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A Comparison of Public, Private, and Charter Educator Beliefs About Autistic Students Abilities

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This is to certify that the doctoral dissertation by

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Walden University
2024

Abstract

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Jodene Jensen

MA, University of Phoenix, 2005

BS, University of Utah, 2002

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

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Abstract

With the incidence of autism on the rise, it is imperative to identify factors that contribute to education. Despite the accessibility and low cost of public institutions, many parents choose to educate their autistic children in private and charter school settings. This study examined the difference in beliefs among public, private, and charter school educators toward the abilities of autistic students. Bronfenbrenner's ecological systems theory guided this study. Through a mixed-methods approach, surveys were employed to special educators within the Walden Participant and Survey Monkey Pools. There was a total of 209 survey respondents. Surveys were analyzed using the Kruskal-Wallis *H* tests. Phone interviews were conducted with five survey participants to better understand experiences related to school policies, in-service training, and perceptions of administrator guidance. There was no difference in the beliefs related to educator school setting. There was a difference in beliefs connected to participant age, years on the job, and gender. Younger educators agreed/strongly agreed that severely autistic students had the ability to care for their parents in old age and have/raise children. Men agreed/strongly agreed more than women that these students could live independently and have/raise children. Special educators described having an inadequate understanding about the Pygmalion Effect. All participants had high expectations; all also advised that a student's previous performance guided student education plan goals. Qualitative results suggested several areas where teachers indicated they need more support from schools and administrators. Study findings may enlighten professionals and parents about the Pygmalion Effect practices and the importance of appropriate goal-driven education plans.

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Dedication

This dissertation is dedicated to Jaden, the boy who couldn't speak but said remarkable things. It is dedicated to Tristen and Jazmine, the children that sacrificed for the benefit of others. Finally, it is dedicated to the children who can see but not tell, dream but not speak, and feel but not express.

Acknowledgments

I would like to include a special thanks to my chairperson, Dr. Kelly Chermack for her amazing guidance and aiding me to the finish line. I would also like to thank Dr. La Toya Johnson, the student advisor that worked hard to help me stay on track.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

In 2002, the Centers for Disease Control and Prevention (CDC) established that 1 in 150 children in the United States had been identified as having autism spectrum disorder (ASD), a neurological condition commonly characterized as involving linguistic, cognitive, and social delays (CDC, 2019a). More recent findings articulated from 2018 data indicate the current occurrence of autism in children is 1 in 59 (CDC, 2021). With the incidence of autism increasing yearly the CDC has aggressively funded studies to evaluate the prevalence, identify risk factors, and explore interventions (CDC, 2019c). Even though this plethora of scientific research commenced over a decade ago, researchers have been unable to identify the sources of ASD.

Influences related to the treatment of ASD have been studied yet are limited in their attempt to address deficits in severely affected persons (Morningstar et al., 2016). Less common is the availability of research, examining the relationship among the cognitive development of severely autistic students educated in self-contained units and ambiguous educators. A relationship between teacher beliefs about kindergarten pupils' abilities and real-world outcomes as middle schoolers was determined to be significant yet was geared toward typically functioning children (Guhn et al., 2016). This study sought to examine and describe the differences in beliefs of public, private, and charter school educators toward the abilities of severely autistic students in contained classroom units.

Chapter 1 will synthesize the background of the problem to explain the current state of education for autistic children and illustrate the individual, family, and social

costs of the condition. Also explained in this chapter is Urie Bronfenbrenner's ecological systems theory which served as the established framework for the current study. The nature of the study is presented herein to detail characteristics of a mixed-methods approach followed by the methodology, population aims, and study variables. Study assumptions, scope, delimitations, limitations, and study significance follow. Summaries will complete this chapter.

Background

Autistic individuals face a multitude of challenges throughout their lifespans. One of the difficulties they encounter may reflect on the educator's and caretaker's perception of their ability for social and cognitive growth. The ability to increase skills may not be innate, but rather a result of a much deeper realm of interactive learning, as explained by Vygotsky (Fu, 1997). Vygotsky did not discuss children with neurological deficits. However, the belief that people will "rise to the occasion" may be true for autistic individuals as well.

Regarding the interactive learning styles of children with autism and the influences of those around them, it appears that the student–teacher relationship contributes to their level of functioning. Fujii (2014) expected to understand the role of educators in the social functioning of students with autism. Fujii hypothesized that the level of closeness between autistic students' and their teacher will predict social functioning and that the level of emotional support in the classroom would directly affect the level of social functioning seen in the child at home and school. While most of the children in Fujii's study engaged in introverted behavior on the playground, they spent

about half of this time engaged in positive peer interaction. Outcomes specified (a) that the children in the study constructively interacted with their peers, (b) that teachers valued their association with autistic students as higher in closeness than conflict, and (c) that study participants had optimistic outlooks about inclusion (Fujii, 2014).

Chung et al. (2015) calculated teacher outlooks about students with autism at local public and charter schools. Outcomes determined that teachers were more likely to elude students with autism than typical students and in general, held unfavorable perspectives about children with autism (Chung et al., 2015). Also, the demographics of the study exposed the fact that female teachers with a special education certificate and elementary-level teachers were more likely to hold favorable attitudes about autistic children (Chung et al., 2015).

The same assumption may be true for the United States. Talib and Poulson (2015) determined that teacher education students held accurate views about the social and emotional aspects of autistic students. However, education students held incorrect beliefs about the exceptional abilities of autistic students in general. They also found that general education educators were more likely than secondary educators to agree with false statements about the abilities of autistic students (Talib & Poulson, 2015). Talib and Poulson pointed out the detriment of inaccurate beliefs about abilities as triggering a ripple effect in the education of autistic students.

Problem Statement

The growing occurrence of ASD has generated a wealth of new research (CDC, 2019c). Researchers vary in their methods for understanding what causes autism (CDC,

2019c; Thomas et al., 2016). However, the CDC (2019a) reported that the incidence of autism increased by 123% from 2002 to 2012 (from 1 in 150 to 1 in 69) and increased further to 1 in 44 in 2018 (CDC, 2021). Although symptoms of autism vary, most individuals on the spectrum experience significant language deficits, cognitive impairments, sensory processing difficulties, behavior problems, and social limitations (CDC, 2019d). In addition, autism costs society approximately $265 billion per year in services and resources provided through programs such as Medicaid and Social Security (Leigh, 2015).

Present research about suitable methods of instructing autistic children is centered on models of insight about educational inclusion methods (Fujii, 2014; Mackenzie et al., 2016; Morningstar et al., 2016). Autistic student candidates for inclusion in regular education classrooms are typically high-functioning (Morningstar et al., 2016) ASD is characterized as a varied group of conditions involving a differing degree of problematic symptoms involving social interaction and communication (World Health Organization, 2023). The most recent criteria for an autism diagnosis has been set forth by the American Psychiatric Association (APA) in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.), which was last updated in 2013 (CDC, 2022). The APA describes those with the severest type of autism as having a Level 3 autism diagnosis characterized by needing very substantial support, whereas Level 2 is considered as needing substantial support and Level 1 is categorized as needing support (CDC, 2022). Those with the severest form of autism (Level 3) often also have an intellectual disability measuring a full IQ of less than 70 and considerable functional impairments that require

supported living and education (Christensen et al., 2018; Mehling & Tasse, 2016). I have been unable to find any research that brings to light findings of special educator beliefs concerning the abilities of severely autistic students in self-contained classrooms (those with more severe forms of autism).

When it comes to the interactive learning styles of children with autism and the influences of those around them, it is apparent that the mentor relationship contributes to their level of functioning (Fujii, 2014). Guhn et al. (2016) found a significant connection between teachers' beliefs of kindergarteners' social, emotional, and cognitive abilities and practical outcomes as middle-school students. This research reflects sociocultural dynamics and suggests that the mentor's view may influence cognitive progress (Guhn et al., 2016). To understand factors that contribute to teacher beliefs about autistic students' aptitudes, Spirko (2015) studied the attitudes of educators and found that attitudes about autistic students were closely related to the amount of educator training, grade level, and placement. However, parents of autistic children have little information about how special educators' beliefs regarding how the abilities of severely autistic students' educated in self-contained classrooms differ in public, private, and charter school settings.

Although the aforementioned research regarding special educator's beliefs towards the inclusion of autistic students in regular educational settings illuminates important findings, I have not found research that has identified the difference between public, private, and charter special educators regarding their beliefs about the abilities of severely autistic students educated in self-contained classrooms. Such research will

provide clarity to parents, caregivers, educators, and administrators about the difference in beliefs associated with the three different school settings for these autistic students in self-contained classrooms. Given such, further research is warranted that could examine the beliefs and overall opinions of public, private, and charter school educators toward the abilities of these autistic students (Derguy et al., 2015; Morningstar et al., 2016).

