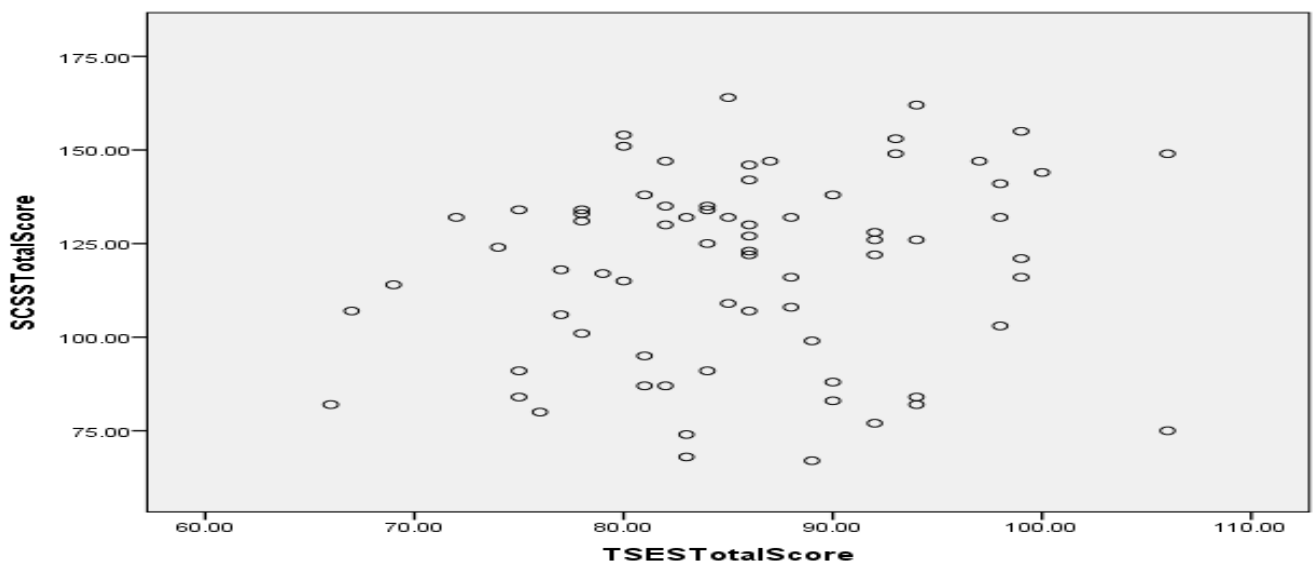


Figure 6. Scatterplot of SCSS and TSES Total Scores for High School Teachers.

Null Hypothesis Three

Correlation coefficients were conducted to evaluate the relationship between elementary special education teachers' perceived sense of community within the school as measured by the Sense of Community in School Scale (SCSS) and their perceived sense of self-efficacy as measured by the Teacher Sense of Efficacy Scale, Short (TSES). Using the Bonferroni approach to control for Type I error across the correlations, a p value of less than .005 was required for significance. The result of the correlational analysis presented in Table 9 show that there is a medium positive correlation between sense of community and self-efficacy in special education teachers. Null hypothesis three was rejected since the significance was less than 0.01.

Table 9

Correlations for Elementary Special Education Teachers

Measure		1	2
1. SCSS Total Score ($N = 88$)	Pearson's r	--	.303**
	p -value		.004
2. TSES Total Score ($N = 88$)	Pearson's r	.303**	--
	p -value	.004	

** Correlation is significant at the 0.01 level (2-tailed).

Figures 7 and 8 show that the distributions for all teachers on the SCSS were normal. Therefore, normality can be assumed.