Purpose of the Study

The purpose of this mixed-method nonexperimental study was to describe and investigate the public, private, and charter special educator beliefs concerning the abilities of severely autistic students in self-contained settings. Parents and caretakers of children with autism struggle to identify appropriate realms of education for their children and often experience confusion in traditional special education settings (Queen Mary University of London, 2016). This research is built on a growing body of evidence concerning the condition of public, private, and charter school education for individuals with autism about promoting appropriate educational practices. The study sought to help parents and caretakers gain knowledge about the differences in beliefs associated with the three different school settings for severely autistic students in self-contained classrooms. Its objective is to help parents and caretakers of children with autism evaluate which type of school is best for their child.

Quantitative Research Questions and Hypotheses

RQ1: What is the difference between public, private, and charter special educator beliefs concerning the abilities of severely autistic students educated in self-contained classrooms?

$H_0$1: There is no statistically significant relationship between public, private, and charter special educator beliefs concerning the abilities of severely autistic students educated in self-contained classrooms.

H_a1: There is a statistically significant relationship between public, private, and charter special educator beliefs concerning the abilities of severely autistic students educated in self-contained classrooms.

Qualitative Research Questions

RQ1: How do special educators describe the relevance of their school policy concerning the education of severely autistic students educated in self-contained classrooms?

RQ2: How do special educators describe the relevance of their school's in-service training concerning the education of severely autistic students educated in self-contained classrooms?

RQ3: How do special educators describe the relevance of their schools' administrator guidance concerning the education of severely autistic students educated in self-contained classrooms?

Theoretical Framework

The theoretical framework that provides the lens through which to view this study is embedded in the work of Bronfenbrenner's ecological systems theory. Bronfenbrenner hypothesized that constructive human development depended heavily on direct personal associations and that those connections must occur frequently (Bronfenbrenner, 1994). This sentiment relates to this research through the notion that a child's attempt at learning

may be attributed to direct personal associations. For example, according to Bronfenbrenner's assertions, children should develop better when their mentors hold positive views about their abilities to learn (Bronfenbrenner, 1994). Bronfenbrenner theorized that these systems were paramount to cognitive progression (Bronfenbrenner, 1994). Bronfenbrenner's theory suggests that the expectations of the interventionist have a direct effect on learning (Bronfenbrenner, 1994). In current education groups, this concept is termed the Pygmalion Effect (Friedrich et al., 2015). Current findings point to the narrative that a student's choice in academia is contingent upon their mentors' expectations and encouragements (Friedrich et al., 2015). Determining differences in beliefs among educators in three school settings will allow parents to consider the Pygmalion Effect influences when deciding educational placement for their autistic child. Although Bronfenbrenner did not explain these attributes in autistic children, his theories shed light on contributing factors to the cognitive development of autistic children.

Nature of the Study

The nature of this study was a mixed-methods sequential research design that utilized survey methods for data collection during the first-phase, followed by a restricted number of rigorous qualitative interviews to investigate a difference. Second-phase questions were posed to study possible differences associated with school policies, in-service training, and perceptions of administrator guidance. Quantitative survey methods efficiently sample a larger population in less time (Rutberg & Bouikidis, 2018). Bleske-Rechek et al. (2015) conceded that nonexperimental research is often necessary to develop behavioral research because these variables tend to be difficult to manipulate.

The same is true for this research that will describe the differences in teacher beliefs toward the abilities of severely autistic students in self-contained classrooms. The independent variables' (IV) for this research are public, private, and charter institutions of learning. The IV was measured at a three-category nominal level for the first-phase application. The dependent variable (DV) for this research is special educator beliefs about the abilities of severely autistic children, educated in self-contained units. The DV was measured at the ordinal level for the first-phase application. Quantitative survey data were collected electronically.

The instrument used was an adapted version from Mutua (1999), which was created to evaluate parental expectations of autistic children. The instrument was revised to accommodate Ivey (2007) in a study to investigate educator expectations of autistic students' future outcomes. It included a 20-statement survey evaluated by a 5-point scale starting with *strongly disagree* and progressing to *strongly agree*. Qualitative structured phone interviews occurred during the second phase of the study to examine participant responses as they relate to school policy, in-service training, and perception of administrator guidance. Second-phase data aimed to explain a difference in beliefs between educators at the three schools by reflecting on how policy, training, and administration shape opinions. First-phase quantitative figures were studied and analyzed through the use of the Kruskal-Wallis *H* test. The Kruskal-Wallis *H* test is an ordered test that is most effective when the purpose is to compare more than two autonomous samples (Dag et al., 2018). Second-phase qualitative data were analyzed using MAXQDA Software and Microsoft Word. MAXQDA is known for utilizing a weighted scores

method. Recorded phone interviews were coded. Three types of coding were used. These included open coding, axial coding, and selective coding. Emergent datasets were transcribed and organized in MAXQDA and Microsoft Word. MAXQDA is a qualitative and mixed-methods data management software. MAXQDA is included in a larger genre of data organization and analysis software commonly known as computer assisted qualitative data analysis (CAQDA; Cayir & Saritas, 2017). A key component of MAXQDA's preference in the qualitative data analysis field is its design (Cayir & Saritas, 2017). All data were organized using MAXQDA software. The benefits of using MAXQDA for this project included its expert abilities with drag-and-drop coding, importing pdf figures, mixed-method designs, information storage, and cloud-based approaches (Vanhoben, 2016).

Sampling for the first and second stages of this research included a purposive sampling method to gain access to a specific group of potential respondents (teachers with special education credentials working specifically with autistic children nationally). Purposive sampling emphasizes the parallels of participants (Palinkas et al., 2015). The objective is to describe the beliefs of public, private, and charter special educators concerning the abilities of severely autistic students in self-contained settings. The population for this project consisted of autism special educators working in public, private, and charter schools. The preferred recruitment method included the use of the Walden Participant Pool to access a variety of special education professionals in either public or private institutions and the use of Survey Monkey.

Definition of Terms

Autism spectrum disorder: A wide-ranging multifaceted developmental disorder characterized by tenacious social challenges, communication deficits, and persistent repetitive actions (APA, 2018; CDC, 2022)

Charter school: Charter schools are federally backed and funded education systems operating in 43 states (U.S. Department of Education, [US ED], 2018). Each state utilizes specific rules to govern charter eligibility (US ED, 2018). Federal funding of charter schools dictates state dissemination through adherence to three basic principles (US ED, 2018):

1. The school must make significant progress toward student achievement.
2. The school must experience prominent levels of parental approval.
3. Management is necessary to defeat start-up complications and establish a successful and fiscally responsible education system.

Educational inclusion: Refers to the inclusion of persons with disabilities in a regular educational setting (National Council on Disability, 2018).

In-service training: All forms of instruction are provided to an educator who is currently working in the field (Osamwonyi, 2016).

Pygmalion Effect: People advance further when expectations are high (Freidrich et al., 2015; Szumski & Karwowski, 2019).

Policymakers: Education Policy makers generally consists of those constituents at the state board of education, community members, and stakeholders who are involved in education policy creation (Railey, 2017).

Self-contained classrooms: Restrictive educational placement in classrooms separated from the general population, usually governed by a special education teacher and several trained special education aids. This placement is most often reserved for those with severe cognitive disabilities (National Council on Disability, 2018).

Self-determined model of learning: An educational practice that promotes self-determination and independence in students with cognitive disabilities (Shogren et al., 2017).

Severe autism: The most extreme form of autism is based on the severity of symptoms which include acute levels of impairments, restrictive repetitive behaviors, and limited cognitive progress (CDC, 2019b). This level of autism is often characterized as having a full IQ of less than 70 and significant functional impairments that involve supported living and education (Christensen et al., 2018; Mehling & Tasse, 2016).

Assumptions

Ali and Bhaskar (2016) recommended that the Kruskal-Wallis *H* test is a beneficial non-parametric test because of its ability to compare more than two autonomous samples and relate their distribution. However, they cautioned against its use when the assumption of a normal distribution must be met. Dag et al. (2018) suggested the Kruskal-Wallis *H* test be used in conjunction with a one-way analysis of variance (ANOVA) for vigorous results with negatively skewed normative data. Accurate results of the Kruskal-Wallis *H* test require an ordinal or continuous DV, two or more independent or categorical IVs, and independent relationships of observations in each group (Dinno, 2015). Furthermore, a correct understanding of the Kruskal-Wallis *H* test

results requires an analysis of each distribution's variability (Dag et al., 2018; Nahm, 2016).

Additional assumptions must be considered as the result of the use of purposive sampling. Purposive sampling requires an emphasis on the similarity of participants (Palinkas et al., 2015). For this study, I initially sought to utilize the Walden Participant Pool to access special educators, instructing autistic children. It is assumed that these educators held special education credentials and work specifically with autistic children. Palinkas (2015) found that mixed-method research utilizing purposive sampling techniques should include a robust strategy rationale and the understanding that the quantitative data is best suited for probability sampling in general.

Scope and Delimitations

The study was originally delimited to special educators, instructing autistic children, who are currently members of the Walden Participant pool. However, there were not enough participants generated, and the study was opened up to SurveyMonkey with the same criteria for credentials. Participants were not required to possess specific gender, age, and race criteria, and those are not defined as part of the research questions or hypothesis. The initial group of Walden Participant Pool candidates limited access to a more robust sample. Where credentials are concerned, the study delimited the population by not considering paraprofessionals (teacher assistants) without higher education backgrounds. Although the US ED (2005) emphasized the need for higher education backgrounds for paraprofessionals, it acknowledged that not every state requires this. In 2016 there were an estimated 1,308,100 paraprofessionals in the United States (U.S.

Department of Labor Bureau of Labor Statistics [USBLS], 2018b). Contrastingly, in the same year, there were approximately 439,300 special education teachers in the United States (USBLS, 2018a)

Limitations

Although mixed-methods designs are often used to understand human behavior, a survey does have several limitations. Survey research may lack the facility necessary to draw meaningful conclusions due to non-response bias (Ponto, 2015). Also, survey instrumentation may compromise dependability and duplicability through sampling errors (Ponto, 2015). These concerns may be addressed through further developing sampling frames (Ponto, 2015). In addition, a framework for research limitations provided by Campbell and Stanley is utilized (Campbell & Stanley, 1963). This framework includes survey limitations and internal validity threats concerning selection. For this research, I selected participants through a nonrandomized method of purposive sampling, which could pose a threat to internal validity. To grow internal validity competency the population scope may be increased (Campbell & Stanley, 1963). The population for this study increased, and 209 participants were included although only 159 were needed.

Significance of the Study

Effective social change for those with autism may involve a positive view of their abilities. Through the Pygmalion Effect, it is evident that people advance further when expectations are high (Freidrich et al., 2015; Szumski & Karwowski, 2019). Recognizing which of the three types of institution (public, private, and charter) are inclined to foster educators with positive outlooks towards autistic students, enables parents to make

informed decisions about educational placement. Bronfenbrenner (1994) studied the relationship among adult attitudes and its direct effect on the cognitive progression of children. Bronfenbrenner argued that the outlook of the interventionist on a child's abilities ensured a direct effect on their ability to grow cognitively. Derguy et al. (2015) found that parents of autistic children reported their most important need was for guidance about which school setting would promote learning. Parents of autistic children struggle to find suitable institutions of instruction for their children (Queen Mary University of London, 2016).

The study aimed to make a connection between school type (public, private, and charter) and the cultivation of special educator beliefs about autistic students' abilities, so that parents may decide which school is best for their child. Furthermore, through this study, I intended to describe and understand the public, private, and charter special educator beliefs regarding the abilities of severely autistic students in self-contained settings to inform parents and educators about the best practices. In addition, findings will inform policy, support professional practice, and reveal where best to appropriate funds for special needs programs through enlightening public and private constituents about which school type is expected to foster educators with positive outlooks toward autistic students.

Educators should use insights to train personnel about how policy, in-service training, and administrator guidance can shape opinions. The basis of the Pygmalion Effect is that the outlooks of the interventionist have a direct effect on learning (Friedrich et al., 2015), severely autistic individuals can benefit from the practices of positive

inferences. Long-lasting effects such as increased cognitive development in autistic individuals are evident through positive Pygmalion Effect practices (Friedrich, et al., 2015; Klintwall et al., 2015; Lee et al., 2015). Chamak and Bonniau (2016) found that long-term trajectories of persons with autism were more positive in those with high-functioning forms of autism like Asperger's. These long-term attributes included the procurement of independent housing, attending higher education, and gaining meaningful employment (Chamak & Bonniau, 2016). Progress made with appropriate interventions and strategies for autism treatment is expected to promote long-term self-sufficiency and independence (Klintwall et al., 2015). Additional research should commence to further investigate the benefits of the positive inferences on autistic students' abilities and educational goal attainment.

Ethical Procedures

Participation in this study did not produce any known harmful effects. Children were excluded from participating, and specific information about subjective students was not allowed. All other potentially vulnerable populations were not included. Biased language or behavior that may include or exclude participants and data was omitted from the study. The Walden Institutional Review Board (IRB) was contacted for study approval. IRB approval was achieved. The IRB approval number is 05-07-21-0561249.

Study participants received information that described the nature and use of the study data. Participants were required to access the informed consent material by clicking on the link prior to receiving study access online. Survey data were uploaded to my computer through encryption. Hard copies of the encrypted data are password-protected

for further protection. Only I have access to the password. Hard copies are stored in locked cabinets in my locked home for a period of 5 years.

Identifying participant information was crucial to the completion of phase two in order to have the ability to contact participants. However, these participants are not identified by name in the research. Their information was coded for the qualitative portion to compel anonymity. Participants were told they may elect to discontinue the survey and end the interview at any time.

Summary

An increased need for independence in adults with severe autism has propelled interest in the outcomes of special education. Correct interventions for children with autism are linked to an increase in cognitive development and are driving independent lifestyles (Tasneem & Paulson, 2015). Intellectual growth in childhood, according to Bronfenbrenner (1994), is stimulated by the confidences that mentors exhibit of the child's abilities. The lack of awareness about how expectations of special educators on their autistic students' abilities motivate parents and professionals are looming. Parents and caretakers of children with severe autism experience confusion about which school setting will advance development (Derguy et al., 2015).

The provider and educational community have echoed concerns with acknowledging legitimate interventions for children with autism (Leaf et al., 2017). Despite these concerns, parents of autistic children are often forced to choose between limited free public-school intervention strategies and costly private educational philosophies (McNerney et al., 2015). It is estimated that the care of a child with autism

costs approximately $17,000 per year more than their neurotypical counterparts, with the majority of these costs consumed by the educational system (Lavelle et al., 2014). These findings illuminate the importance of economic responsibility about choosing appropriate educational settings for children with severe autism.

Each chapter contains a comprehensive summary. Chapter 1 included the introduction, problem statement, research questions, significance, theoretical framework, and terms and limitations connected to this study. The review of appropriate literature and an illustrative summary of studies related to the problem of identifying the difference between public, private, and charter special educators regarding their beliefs about the abilities of severely autistic students educated in self-contained classrooms are presented in Chapter 2. Chapter 3 explains the methodology and study design utilized to gather and analyze data. Chapter 4 sets out the results of the study, data collection techniques, study demographics, and study setting. Chapter 5 includes a discussion, conclusion, and recommendations.

Chapter 2: Literature Review

The mounting occurrence rate of autism has propelled an abundance of new research regarding the increase (CDC, 2019c). However, there is discordance among researchers as to the identity of the cause(s) of autism (CDC, 2019c; Thomas et al., 2016). The CDC (2019a) indicated that the rate of autism occurrences increased by 123% from 2002 to 2012. Individuals with autism may experience significant language deficits, cognitive deficiencies, sensory complications, behavior inefficiencies, and social restrictions (CDC, 2019d). The financial burden of autism on society ($265 billion per year) is realized through entitlement programs (Leigh, 2015).

The majority of current autism education research is based on educational inclusion methods (Fujii, 2015; Mackenzie et al., 2016; Morningstar et al., 2016). In the first phase of this research, I quantitatively measured public, private, and charter special educator beliefs about the abilities of severely autistic students already placed in self-contained educational settings. Methods to investigate a difference and its relation to policy, guidance, and in-service training followed. The foundation of this study was established through a rigorous review of literature about historical and modern perspectives on the state of special education for those with autism. This chapter will commence with a strategic analysis of the search techniques used for the literature review. followed by a chronological historical explanation, study rationale, and applicability of mentor beliefs on cognitive development is presented as the theoretical framework. Next, there will be a review of the problem of inappropriate special educator ideologies regarding autistic students' abilities. After that, I discuss literature on the

occurrence of families experiencing discord in the educational system. This is followed by the presentation of the study variables and a review of the survey. The chapter concludes with a synopsis of the literature's relevance/significance and a general summary of the literature.