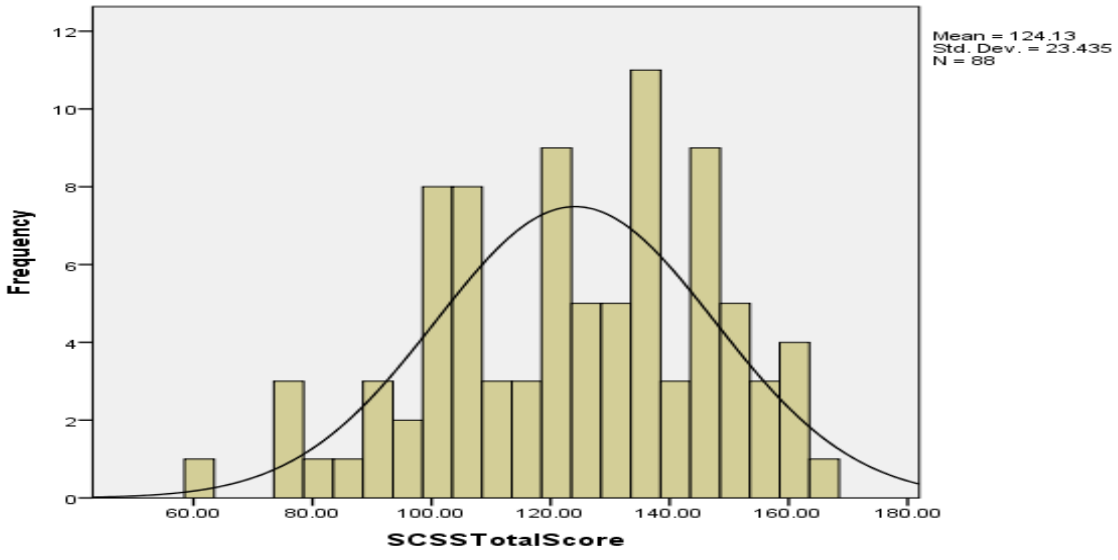


Figure 7. Histogram of SCSS Total Score for Elementary Teachers.

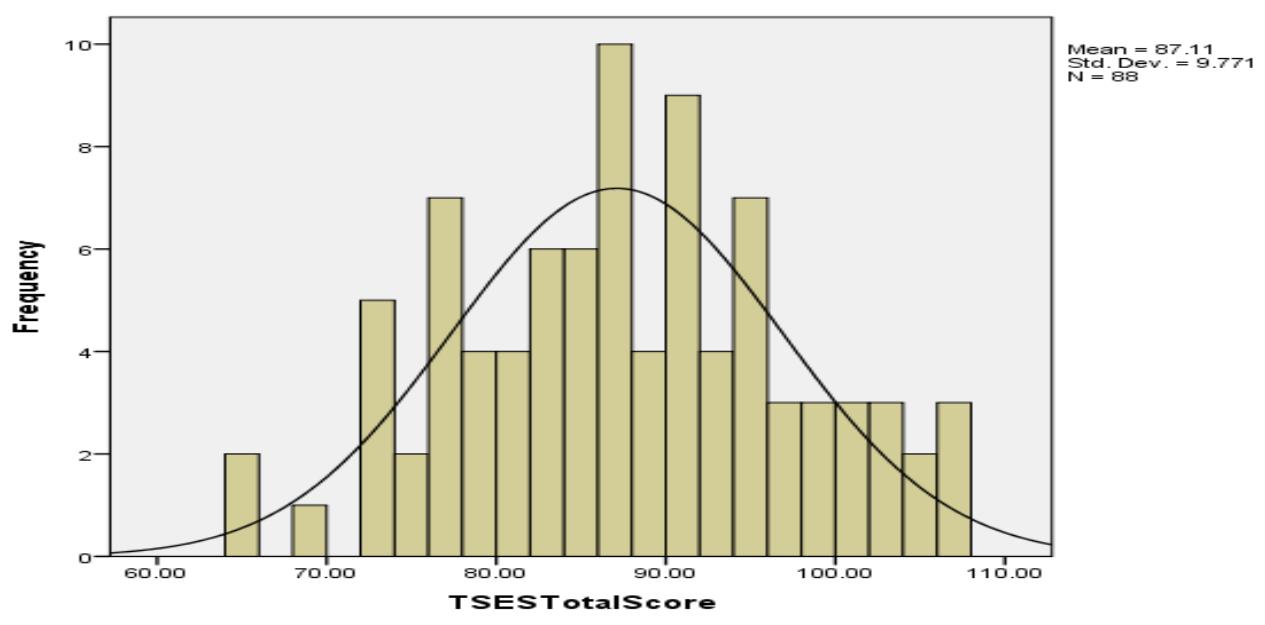


Figure 8. Histogram of TSES Total Score for Elementary Teachers.

Figure 9 indicates the lack of linearity and the lack of homoscedasticity. The lack of a roughly straight line (no curve) indicates that the assumption is not tenable. The lack of cigar shape on this scatterplot indicates that the assumption of homoscedasticity was not tenable.