Search Strategies

The literature review commenced using two primary domains which include Google Scholar and the Walden library databases. Specific databases within the Walden library included ProQuest Central, EBSCO Host, PSYCHIndex, PsychARTICLES, Sage Premier, and Science Direct. Once identified through Google Scholar the entries were further scrutinized using the Walden Library search where peer-reviewed entries and an applicable date range were specified. Key phrase search terms included: *education of students with autism, special educator beliefs about autistic student's abilities, attitudes of teachers on the effect cognitive growth, teacher student relationship and cognitive growth, educator views about students' abilities autism, families experiencing dissatisfaction in special education, autism family's and payment for private education, funding gap for special education, barriers to special education autism, barriers to services education autism, financial burden of autism, cost of autism on public education,* and *cost of private autism educational institution.*

Seminal works preceding 2014 were sought out using the Walden databases listed above to depict historical viewpoints and illustrate the theoretical framework for the study. Additional investigation of seminal works occurred through Google Scholar. The consideration of seminal work included entries that expressed a historical viewpoint of

special education, human development, and individual autistic trajectories. Other historical and current literature was selected that showed an established gap, explanations of the problem, and perspectives on the abilities of high-functioning autistics as well as their lower-functioning counterparts.

In addition, to identify other studies not found first through the two primary domains searches were completed in Google and Safari. Applicable literature was singled out and reviewed through the Walden Library general search. Next, it was further scrutinized using the peer-reviewed and date functions. Some of the identified literature was relevant to the topic but produced in various other countries. Although there is a difference in the type of school setting, autistic diagnosis criteria, theologies, cultural anomalies, and special education techniques worldwide these works were considered with global significance to the gap.

Theoretical Foundation

The theoretical framework directing this study is embedded in Bronfenbrenner's ecological systems theory (Bronfenbrenner, 1994). According to Bronfenbrenner, a child's ability to learn is affected by the views of their mentors. Bronfenbrenner's theory hinged on the idea that one's environment was their primary context of development. Bronfenbrenner believed that genetics or heredity played a smaller role in human development than these environmental constructs (Bronfenbrenner, 1994).

Ecological Systems Theory

Bronfenbrenner (1994) hypothesized that constructive human development depended heavily on direct personal associations and that those connections must occur

frequently. Bronfenbrenner's explanation of human development utilized a system of five environmental constructs which are known as the microsystem, mesosystem, exosystem, macrosystem, and chronosystem (Bronfenbrenner, 1994). Bronfenbrenner theorized that we may encounter all these systems synonymously, yet each system is responsible for how we interact and behave.

Microsystem

Bronfenbrenner (1994) explained one's microsystem as their closest relations such as friends, family, teachers, and neighbors. These are the individuals who act most directly in one's life. The microsystem includes those face-to-face interactions that fill one's daily life (Bronfenbrenner, 1994). Bronfenbrenner believed that the microsystem was the most central system to one's development (Bronfenbrenner, 1994).

Mesosystem

The mesosystem is described as the interactions between each setting (Bronfenbrenner, 1994). For instance, the association between work, school, and home life would be a direct influence on one's mesosystem (Bronfenbrenner, 1994). Bronfenbrenner further describes the mesosystem as a scheme of microsystems (Bronfenbrenner, 1994). Autistic children may experience mesosystem interactions between therapy, school, medical, and home systems.

Exosystem

Bronfenbrenner (1994) described the exosystem as the link between two or more settings in which one has a direct link to one's development and the other does not. For instance, a child may have a close relationship with a teacher that is interrupted when the

teacher falls ill and a substitute teacher is placed in the classroom. As a result of the child's longing for the original teacher, they form a bond with the substitute. Bronfenbrenner (1994) theorized that the three systems most likely to influence a child's behavior on this level are family, school, and peers.

Macrosystem

The macrosystem described by Bronfenbrenner (1994) is constructed of characteristics of subcultures within the microsystem, mesosystem, and exosystem. Bronfenbrenner believed that these characteristics included religious beliefs, physical resources, educational standards, opportunities, and hazards (Bronfenbrenner, 1994). This system may be better understood as the values of each culture. For example, according to Bronfenbrenner (1994), development at the macrosystem level may be related to the degree and type of religious affiliation, learning environment, economic opportunities, and so on that drive interactions.

Chronosystem

Bronfenbrenner (1994) explained the chronosystem as learning that takes place as a result of time or other chronological events. This would help explain altered beliefs and viewpoints that may occur over time individually. Bronfenbrenner theorized that not only physical changes contributed to this adjustment but economic status as well. Learning at the chronosystem level is thought to be a result of previous adventures which had forged new thought processes (Bronfenbrenner, 1994).

Practical Relationship to This Study

A child's attempt at learning may be attributed to direct associations including those at the micro and macro level (Bronfenbrenner, 1994). Since Bronfenbrenner (1994) theorized that these systems were paramount to cognitive progression, the suggestion that a relationship between attitude and cognitive achievement exists is robust. Bronfenbrenner alluded to the outlook of the interventionist acting as a direct effect on learning. Although Bronfenbrenner did not explain these attributions in autistic children, his ideas serve as a principle for all aspects of learning.

Literature Review

It is important to understand that every autistic person faces different challenges. Symptoms of autism vary in manner, intensity, and duration (CDC, 2019d). An autism spectrum diagnosis may include the most severe type of autism (autistic disorder) or other less austere categories (Asperger's syndrome, Pervasive Development Disorder-Not Otherwise Specified, and Autism Spectrum Disorder-Not Otherwise Specified)Christensen et al., 2018). Autism-related service providers may experience this vastness firsthand as frontline support for individuals on the spectrum (Christensen et al., 2018). Ruppar et al. (2015) found that teachers' views about the foundations for a student's cognitive abilities were directly associated with the teacher's self-derived level of accountability for the students' learning. Understanding the context for educators' beliefs about a student's ability to learn may influence future policy and training methods specifically where outlooks may affect development.

After performing a search of the literature that addressed matters of current educational practices for severely autistic students in self-contained classrooms, special educator outlooks regarding the abilities of Severely autistic students in self-contained classrooms, and the effects of these beliefs about abilities on the student's cognitive development, I found an abundance of literature that focused on the inclusion dilemma (Fujii, 2014; Mackenzie et al., 2016; Morningstar et al., 2016), teacher self-efficacy about teaching autistic students (Boujut et al., 2017), special education teacher burnout (Boujut et al., 2017; Kiel et al., 2016), and special educators' beliefs about autism (Talib & Paulson, 2014). However, these works were limited in their understanding of the severely autistic population, those educated in self-contained classrooms, and possible institutional differences promoting ideologies. Research that would identify the difference between public, private, and charter special educators regarding their beliefs about the abilities of severely autistic students educated in self-contained classrooms requires further development to provide clarity and promote accurate practices to parents, caregivers, educators, and administrators. The literature review does not reflect research that draws conclusions about the abilities of autistic students.

The Effect of Special Educator Beliefs About Autistic Students' Abilities

The effect of special educator beliefs on the perceived development of intellectually disabled students has been documented (Ruppar et al., 2015). Stereotypical attitudes about those with cognitive impairments have guided efforts to understand the roots of these views. The importance of such research has been implicated when growth is affected. Accountability for one's learning may characterize an underrepresented factor

in disability research. However, a recent investigation suggests that a student's opportunity for growth is directly associated with a teacher's self-derived accountability for their learning (Ruppar et al., 2015). Although this research did not address autism specifically, it adopted all versions of limitations or those with a disability. This qualitative study sought to understand literacy decisions on behalf of educators about their disabled students (Ruppar et al., 2015). Beliefs about a student's ability to learn, contextual differences, expectations, and self-efficacy emerged as primary influences that guided educator's views of a student's reading ability (Ruppar et al., 2015). This study suggests that literacy in individuals with severe cognitive impairments will be affected by an educator's responses to their disability. This begs the question of why educate someone whom one believes does not have the capacity to learn. If learning and literacy are essential to economic progress and independence, the future for illiterate individuals is unclear.

Similarly, educators have reported problems with self-efficacy when it comes to instructing autistic students (Segall & Campbell, 2014). Teachers that reported stronger positive attitudes of autistic students held higher levels of self-efficacy beliefs and these attitudes influenced educational placement (Segall & Campbell, 2014). Educational placement in this study included a variety of general and restrictive educational settings. Candidacy for general education placements was directly affected by the teachers reported self-efficacy concerning alternative or special education factors (Segall & Campbell, 2014). The perceived cognitive ability of the hypothetical student in the study was also a significant factor in placement (Segall & Campbell, 2014). Overall, Seagall

and Campbell (2014) reported two primary placement influences of autistic students: teacher self-efficacy and perceived cognitive ability. The study did differentiate between cognitive ability and disability labels. There was no significant relationship between the label (i.e., autism) and placement (Segall & Campbell, 2014). Results indicated that proper diagnostic techniques and teacher training are the best ways to subjugate placement mishaps. Although this study was somewhat limited because of its use of a hypothetical student, it helps to draw a link between educational placement and educator beliefs about students' capabilities.

Researchers have also set out to estimate the impact of policy and practice on the views educators hold about students with disabilities. Shogren et al. (2014) found that when educators were tasked with implementing practices of the self-determined learning model of instruction (SDLMI), their perceptions of a student's capacity for self-determination significantly increased. SDLMI is explained as a set of research-based teaching methods used by some special educators (Shogren et al., 2017). The SDLMI was intended to assist teachers in educating students on how to self-regulate their learning experience (Shogren et al., 2017). The SDLMI is directed as a three-phase learning process (Shogren et al., 2017). Their experimental study, which took place during one school year, suggests that once an educator has been trained to use the SDLMI, their view of a student's capacity increases, and models of self-determination are provoked in the student.

The effect of teachers' beliefs on the progress of students with disabilities is underrepresented generally (Klehm, 2014). To determine why students with disabilities

were not meeting proficiency scores or targeted achievement markers, Klehm (2014) studied the trends in educator attitudes and habits towards disabled students. Using survey research, Klehm found that 53.9% of respondents believed that disabled students lacked the ability to reach proficiency standards and guidelines. However, the majority of teachers (85%) denoted that they believed students with disabilities were able to attain a higher level of thinking, and 87% of the respondents felt they lacked the training, time, and resources to properly effect growth for students with disabilities. This research made an argument for the need for more comprehensive guidance but lacked evidence of a scientific link between teacher beliefs about student ability and educational progress.

The Pygmalion Effect has developed into a commonly accepted concept among education circles in the United States (Szumski & Karwowski, 2019). This concept was actualized with the development of "common core" educational standards used in public education facilities throughout the United States (Boser et al., 2014; Szumski & Karwowski, 2019). A 10-year longitudinal study followed 10th-grade students through their further academia to uncover a link between teacher expectations and academic success (Boser et al., 2014). Key findings concluded that high schoolers whose teachers held high expectations were three times more likely to achieve a college degree and that students of diverse and disadvantaged backgrounds were rated with lower teacher expectations (Boser et al., 2014). Although these works were critical in validating the Pygmalion Effect, they did not elucidate results for intellectually disabled or severely autistic students.

Another underestimated factor advancing the Pygmalion Effect is the notion that entire educational groups or classes may receive a collective benefit from higher teacher expectancy. This concept was studied by Friedrich et al. (2014) through a longitudinal study that measured individual and collective classroom growth with respect to teacher expectancy concepts and mathematical literacy. Friedrich et al. determined that the Pygmalion Effect was identified at both the individual and classroom level. Teacher's expectations of their students' mathematic competencies were successfully linked to student achievement (Friedrich et al., 2014). Friedrich et al. did control for students figural reasoning scores and prior mathematical achievements. This stipulation may help illuminate findings for those with intellectual disabilities as well.

Another study sought to determine how performance goals affect a student's critical thinking ability (CTA). CTA is thought of in education circles as a gateway to educational growth. Howard, Tang, and Jill Austin (2014) conducted a quantitative study to unearth a link between CTA and performance goals. They found that students with higher performance goals also had higher levels of CTA and students with lower performance goals required a limited amount of CTA (Howard, Tang, and Jill Austin, 2014). Since performance goals for severely autistic students are often part of an Individual Education Plan (IEP) team effort (teacher, parent, professional), these results are significant in a more collective concept.

A more preliminary way to determine teacher beliefs about autistic students' abilities would be to understand the beliefs of teachers in training. To wage whether pre-service teachers held appropriate beliefs about the abilities of students with learning

disabilities (LD) and how an LD instruction course could alter these beliefs, Greenfield et al. (2016) conducted a mixed-methods study. Study results indicated that the LD instruction course had little effect on the viewpoints of pre-service teachers about LD students' abilities. These results indicate that instruction alone will not alter belief patterns.

Families Experiencing Discord in the Educational System

Although special education has been around for decades, the growing occurrence of autism (CDC, 2019c) has sparked a fresh look into therapeutic and educational practices (CDC, 2019c). Parents and caretakers of severely autistic children have also expressed the need for clarity in educational approaches. Vohra et al. (2014) expressed this concern when studying perceived access to services. This comparative study compared the perceptions of families with children who had other severe disabilities to those with children who had autism to understand access to services, quality of care, and the impact on families affected by autism (Vohra et al., 2014). Of those two subsets, parents, and caretakers of children with autism were significantly more probable to have trouble utilizing services, lack of care, problems with the quality of care, financial and employment-related impacts, and deficiencies of shared decision-making and care coordination among service providers (Vohra et al., 2014). Parents of children with autism have voiced concerns about their need for transparency in educational methods and settings (Vohra et al., 2014). In this respect, there has been a consistent need for parental advocacy in special education.

Burke and Hodapp (2016), studied the conditions of advocacy surrounding education and parents of children with disabilities. It has long been assumed that parents and educational systems work together for the betterment of services for vulnerable populations. However, Burke and Hodapp (2016) found that the most active parent advocates were those who had experienced discord within their child's education system. This dissonance was predominant in schools that; practiced refusal of services, reported disingenuous behavior, lacked trained personnel, and exhibited poor communication skills. Perhaps the best parent advocates were born out of this divergent system. It is difficult to understand the motive of this type of educational system. Tara et al. (2014) reported the estimated educational cost of a child with autism averages $8,610 more each year than their non-autistic counterparts. Most of this cost is absorbed by the educational system although some parents have elected to pay for the private education of their autistic children (Burke & Hodapp, 2014). Some researchers have set out to study the cost-driven system and its effect on an already underfunded public education system to discover if defaulting on special education is purposeful (White, 2014).

Access to services may also be affected by family demographics, child characteristics, and parental knowledge (Siller et al.,2014). Parents and caregivers of children with autism have long suspected that barriers to service access were economically driven (LaVelle et al., 2014). Siller et al. (2014) found that parental knowledge and cognition was a driving force behind access to services for children with autism. These cognitions included degrees of parental efficacy and knowledge about child development (Siller et al., 2014). Better informed parents may in that sense make

better advocates. Still, Siller et al. did not explain how this advocacy translates into access to services. Perhaps educational discord is the driving force behind access to services (Burk and Hodapp, 2016).

Web-Based Surveys

Many would argue that the availability of web-based technology has increased participation in research accuracy and added to it in a robust fashion (Ramsey et al., 2016). However, the quality of internet-based web survey data is concerning (Ramsey, et al., 2016). Internet-based surveys are able to reach a wide audience and because of this have achieved an increased use for sampling and survey administration purposes (Ramsey et al., 2016). However, researchers suggest that web-based surveys should be used with caution as there is evidence of content-based limitations (Ramsey et al., 2016).

Factors that may increase web-based survey participation also yield stimulating results. Cook et al. (2016) suggested that offers of incentives and follow-up prompting did not change the response rate among practitioners in their study. However, the Cook et al. study was limited because it involved highly educated individuals only and the incentive was a book. When taking a closer look at contributing factors to involvement in web-based surveys Parsons and Manierre (2014) found that unconditional cash incentives were significantly connected to advanced web survey response rates. Limitations, however, included an exacerbated representation of women participants (Parsons & Manierre, 2014). Maximizing successful response rates of web-based surveys may also contribute to a limited selection bias (McPeake et al., 2014). Improved response rate strategies include the use of electronic personalization, scheduled prompts, and

statements of time averages located in the email heading (McPeake et al., 2014). Response rates may also depend on internal inclusions. Participants were found to be less likely to complete longer surveys with unrestricted questions (Liu & Wronski 2017).

Summary and Conclusions

Persons with severe autism rely on the support of able-bodied individuals to ensure their clinical and educational needs are being met. It is assumed that natural advocates such as teachers, mentors, therapists, and caretakers are aware and educated on the best practices to promote the abilities of those with severe autism. However, these safeguards may not guarantee effective processes. With the cost of raising a child with autism averaging $17,000 per year more than typical children (Lavelle et al., 2014), parents are facing a cost/benefit dilemma. Still, many choose to bear the cost and educate their severely autistic children in private settings, which begs the question of which setting is most effective in educating these individuals. To understand effectiveness parents and caretakers may consider the works of Bronfenbrenner's ecological systems theory which asserts that limited human development is associated with the higher levels of mentor apathy and incredulity towards the child's abilities (Bronfenbrenner, 1996). The literature review conceded a multitude of information regarding attitudes of special educators concerning inclusive education and scholastic placement for high-functioning autistic persons. Limited studies were presented that reflected the nature of educational placement for severely autistic individuals. A need for research was identified that could examine the beliefs of public, private, and charter school educators toward the abilities of autistic students educated in self-contained schoolrooms.

Literature was presented that represented the effects of special educator beliefs about autistic students' abilities. More specifically, the impact of influences on the educational undertakings of intellectually restricted students (Ruppar et al., 2015). Although these did not dictate a student's progress, they served to hinder their opportunity for growth (Ruppar et al., 2015). The problem of improper use of restrictive or non-restrictive educational placement for those with autism is also identified (Segall & Campbell, 2014). Additionally, the effect of administrative policy and training on the belief system of special educators was shown to be positively correlated.