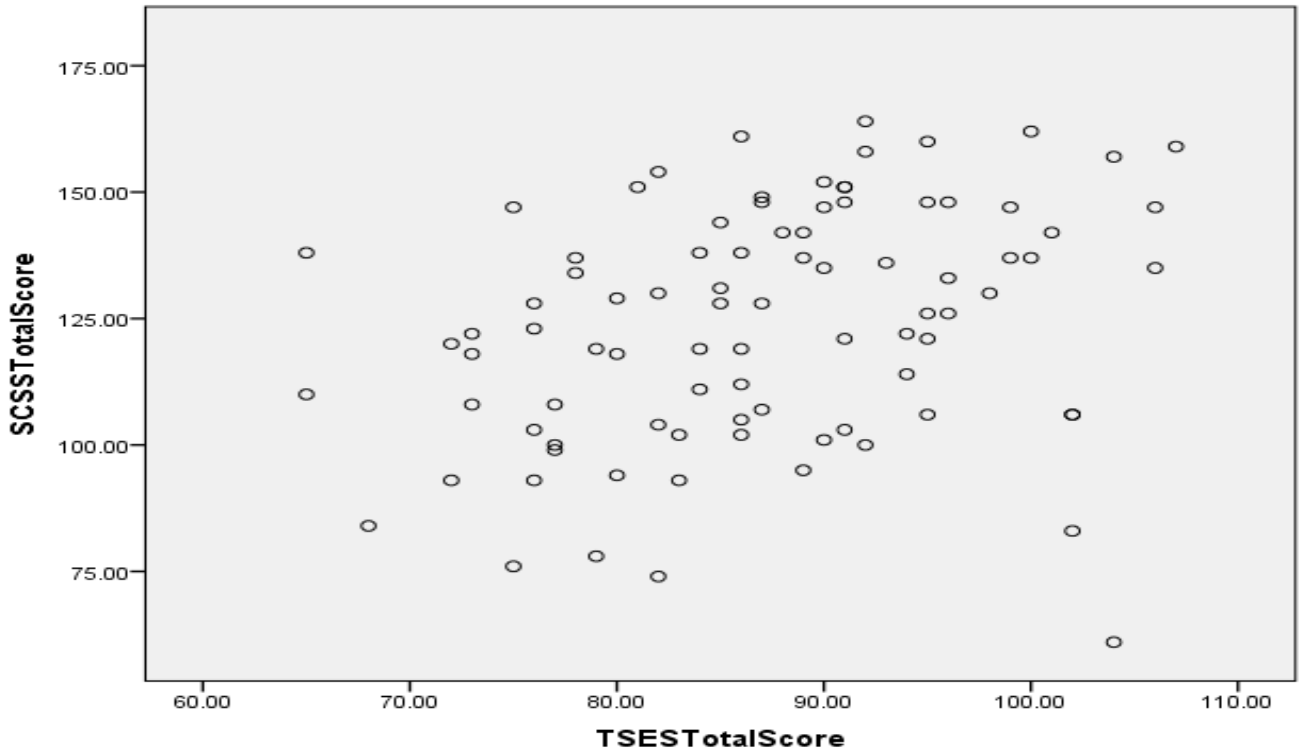


Figure 9. Scatterplot of SCSS and TSES Total Scores for Elementary Teachers.

CHAPTER FIVE: CONCLUSIONS

This chapter will explore the results of the study researching the relationship between sense of community and self-efficacy in special education teachers. The discussion reviews each hypothesis and the results of the study. The conclusions and implications sections take the results and explore their meaning and practical applications of them. The recommendations section offers additional ways to study sense of community and self-efficacy in more specific populations and settings of special education teachers.

Discussion

The purpose of this study was to determine if there was a relationship between sense of community and self-efficacy in special education teachers. Previous research shows a relationship between sense of community and self-efficacy (Collie et al., 2012; Moolenaar et al., 2012). Research also shows that higher self-efficacy in teachers relates to lower rates of burnout and attrition (Aloe et al., 2014; Høigaard et al., 2012; Skaalvik & Skaalvik, 2014). A sampling of special education teachers in one Mid-Atlantic state completed the Sense of Community in School Scale (SCSS) and the Teacher Sense of Efficacy Scale, Short (TSES). The results showed a small to medium positive correlation.

Null Hypothesis One stated that there is no statistically significant relationship between special education teachers' sense of community within the school as measured by the SCSS and their sense of self-efficacy as measured by the TSES. The results of the study showed sense of community scores just below *neutral to does apply*. Self-efficacy results showed higher scores from just under to just over *quite a bit*. A minimal positive correlation between sense of community and self-efficacy was shown for all levels of special education teachers. However, since the significance of .024 was more than .005, the null hypothesis was accepted.

Null Hypothesis Two stated that there is no statistically significant relationship between high school special education teachers' perceived sense of community within the school as measured by the SCSS and their perceived sense of self-efficacy as measured by the TSES. The results of the study showed sense of community scores just below *neutral to does apply*. Self-efficacy results showed higher results between *some degree* to over *quite a bit*. A small positive correlation between sense of community and self-efficacy for high school special education teachers was found. Null hypothesis two was accepted since the significance of .190 was more than .005. This finding supports the results of the study by Skaalvik and Skaalvik (2016) who found in their study of Norwegian senior high school teachers that conflict with colleagues was not related to self-efficacy. One potential explanation is that other studies include elementary and middle school participants while Skaalvik and Skaalvik (2016) only studied senior high school teachers. This difference could mean that because of team-based teaching at the lower levels and not at the senior high level, colleague conflict does not have as great an influence on self-efficacy (Skaalvik & Skaalvik, 2016).