Access to services was also represented in the literature as it could affect the quality and amount of information parents and caretakers obtain (Vohra et al., 2014). Advocacy is represented as it has historically played a role in access to services. However, one of the most prominent themes in access to services is economic barriers (LaVelle et al., 2014) which were also discussed in the literature review. Chapter 3 will deliver an additional examination of this study's sample, sampling techniques, study variables, research question and hypotheses, and web-based survey practices. Chapter 3 will also provide information about the methodology of this study.

Chapter 3: Research Method

The purpose of this research study was to understand the attitudes of special education teachers in public and private learning facilities toward the abilities of children with autism. The nature of this study included a mixed-methods approach utilizing survey techniques for data collection purposes for the first phase. The second phase involved a number of arduous qualitative interview questions to investigate the difference in special educator perceptions of policy, in-service training, and administrator guidance concerning the abilities of autistic students educated in public, private, and charter schools. This mixed-methods design provides a dual effort that includes measuring the differences in educator beliefs toward the abilities of severely autistic students in self-contained units and connecting prospective differences to school policies, in-service training, and perceptions of administrator guidance. In addition, mixed-methods studies in educational research provide a great depth and breadth of evidence because they offer a robust scope to investigate educational issues (Almalki, 2016).

Research Design and Rationale

The intent of the first phase of the research was to describe what already exists in relation to teachers' beliefs about the abilities of severely autistic students educated in self-contained classrooms. This phase also included determining whether there was any connection between these beliefs and the three themes. Both Phase 1 (quantitative survey questions) and Phase 2 (qualitative interviews) identified whether there is a difference in beliefs among the educators at the three types of institutions. The qualitative phase was based on the statistical analysis of quantitative survey data about educator beliefs and was

followed by qualitative interview questions. The interview questions were used to examine themes central to the educator's belief systems. The second qualitative phase sought to understand perceptions about the three themes (policies, in-service training, and perceptions of administrator guidance). The sequence of Phase 1 (quantitative survey questions) and Phase 2 (qualitative interviews) was strategically designed to first determine if there is a difference in beliefs among the educators at the three types of institutions.

A statistical analysis of quantitative survey data regarding educator beliefs is key in uncovering themes central to provoking educators' belief systems. Other schemes considered for the anticipated research included quantitative casual-comparative and qualitative interview designs. The purpose of this study was to discover what is, rather than suggest what is; thus, a causal-comparative design was not appropriate. In addition, a sole qualitative interview design may have saved time and money, but the nature of the analysis produces threats to internal and external validity that are less of a burden for a quantitative analysis design.

Methodology

This mixed-methods study was comprised of two approaches. The first method included a survey that sought to understand the attitudes of special education teachers in public, charter, and private learning facilities towards the abilities of children with autism. The second approach involved an investigation of any differences in opinions in the first phase related to school policy, in-service training, and perception of administrator guidance. The methods included in this research are comprised of

procedures of population and sampling, instrumentation, and data analysis. The study variables included independent variables of charter, public, and private special education settings, and dependent variables of autism special education teacher attitudes.

Target Population

The study's target population was adult special education teachers employed in U.S. public, private, and charter school settings and attending Walden University as well as those responding to SurveyMonkey. These participants were not considered a part of any vulnerable population and were required to participate voluntarily. Recruitment of contributors commenced through the use of the Walden Participant Pool according to its voluntary enlistment guidelines and the SurveyMonkey pool according to the same guidelines and credentials set within this study. Participation guidelines also included only those holding qualified special education credentials for the state in which they are employed.

Sampling

A self-selective nonprobability sampling method for the first phase (quantitative) of the study was chosen to gain access to a specific group of potential contributors (teachers with special education credentials). Self-selective sampling was used to gain access to a group of special educators within the population. Nonprobability sampling exacerbates the potential for bias and limits the reliability of the results (Etikan et al., 2016). However, this type of sampling is preferred because of the lack of access to the population since potential contributors cannot be directly contacted initially. This type of sampling allowed for a smaller representative and more accurate sample (individuals

working specifically with autistic children). The preferred recruitment method included the use of the Walden and SurveyMonkey Participant Pools to access a variety of special education professionals to answer the question of what is the difference between public, private, and charter special educator beliefs concerning the abilities of severely autistic students educated in self-contained classrooms.

The second phase (qualitative) of the study commenced through a sampling of acceptable first-phase participants who indicated willingness to be part of the qualitative phase. The purpose of the second phase of the research was to determine how the difference in special educator beliefs concerning the abilities of autistic students are relevantly described by public, private, and charter school settings.

Using G*Power (Version 3.1.9.2), a sample size of 159 was reached for the first phase application of this study. The indicated measurements were *F* tests, ANOVA, effect size of .25, the error of the probability of .05, and power of .80. The ANOVA and *F* tests were used to accommodate the Kruskal-Wallis *H* test assertions, which calculated the differences in the three school settings. This test is commonly used to compare the means of three groups (Kim, 2017). For the effect size of .25, the *p* value was considered because I sought to look at the differences in scores among several groups with a possible large convention. The probability rate of .05 and power of .80 were chosen for their standard role. The sample size of 159 indicates a minimum number of participants for the study. All contributors were considered for the sample. The response rate for this study was positively affected by the recruitment efforts listed in the next section. Therefore, other participant pools were not required. The second phase sample size was generated

through purposive sampling of those quantitative contributors who indicated a willingness to participate.

Recruitment

The primary preferred recruitment method for this study included the use of the Walden Participant Pool and SurveyMonkey to access a variety of special education professionals in public, private, and charter institutions. After URR approval was achieved, an application to use the Walden Participant Pool was submitted electronically to an online survey link. An email request (see Appendix D) for the Walden Participant Pool was submitted to the Walden IRB and the Walden Office of Institutional Research Assessment (OIRA). Participants were notified of the study electronically through the school email system and the SurveyMonkey data system. Only those holding special education certifications, degrees, credentials, and working or having worked directly with autistic children were considered. This information was posted as eligibility requirements in the study data within the participant pool sites. Wyse et al. (2016) found that $5 incentive gift cards to Starbucks related to increased response rates of surveys. To positively affect survey completion rates and response rates incentive electronic gift cards worth $10 at Amazon were offered to each participant meeting the study criteria and in which the contributor provides an email address for the gift card recovery and to enter into the second phase pool. Gift cards were emailed electronically to all qualified participants after the completion of second-phase interviews. I purchased Amazon gift cards and sent them to the participant's email address electronically through the Amazon website.

Data Collection

The quantitative research focused on survey data. Surveys were available to participants for a period of 3 weeks and commenced after Walden approvals were met. The survey included the study background information, demographic questions, and prequalification items such as educator credentials. The survey included 20 questions as detailed in Appendix B. I supplied all study participants with study background information, criteria for participating, and informed consent paperwork. Survey data were collected from the Walden Participant Pool and Survey Monkey web-based frame. Once completed, surveys were transferred electronically. First-phase quantitative data were stored in SPSS for analysis and retrieval.

Additional data for the study included information gained from the second-phase interviews. Second-phase qualitative data collection commenced through qualitative structured phone interviews. Second-phase participants were selected through a purposive sampling procedure to gain access to willing participants. Second-phase participants were asked to list contact information on the returned first phase survey. The qualitative phone interview (see Appendix C) included open-ended questions related to three basic concepts: in-service training, school policy, and perception of administrator guidance. These data were organized using MAXQDA and Microsoft Word. MAXQDA allows drag-and-drop coding, importing pdf, mixed-method designs, data storage, and cloud-based access (Vanhoben, 2016).

Instrumentation

Quantitative survey data were collected electronically. The instrument is an adapted version from Mutua (1999). This instrument was created to evaluate parental expectations of autistic children. Mutua's instrument was revised to accommodate Ivey (2007). I received permission to use the adapted instrument via email on 03/26/2021. Ivey investigated educator expectations of autistic students' future outcomes. The instrument includes a 20-statement survey using a 5-point scale progressing from *strongly disagree* to *strongly agree* (see Appendix B). Participant responses were provided that relate to the study variables and these data were used to evaluate the study hypothesis.

I conducted qualitative structured phone interviews during the second phase to study participant responses as they relate to school policy, in-service training, and perception of administrator guidance. Second-phase data aimed to explain a difference in beliefs between educators at the three schools by reflecting on how policy, training, and administration shape opinions. Data were generated through a series of semistructured phone interview in which I asked participants a series of prepared questions (see Appendix C). These questions were organized into three segments, which include topics concerning policy, training, and administration. The prepared questions were open-ended to elicit unrestricted responses.

Teachers' Expectations for Future Outcomes

This instrument was originally adapted from Mutua (1999) to assist Ivey (2007) to understand educators' outlooks of autistic students. The original instrument included

questions addressed to parents as well as issues that were not synonymous with expectations (Ivey, 2007). Ivey addressed this by separating that block of statements and conducting independent reliability and validity measures. The instrument includes a 95% confidence interval of the difference (Ivey, 2007). Respondents for this study were asked to complete the 20-item survey (see Appendix B). Additionally, the survey material included a credential and demographic section.

Demographics

Participants were asked during the first phase to complete a demographic response. These questions elicited answers with regard to age, school type of related employment, years of service, and gender. Special education credentials that meet the criteria for this study include a current state special education certification/license and/or meeting of their state's guidelines. The questionnaire was followed by the structured first-phase participant survey.

Data Analysis

After collecting first-phase quantitative information, I scrutinized the data to identify missing information, conflicts, and outliers. Missing data were addressed through the use of multiple imputation in SPSS. Multiple imputation, unlike listwise deletion, replaces data rather than throwing it away (Ginkel et al., 2019). Missing data values were substituted with $m > 1$ then reviewed for standard errors with multiple imputation (Van Ginkel et al., 2019). First-phase quantitative data were analyzed with the Kruskal-Wallis *H* test. The generalized Kruskal-Wallis test is considered an effective tool for experts to investigate in a robust non-parametric manner (Ali & Bhaskar, 2016). The Kruskal-

Wallis *H* test is a rank-centered assessment that is valuable when comparing more than two autonomous samples (Dag et al., 2018).

This research compared three independent groups (public, private, and charter schools). The Kruskal-Wallis *H* test does not make inferences about normality but does assume that each group's observations are generated from a similarly distributed population, and it does a better job at applying ranks instead of values (Dag et al., 2018). The population considered for this research was sampled through use of the Walden and SurveyMonkey Participant Pools. The independent variables (IV) for this research are public, private, and charter institutions of learning. The Kruskal-Wallis *H* test does not necessitate the completion of all the assumptions in standard parametric ANOVA tests (Dag et al., 2018). The Kruskal-Wallis *H* test has been deemed reliable without including normative data, interval data, and homogeneity of group variance, making this a more adaptable test (Dag et al., 2018).

Second-phase qualitative data were analyzed using MAXQDA and Microsoft Word. MAXQDA is included in a larger genre of data organization and analysis software commonly known as computer-assisted qualitative data analysis (CAQDA; Cayir & Saritas, 2017). A key component of MAXQDA's preference in the qualitative data analysis field is its design (Cayir & Saritas, 2017). MAXQDA was created with computer-assisted qualitative coding in mind (Cayir & Saritas, 2017). Advantages of using MAXQDA include its greater abilities with drag-and-drop coding, importing pdf files, mixed-method design organization, superior data storage, and cloud-based access (Vanhoben, 2016). Recorded phone interviews were coded using keywords and phrases

to elucidate the three series of questions. Participants were asked during the in-service training phase to expand on their experience as a student-teacher in working with students with severe autism (see Appendix C).

Initial coding included an open coding technique. Open coding allows the researcher to first discover key concepts and themes (Williams & Moser, 2019). Key words for identifying these themes included words like "conflict," "compromise," "apprehensive," "listening," and "diversity." Next, the identification of emergent themes took place through axial coding techniques. Axial coding further refines the open-coded concepts (Williams & Moser, 2019). Through axial coding, themes were identified that signified relationships between the open-coded terms (Williams & Moser, 2019). For example, works like "conflict," "compromise," and "apprehensive" were grouped into one theme termed "collaboration." Patterns then emerged which made categorizing a possibility through selective coding (Williams & Moser, 2019). Through selective coding, I was able to further scrutinize the identified themes and classify them into more selected themes such as Viewpoint Influence and Teacher Learning. All the data sets were transcribed, organized, and further analyzed through the use of MAXQDA and Word.

Research Variables

IV: The independent variables' (IV) for the research were public, private, and charter institutions of learning.

DV: The dependent variable (DV) for the research was special educator beliefs about the abilities of severely autistic children, educated in self-contained units.

Research Questions and Hypotheses

Quantitative

RQ1: What is the difference between public, private, and charter special educator beliefs concerning the abilities of severely autistic students educated in self-contained classrooms?

$H_0$1: There is no statistically significant relationship between public, private, and charter special educator beliefs concerning the abilities of severely autistic students educated in self-contained classrooms.

H_a1: There is a statistically significant relationship between public, private, and charter special educator beliefs concerning the abilities of severely autistic students educated in self-contained classrooms.

Qualitative

RQ1: How do special educators describe the relevance of their school policy concerning the education of severely autistic students educated in self-contained classrooms?

RQ2: How do special educators describe the relevance of their school's in-service training concerning the education of severely autistic students educated in self-contained classrooms?

RQ3: How do special educators describe the relevance of their school's administrator guidance concerning the education of severely autistic students educated in self-contained classrooms?

Data Analysis Plan

To address the research questions and investigate the hypothesis for the quantitative data The Kruskal-Wallis *H* test was used to examine if there is a statistically significant relationship between public, private, and charter special educator beliefs concerning the abilities of severely autistic students educated in self-contained classrooms. The quantitative data was organized and analyzed using SPSS. Data for all groups have been sorted into an ascending order.

The second-phase qualitative data were coded with MAXQDA and Word software using a drag-and-drop method. This data was analyzed used weighted scores. Cayir and Saritas (2017) discovered that MAXQDA used in qualitative and mixed-methods research was intended as a funnel to permit coding of applicable schemes for the data. They found that MAXQDA was designed to enable researchers to develop coding schemes (Cayir & Saritas, 2017). I intended to qualitatively investigate participant responses as they relate to three central themes which are school policy, in-service training, and perception of administrator guidance.

This data aimed to elucidate a difference in beliefs between educators at the three schools by reflecting on how policy, training, and administration shapes opinions. The second-phase themes were coded in MAXQDA and Word using applicable code words such as conflict, compromise, apprehensive, listening, and diversity to explain the participant's experience as it relates to, school policies, in-service training, and perception of administrator guidance. Scheming information was scored and analyzed through MAXQDA and Word.

Threats to Validity

Methods to extract valid data for social research hidden populations are important in exposing validity concerns. Validity and reliability of the research instruments were established through statistical methods. However, the first method of establishing validity involved an evaluation of peer-reviewed literature on similar subjects. Validity threats are expressly discussed.

Validity

The study exhibits several threats to the generalizations. These threats include difficulties with the use of purposive sampling and survey instrumentation. Each threat includes a valid measure of determining its relation to the research. Also, included are procedures to limit threats to validity.

Purposive Sampling

Purposive sampling techniques coupled with online survey designs tend to underrepresent hidden populations which can be partially rectified through convenient sampling (Barratt et al., 2015). However, convenient sampling biases will affect external validity as well (Barratt et al., 2015). To limit external validity concerns Barratt et al. (2015) suggest combining the sample with ethnographic field work. The purpose of the mixed-method design of this research is to investigate the sample and strengthen validity. In addition, a framework for research limitations was provided by Campbell and Stanley (Campbell & Stanley, 1963). This framework included survey limitations and internal validity threats concerning selection. The research sought to select participants through a nonrandomized method of convenient sampling. The virtue of this collection poses a

threat to internal validity. To remedy this concern the population scope can be increased (Campbell & Stanley, 1963).

Survey Instrumentation

Survey research in quantitative methods exhibit low trustworthiness of results (Stavru, 2014). This may be because of the lack of generalizability (Etikan et al., 2016). Survey research relies on estimation and attitudes that can change over time. This study set out to mitigate these factors by using quantitative analysis. Scaling Likert information through parametric tests causes a dilemma if data lacks a classic normal distribution (Ali & Bhaskar, 2016). This method of analysis was chosen because of the probability of parametric tests to return robust and precise information (Ali & Bhaskar, 2016). Even though quantitative measures are favored methods of understanding human behavior, a survey scheme implicates several limitations. Survey research falls short of the facility necessary to draw meaningful conclusions and research (Ponto, 2015).

Also, survey instrumentation may compromise dependability and duplicability. These concerns may be addressed through ensuring the validity of the instruments (Ponto, 2015). To address the reliability of the instrument a Cronbach's Alpha test is conducted. The Cronbach Alpha test relies on a measurement of all variables to contribute to consistency (Bonnett & Wright, 2015). Bonnet and Wright (2015) suggest that maximum potential is reached with a Cronbach Alpha when there is a coverage probability of less than 1 for leptokurtic measurements and more than one for platykurtic measurements. Reliability of the Likert data may be problematic since Likert data often represents ordinal data (Ali & Bhaskar, 2016).