Null Hypothesis Three stated that there is no statistically significant relationship between elementary special education teachers' perceived sense of community within the school as measured by the SCSS and their perceived sense of self-efficacy as measured by the TSES. The results of the study showed sense of community scores just below *does apply* to right on *does apply*. Self-efficacy scores showed higher results of just under to just over *quite a bit*. A medium positive correlation was found between sense of community and self-efficacy for elementary teachers. Therefore, null hypothesis three was rejected since the significance of .004 was less than 0.005.

Conclusions

There was a small positive relationship between sense of community and self-efficacy in special education teachers at all levels and at the high school level. However, there was not a significant correlation, so Null Hypothesis One and Null Hypothesis Two were accepted. There was a medium positive correlation between sense of community and self-efficacy for elementary teachers, so Null Hypothesis Three was rejected. High school special education teachers have lower overall sense of community and self-efficacy than elementary teachers and all participating special education teachers. Further, high school teachers had lower subscale scores for the SCSS except for *emotional safety*. High school teachers also had lower sub scale scores for the TSES except for *instructional strategies*.

Implications

The results of this study have implications for several groups of educational stakeholders. Teachers are the focus of the study and the most affected by sense of community and self-efficacy or the lack thereof. Second to the teachers, administrators have the ability to influence sense of community for their teachers. Finally, students are the benefactors of strong teacher self-efficacy. Three groups of educational stakeholders can learn from the results of this present study.

First, teachers are the focus of this study. One implication of the results of this study is that not all special education teachers are the same. Although this study does not delve into the differences in working environment, personality, or other differences between elementary and high school special educators, this study did find differences in sense of community and self-efficacy. Elementary and *all* participants had higher sense of community and self-efficacy overall than did high school participants. One could speculate that the team approaches in elementary

and middle school set up to support students provides support for special education teachers as well.

Although elementary and *all* participants had higher scores overall, high school participants had higher scores in *emotional safety* for sense of community and *instructional strategies* for self-efficacy. This researcher cannot speculate the reason for the higher *emotional safety* score, but the higher *instructional strategies* score could be related to teaching the same subject matter multiple times per day and working with regular education teachers who specialize in a particular subject. Teacher groups can work together to raise the sense of emotional safety and instructional strategies for elementary and middle school special education teachers as well as for their high school counterparts.

Scores for *shared domain* and *meaningful relationships* were the highest for all participant categories. Teachers should recognize the strengths they have as generally kind individuals who care for each other and their group in order to provide successful learning experiences for the students. Then, teachers should continue caring for each other in whichever way they do that best, whether that is through monthly potluck luncheons, going to a coffee shop after school, or going out for lunch on professional development days.

Next, administrators have the ability to influence sense of community for their teachers. There is a small relationship between sense of community and self-efficacy for high school participants and a medium correlation for elementary teacher participants. One suggestion is that special and regular education administrators be purposeful about increasing sense of community for special education teachers, especially elementary special education teachers.

On a different note, the sense of community subset of *interactional repertoire* was the lowest score for all groups. The items in the *interactional repertoire* category follow.

- This group takes time to discuss how we communicate.
- This group takes time to reflect and discuss how we work together as a whole.
- During meetings, people call for a “time out” when necessary to deal with potential problems so certain individuals do not go on feeling hurt or unheard.
- This group employs clear norms, rules, and laws (Admiraal & Lockhorst, 2012).

Administrators should consider taking time to evaluate the group’s working relationship and facilitate discussion on ways to improve this aspect of community.

Further, students benefit from having teachers with strong sense of community and self-efficacy. Teachers with good self-efficacy in classroom management enable students to learn in a safe and productive environment. Students with teachers who have teachers with strong self-efficacy in instructional strategies will learn more efficiently. Students who are effectively engaged by their teachers will learn more since they will be part of the learning experience. A strong sense of community and self-efficacy in teachers benefits students.

Finally, although Collie et al. (2012) and Moolenaar et al. (2012) found that strong perceived sense of community directly relates to high teacher self-efficacy, this study did not find similar results for elementary special education teachers or the group of *all* participants. However, like Collie et al. (2012) and Moolenaar et al. (2012), this study did show a correlation between sense of community and self-efficacy in elementary special education teachers. Also, the high scores for *shared domain* and *meaningful relationships* seem to provide support for Madrid’s (2016) finding that genuine friendships among teachers increase self-efficacy.

Limitations

There are several limitations to this study. The first limitation is the sample. The study participants were from only one state in the Mid-Atlantic region. A related limitation is that

surveys were completed by teachers who chose to complete them. It is possible that only teachers with enough margin in their lives to add another item to their “to-do” lists participated in the study. Another limitation is the lack of racial and developed environment (rural, suburban, and urban) diversity in the participants. Additionally, some teachers teach cross-level, which could confuse their sense of community and self-efficacy.

Recommendations for Future Research

Future research should include different school type such as city school districts, private schools, or charter schools. Next, researchers could look at the time of year teachers answer surveys. Additionally, future research could investigate the differences in teachers of students in certain age levels; years of experience; or disability categories, such as autism, emotional disturbance, intellectual disability, or multiple disabilities. In addition, future research could delve more deeply into reasons for the differences between elementary and high school teachers. Further, researchers could look into whether community-building activities are more effective when arranged by the teachers or by administrators. Finally, future research could use different instrumentation, such as the measure modified from Gibson and Dembo (1984) by Coladarci and Breton (1997) to use wording that specifically applies to special education.

Since research has shown a link between teacher attrition and burnout (Aloe et al., 2014; Høigaard et al., 2012; Hong, 2012; Skaalvik & Skaalvik, 2010; Skaalvik & Skaalvik, 2014) and burnout symptoms and low self-efficacy (Aloe et al., 2014; Skaalvik & Skaalvik, 2014), further study is needed to investigate the causes and preventative measures teachers and administrators can take to avert burnout and attrition. Additionally, researchers correlated sense of community and self-efficacy in some populations (Collie et al., 2012; Moolenaar et al., 2012). Hence, some may think that strong sense of community would positively correlate to strong self-efficacy in

special education teachers as well. However, this study did not fully support that conclusion. While there were positive correlations between sense of community and self-efficacy, the relationships were minimal and therefore, not significant for the group of all special education teachers or for high school special education teachers. The interaction between sense of community and self-efficacy in elementary special education teachers was only moderate. Further study has the potential to benefit the educational community by finding ways to increase sense of community and self-efficacy and lower teacher turnover.

REFERENCES

- Admiraal, W., & Lockhorst, D. (2012). *The sense of community in school scale* [Measurement instrument]. Emerald Group Publishing Limited. doi:10.1108/13665621211223360
- Adeyemi-Bello, T. (2001). Validating rotter's (1966) locus of control scale with a sample of not-for-profit leaders. *Management Research News*, 24(6), 25-34.
- Allinder, R. M. (1994). The relationship between efficacy and the instructional practices of special education teachers and consultants. *Teacher Education and Special Education*, 17, 86-95.
- Allinder, R. M. (1995). An examination of the relationship between teacher efficacy and curriculum-based measurement and student achievement. *Journal for Special Educators*, 16(4), 247-254.
- Aloe, A., Amo, L., & Shanahan, M. (2014). Classroom management self-efficacy and burnout: A multivariate meta-analysis. *Educational Psychology Review*, 26(1), 101-126.
doi:10.1007/s10648-013-9244-0
- Anderson, R., Greene, M., & Loewen, P. (1988). Relationships among teachers' and students' thinking skills, sense of efficacy, and student achievement. *Alberta Journal of Educational Research*, 34(2), 148-165.
- Armor, D., Conroy-Oseguera, P., Cox, M., King, N., McDonnell, L., Pascal, A., . . . & Zellman, G. (1976). Analysis of the school preferred reading programs in selected Los Angeles minority schools (Report No. R-2007- LAUSD). Santa Monica, CA: Rand Corporation
Retrieved from ERIC database (ED130243).
- Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. New York, NY: Longman.

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215. doi:10.1037/0033-295x.84.2.191
- Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of Social and Clinical Psychology*, 4(3), 359-373. doi:10.1521/jscp.1986.4.3.359
- Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management*, 38(1), 9-44. doi:10.1177/0149206311410606
- Beavans, K., Bradshaw, C., Meich, R., & Leaf, P. (2007). Staff-and school-level predictors of school organizational health: A multilevel analysis. *Journal of School Health*, 77, 294-302. <http://dx.doi.org/10.1111/j.1746-1561.2007.00210.x>
- Berman, P., McLaughlin, M., Bass, G., Pauly, E., & Zellman, G. (1977). Federal programs supporting educational change. Vol. VII: Factors affecting implementation and continuation (Report No. R-1589/7-HEW). Santa Monica, CA: The Rand Corporation
Retrieved from ERIC database (ED140432).
- Bettini, E., Benedict, A., Thomas, R., Kimerling, J., Choi, N., & McLeskey, J. (2016). Cultivating a community of effective special education teachers local special education administrators' roles. *Remedial and Special Education*, 38(2), 111-126.
- Billingsley, B. S., & Cross, L. H. (1991). Teachers' decisions to transfer from special to general education. *The Journal of Special Education*, 24(4), 496-511.
- Cancio, E. J., Albrecht, S. F., & Johns, B. H. (2013). Defining administrative support and its relationship to the attrition of teachers of students with emotional and behavioral disorders. *Education and Treatment of Children*, 36(4), 71-94.
- Chong, W. H., & Kong, C. A. (2012). Teacher collaborative learning and teacher self-efficacy: The case of lesson study. *The Journal of Experimental Education*, 80(3), 263-283.

- Chu, S. (2011). Teacher perceptions of their efficacy for special education referral of students from culturally and linguistically diverse backgrounds. *Education, 132*(1), 3-14.
- Coladarci, T., & Breton, W. A. (1997). Teacher efficacy, supervision, and the special education resource-room teacher. *The Journal of Educational Research, 90*(4), 230-239.
- Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology, 104*(4), 1189-1204. doi:10.1037/a0029356
- Commonwealth of Pennsylvania Department of Education, Special Education. (2008). *Special Education Services and Programs State Regulations*. <http://www.education.pa.gov/k-12/special%20education/pages/default.aspx>
- Conley, T. A. (2015). *Teacher and principals' beliefs about self-efficacy and the effects on student learning during school improvement: Perspectives from the field*. Northcentral University. ProQuest.com.
- Dicke, T., Parker, P. D., Marsh, H. W., Kunter, M., Schmeck, A., & Leutner, D. (2014). Self-efficacy in classroom management, classroom disturbances, and emotional exhaustion: A moderated mediation analysis of teacher candidates. *Journal of Educational Psychology, 106*(2), 569.
- Droogenbroeck, F. V., Spruyt, B., & Vanroelen, C. (2014). Burnout among senior teachers: Investigating the role of workload and interpersonal relationships at work. *Teaching and Teacher Education, 43*, 99-109. <http://dx.doi.org/10.1016/j.tate.2014.07.005>
- Dumay, X., & Galand, B. (2012). The multilevel impact of transformational leadership on teacher commitment: cognitive and motivational pathways. *British Educational Research Journal, 38*(5), 703-729.

- DuFour, R. (2004). What is a “professional learning community”? *Educational leadership*, 61(8), 6-11.
- Emmer, E. T., & Stough, L. M. (2001). Classroom management: A critical part of educational psychology, with implications for teacher education. *Educational Psychologist*, 36(2), 103-112.
- Fives, H., & Buehl, M. M. (2009). Examining the factor structure of the teachers’ sense of efficacy scale. *The Journal of Experimental Education*, 78(1), 118-134.
- Fullan, M., & Hargreaves, A. (Eds.). (1992). *Teacher development and educational change*. London, UK ; Washington, D.C.: Falmer Press.
- Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction* (8th ed.). New York, NY: Allyn & Bacon.
- Gibson, S., & Dembo, M. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, 76, 569-582.
- Gray, L., & Taie, S. (2015). Public school teacher attrition and mobility in the first five years: Results from the first through fifth waves of the 2007-08 beginning teacher longitudinal study. first look (NCES 2015-337). National Center for Education Statistics.
- Guskey, T. R. (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education*, 4, 63-69.
- Høigaard, R., Giske, R., & Sundsli, K. (2012). Newly qualified teachers’ work engagement and teacher efficacy influences on job satisfaction, burnout, and the intention to quit. *European Journal of Teacher Education*, 35(3), 347-357.

- Holzberger, D., Philipp, A., & Kunter, M. (2013). How teachers' self-efficacy is related to instructional quality: A longitudinal analysis. *Journal of Educational Psychology, 105*(3), 774.
- Hong, J. Y. (2012). Why do some beginning teachers leave the school, and others stay? Understanding teacher resilience through psychological lenses. *Teachers and Teaching, 18*(4), 417-440. doi:10.1080/13540602.2012.696044.
- Individuals with Disabilities Act, 20 U.S.C. § 1400 (2004).
- Isbell, L., & Szabo, S. (2015). Assessment: Teacher efficacy and response to intervention. *Delta Kappa Gamma Bulletin, 81*(2).
- Janney, R., & Snell, M. E. (2013). Modifying schoolwork. *Theory Into Practice, 45*(3), 215-223.
- Jones, N. D., Youngs, P., & Frank, K. A. (2013). The role of school-based colleagues in shaping the commitment of novice special and general education teachers. *Exceptional Children, 79*(3), 365.
- Klassen, R. M., & Tze, V. M. (2014). Teachers' self-efficacy, personality, and teaching effectiveness: A meta-analysis. *Educational Research Review, 12*, 59-76.
- Klein, S. (2004). Reducing special education paperwork. *Principal, 58*-60.
- Kowalski, T. (2008). *Case studies on educational administration* (5th ed.). Boston, MA: Pearson.
- Kraut, R., Chandler, T., & Hertenstein, K. (2016). The interplay of teacher training, access to resources, years of experience and professional development in tertiary ESL reading teachers' perceived self-efficacy. *GIST Education and Learning Research Journal, 12*, 132-151.
- Kuo, Y., Walker, A. E., Schroder, K. E., & Belland, B. R. (2014). Interaction, internet self-efficacy, and self-regulated learning as predictors of student satisfaction in online

- education courses. *The Internet and Higher Education*, 20, 35-50.
doi:10.1016/j.iheduc.2013.10.001
- Leyser, Y., Zeiger, T., & Romi, S. (2011). Changes in self-efficacy of prospective special and general education teachers: Implication for inclusive education. *International Journal of Disability, Development and Education*, 58(3), 241-255.
doi:10.1080/1034912x.2011.598397
- Madrid, D. (2016). *A case study of the influence of professional friendships among teachers on teacher retention, school culture, teacher performance, and student performance* (Unpublished doctoral dissertation). Houston, TX: University of Houston.
- Malinen, O. P., Savolainen, H., Engelbrecht, P., Xu, J., Nel, M., Nel, N., & Tlale, D. (2013). Exploring teacher self-efficacy for inclusive practices in three diverse countries. *Teaching and Teacher Education*, 33, 34-44.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370.
- Martin, K. L., Buelow, S. M., & Hoffman, J. T. (2016). New teacher induction: Support that impacts beginning middle-level educators. *Middle School Journal*, 47(1), 4-12.
- Maslach, C., & Leiter, M. (1997). *The truth about burnout: How organizations cause personal stress and what to do about it*. San Francisco, CA: Jossey-Bass.
- McKnab, P. (1995). Attrition of special education personnel in Kansas from 1993-94 to 1994-95. Emporia, KS: Emporia State University, Division of Psychology and Special Education. Retrieved from ERIC database (ED352754).
- McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology J. Community Psychol.*, 14(1), 6-23. doi:10.1002/1520-6629(198601)14:13.0.co;2-i

- Meijer, C., & Foster, S. (1988). The effect of teacher self-efficacy on referral chance. *Journal of Special Education, 22*(3), 378-385.
- Mehrenberg, R. L. (2013). Red tape and green teachers: The impact of paperwork on novice special education teachers. *International Journal of Special Education, 28*(1), 80-87.
- Midgley, C., Feldlaufer, H., & Eccles, J. (1989). Change in teacher efficacy and student self- and task-related beliefs in mathematics during the transition to junior high school. *Journal of Educational Psychology, 81*, 247-258.
- Mintzes, J. J., Marcum, B., Messerschmidt-Yates, C., & Mark, A. (2013). Enhancing self-efficacy in elementary science teaching with professional learning communities. *Journal of Science Teacher Education, 24*(7), 1201-1218.
- Moolenaar, N. M., Slegers, P. J., & Daly, A. J. (2012). Teaming up: Linking collaboration networks, collective efficacy, and student achievement. *Teaching and Teacher Education, 28*(2), 251-262. doi:10.1016/j.tate.2011.10.001
- Moore, W., & Esselman, M. (1992). Teacher efficacy, power, school climate and achievement: A desegregating district's experience. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- Moores-Abdool, W., & Voigt, J. (2013). Special Education Teachers: What Keeps Them in the Field?.
- National Association of State Directors of Special Education. (1990, May). *Special education faces a mounting crisis: How to recruit, train, and hold on to qualified teachers and related services personnel*. Liaison Bullentin. Washington, DC: Author.

- Peterson, N. A., Speer, P. W., & Mcmillan, D. W. (2008). Validation of a brief sense of community scale: Confirmation of the principal theory of sense of community. *Journal of Community Psychology J. Community Psychol.*, *36*(1), 61-73. doi:10.1002/jcop.20217
- Podell, D., & Soodak, L. (1993). Teacher efficacy and bias in special education referrals. *Journal of Educational Research*, *86*, 247-253.
- Rashidi, N., & Moghadam, M. (2014). The effect of teachers' beliefs and sense of self-efficacy on Iranian EFL learners' satisfaction and academic achievement. *Tesl-Ej*, *18*(2), 1-23.
- Ross, J. A. (1992). Teacher efficacy and the effect of coaching on student achievement. *Canadian Journal of Education*, *17*(1), 51-65.
- Rockinson-Szapkiw, (2013). Statistics Guide. <http://amandaszapkiw.com/elearning/statistics-guide/downloads/Statistics-Guide.pdf>
- Rotter, J. (1954). *Social learning and clinical psychology*. New York City, NY: Prentice Hall.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, *80*(1), 1.
- Rovai, A. P. (2002). Sense of community, perceived cognitive learning, and persistence in asynchronous learning networks. *The Internet and Higher Education*, *5*(4), 319-332.
- Rovai, A. P., & Gallien Jr, L. B. (2005). Learning and sense of community: A comparative analysis of African American and Caucasian online graduate students. *The Journal of Negro Education*, *74*(1), 53-62.
- Sarıçam, H., & Sakız, H. (2014). Burnout and teacher self-efficacy among teachers working in special education institutions in Turkey. *Educational Studies*, *40*(4), 423-437.
doi:10.1080/03055698.2014.930340

- Sass, D. A., Flores, B. B., Claeys, L., & Pérez, B. (2012). Identifying Personal and Contextual Factors that Contribute to Attrition Rates for Texas Public School Teachers. *education policy analysis archives*, 20(15), n15.
- Savolainen, H., Engelbrecht, P., Nel, M., & Malinen, O. (2012). Understanding teachers' attitudes and self-efficacy in inclusive education: Implications for pre-service and in-service teacher education. *European Journal of Special Needs Education*, 27(1), 51-68.
doi:10.1080/08856257.2011.613603
- Schaefer, L., Long, J. S., & Clandinin, D. J. (2012). Questioning the research on early career teacher attrition and retention. *Alberta Journal of Educational Research*, 58(1), 106-121.
- Shaukat, S., & Iqbal, H. M. (2012). Teacher self-efficacy as a function of student engagement, instructional strategies and classroom management. *Pakistan Journal of Social and Clinical Psychology*, 9(3), 82-85.
- Simon, N. S., & Johnson, S. M. (2013). Teacher turnover in high-poverty schools: What we know and can do. *Teachers College Record*, 117, 1-36.
- Skaalvik, E., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology*, 99(3), 611-625. <http://dx.doi.org/10.1037/0022-0663.99.3.611>
- Skaalvik, E., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education*, 26(4), 1059-1069.
doi:10.1016/j.tate.2009.11.001
- Skaalvik, E. M., & Skaalvik, S. (2011). Teacher job satisfaction and motivation to leave the teaching profession: Relations with school context, feeling of belonging, and emotional

- exhaustion. *Teaching and Teacher Education*, 27, 1029-1038.
<http://dx.doi.org/10.1016/j.tate.2011.04.001>
- Skaalvik, E. M., & Skaalvik, S. (2014). Teacher self-efficacy and perceived autonomy: relations with teacher engagement, job satisfaction, and emotional exhaustion. *Psychological Reports*, 114(1).
- Skaalvik, E. M., & Skaalvik, S. (2016). Teacher stress and teacher self-efficacy as predictors of engagement, emotional exhaustion, and motivation to leave the teaching profession. *Creative Education*, 7(13), 1785.
- Skinner, B. (1948). *Walden two*. New York City, NY: Macmillan.
- Skinner, E. A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology*, 85(4), 571.
- Soodak, L., & Podell, D. (1993). Teacher efficacy and student problem as factors in special education referral. *Journal of Special Education*, 27, 66-81.
- Stein, M. K., & Wang, M. C. (1988). Teacher development and school improvement: The process of teacher change. *Teaching and Teacher Education*, 4, 171-187.
- Steinhardt, M. A., Smith Jaggars, S. E., Faulk, K. E., & Gloria, C. T. (2011). Chronic work stress and depressive symptoms: Assessing the mediating role of teacher burnout. *Stress and Health*, 27(5), 420-429.
- Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2006). Professional learning communities: A review of the literature. *Journal of educational change*, 7(4), 221-258.
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17(7), 783-805. doi:10.1016/s0742-051x(01)00036-1

- Tschannen-Moran, M., & Hoy, A. W. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and teacher Education, 23*(6), 944-956.
- Vieluf, S., Kunter, M., & van de Vijver, F. J. (2013). Teacher self-efficacy in cross-national perspective. *Teaching and Teacher Education, 35*, 92-103.
- Vieno, A., Santinello, M., Pastore, M., & Perkins, D. D. (2007). Social support, sense of community in school, and self-efficacy as resources during early adolescence: an integrative model. *American Journal of Community Psychology, 39*(1-2), 177-190.
- Warner, R. M. (2013). *Applied statistics: From bivariate through multivariate techniques*. Thousand Oaks, CA: SAGE.
- Wendt, J. L., & Rockinson-Szapkiw, A. J. (2015). The effect of online collaboration on adolescent sense of community in eighth-grade physical science. *Journal of Science Education and Technology, 24*(5), 671-683.
- Zembylas, M., & Papanastasiou, E. (2006). Sources of teacher job satisfaction and dissatisfaction in Cyprus. *Compare: A Journal of Comparative and International Education, 36*, 229-247. <http://dx.doi.org/10.1080/03057920600741289>

APPENDIX A

Hi Laura,

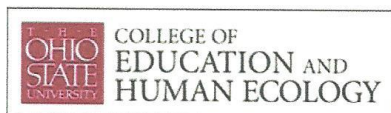
It did cost me some time, sorry for that. My synchronization software made a mess out of it. But now it is ready.

You can have a look and download the SCSS for you own use from my google website (see below).

Let me know if this is not working.

good luck and best wishes,
Wilfried

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ANITA WOOLFOLK HOY, PH.D.

PROFESSOR
PSYCHOLOGICAL STUDIES IN EDUCATION

Dear

You have my permission to use the *Teachers' Sense of Efficacy Scale* in your research. A copy the scoring instructions can be found at:

<http://u.osu.edu/hoy.17/research/instruments/>

Best wishes in your work,



Anita Woolfolk Hoy, Ph.D.
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