Construct Validity

Construct validity was determined through confirmatory factor analysis (CFA). This method was used to determine if each question appropriately relates to the other. CFA may be useful in comparing ordinal data when using the concept of weighted squares (Li, 2016). To ensure a CFA is a good fit, the Kaiser-Meyer-Olkin sampling measure and Bartlett's Test of Sphericity are conducted as well.

Ethical Considerations

Participation in the study compelled no known adverse effects. Children were excluded from the study. Specific information about individual students was not allowed. Other vulnerable people were not included. Subjective language or conduct that may include or exclude contributors to the data was omitted from the study. The Walden IRB was contacted for study approval. IRB approval was achieved. The IRB approval number is 05-07-21-0561249.

Study participants received informative data that describes the nature and use of the study. Participants were required to access the informed consent material by clicking on the link prior to receiving study access online. Survey data was uploaded to my computer through encryption. Interview and study data is password protected on my computer. Hard copies shall be stored in locked cabinets for a period of 5 years. Filing cabinets are stored on the researcher's locked premises.

Identifying participant information was necessary to the completion of phase two so the researcher may contact participants. Participants will not be identified by name.

Their data was coded for the qualitative portion to compel privacy. Participants were advised that may decide to discontinue the survey and end the interview at any time.

Summary

A mixed-method nonexperimental design is the most appropriate method to determine if there is a difference between public, private, and charter special educator beliefs concerning the abilities of severely autistic students educated in self-contained classrooms and to investigate any difference. A phase one online survey and phase two telephone interview are the most efficient and cost-effective methods to gather data from contributors across the United States. Ethical considerations are included to comply with the Walden IRB standards and general research guidelines. Unforeseen changes to the research, IRB approval, and study conclusions are presented in Chapter 4. Study results, limitations, conclusions, and implications have been incorporated in Chapter 5.

Chapter 4: Results

Increasing knowledge and awareness by teachers of appropriate education techniques for students with severe autism is important in the students learning journey. The purpose of this mixed-methods nonexperimental study was to examine whether there was a statistical significance between public, private, and charter special educator beliefs concerning the abilities of severely autistic students in self-contained settings and investigate any related phenomenon. The research questions and hypothesis concentrated on whether there was a statistically significant relationship between special educators' beliefs in public, private, and charter schools about the abilities of severely autistic individuals and an investigation of beliefs about in-service training, policy, and administrator guidance.

In Chapter 4, I discuss the results of the study and put forward the data collection techniques. Also included are demographics and the study setting. Chapter 4 also presents a summary of the conclusions that were used to answer the research questions: What is the difference between public, private, and charter special educator beliefs concerning the abilities of severely autistic students educated in self-contained classrooms? How do special educators describe the relevance of their school policy concerning the education of severely autistic students educated in self-contained classrooms? How do special educators describe the relevance of their school's in-service training concerning the education of severely autistic students educated in self-contained classrooms? How do special educators describe the relevance of their schools' administrator guidance concerning the education of severely autistic students educated in self-contained

classrooms? The data collection portion of the chapter includes a view of both qualitative and quantitative collection procedures.

Following the data collection portion of the chapter are subsections that include statistical data, analysis, and results as well as related qualitative coding information. I determined through the use of quantitative survey data analyzed by the Kruskal-Wallis *H* test that there are no differences in special educator beliefs in public, private, and charter institutions of learning about the abilities of severely autistic individuals. The study also concludes that there is a significant difference in beliefs among age, gender, and experience groups. Additional inferences regarding the qualitative interviews are expressly discussed in this chapter. The conclusion of the chapter consists of a summary of the results, discussion, and statistical diagrams.

Setting

The study data collection took place during a time when COVID-19 was beginning to show remission. At the beginning of the 2021 school year, many schools had opted to return to in-person learning. Given such, many educators returned to the in-person classroom around this time. This was a time of change and hope in the United States. It also took place during a time of uncertainty about the trajectory of COVID-19. Initially, surveys for the quantitative portion of the study were offered to Walden Participant Pool candidates who had special education credentials. This took place on 12/29/2021. Three responses were received. This lack of responses prompted me to post the surveys to SurveyMonkey with the same criteria for credentials on 01/14/2022.

Qualitative participants were derived from quantitative participation. Qualitative interviews commenced on 01/29/2022.

Semistructured phone interviews occurred during the second phase to study participant responses related to the research questions. Second-phase data aimed to describe a difference in beliefs between educators by reflecting on how policy, training, and administration influence beliefs about learning. Questions were arranged into three sections which included topics concerning policy, training, and administration. The planned questions were open-ended to provoke various responses. Follow-up questions were asked to derive more thorough data.

Demographics

For the quantitative phase of the study, a total of 159 participants were needed per the sample size suggestion via G*power analysis. This was obtained with a total number of 209 participants. All participants were required to be at least 18 years old and possess special education credentials specific to their state requirements. Most participants had taught in public schools (65.6%). Private school participants represented 29.8% of the sample, and charter school educators (4.8%) had the least number of participants. Age-specific data can be found in Table 1, whereas Table 2 shows years on the job. Gender identification is indicated in Table 3.

Of the 209 quantitative study participants, five indicated willingness to participate in the qualitative portion of the study Those who revealed they would like to be a part of the qualitative phase of the study were rewarded with a $10.00 Amazon gift card. Qualitative participants possessed between 1 and 30 years of experience in working with

autistic students. Females represented 80% (n = 4) of qualitative participants, which may be indicative of educator genders nationwide. Twenty percent (n = 1) of qualitative interviewees were 50–65 years old, while 80% (n = 4) were in the 34–49 age range. The majority, 60% (n = 3) of educators had experience in public schools, while 40% (n = 2) were private school educators. Demographics of qualitative participants are in Table 4.

Table 1

Age of Participants (Quantitative)

Age	Number	Percent
18–33	67	32.1
34–49	70	33.5
50–65	53	25.4
66+	19	9.1

Note. n = 209 / 95% confidence interval

Table 2

Years on the Job as a Special Educator (Quantitative)

Years	Frequency	Percent
1–5	127	61.4
6–10	47	22.7
11–15	13	6.3
16+	20	9.7

Note. n = 209 / 95% confidence interval

Table 3

Gender Identification (Quantitative)

Gender identity	Frequency	Percent
Male	92	44
Female	110	52.6
Non-binary	6	2.9
Other	1	0.5

Note. n = 209 / 95% confidence interval

Table 4

Qualitative Demographics (Qualitative)

Demographic	Frequency	Percent
Male	1	20
Female	4	80
(Age)34–47	4	80
(Age)50–65	1	20
(YOS)1–5	4	80
(YOS)21+	1	20

Note. $n = 5$.

Data Collection

Walden University IRB approval was achieved on 05/07/2021. I posted surveys to the Walden Participant Pool on 12/29/2021 and received only three responses in the 2 weeks that followed. This lack of responses prompted a change in procedure and surveys were posted to SurveyMonkey with the same criteria for credentials on 01/14/2022. IRB approval for this change was achieved on 01/14/2022. Second-phase qualitative participants were derived from quantitative contributors. I contacted these participants after they indicated their interest in entering the second-phase participant pool.

Qualitative interviews commenced on 01/29/2022 and were completed on 01/31/2022. Second-phase participants were provided a $10.00 Amazon gift card via email upon completion of the interview. A total of five second-phase interviews were conducted. These were the only interviewees who indicated willingness to participate in the second phase. Vasileiou et al. (2018) proposed that saturation is not reliant on the volume of participants; rather, it is dependent upon the researcher's use of methodology in sample size sufficiency. For this research, the process of attempting saturation included

a method proposed and researched by Guest et al. (2020), who purported that their method for data saturation was conducive for qualitative research that sought to generate narratives through open-ended questioning. The process of determining saturation for this research included a process that is dictated and discussed in the tables in the next section. Although I believed saturation was imminent, the restricted number of willing second phase participants make this a study limitation. Thus, I conducted interviews with all participants who expressed interest and who were willing. I believe that I reached data saturation, through the process of saturation called the Data Saturation Model which associates to the extent to which new data imitates what was conveyed in previous data (Saunders et al., 2018). Although conducting additional interviews may have been useful, it was not needed. These results are explained in subsequent tables.

Data Analysis

Data collection and analysis for this project as strategically organized. An explanatory sequential design was utilized to investigate any differences in quantitative data. Gutterman and Fetters (2018) found that this type of design is most used to explain differences in mixed-methods research. A primary rationale for using mixed methods research is the assumption that one method informs the other (Dawadi et al., 2021). For this research qualitative interviews were conducted to investigate quantitative results. A system of open coding was utilized during the qualitative phase to better inform the data. Open coding is a concept that originated from the grounded theory approach (Rieger, 2018). Grounded theory aims to originate new concepts from the data (Rieger, 2018). Quantitative data were analyzed using SPSS and the Kruskal-Wallis design.

Quantitative Data Analysis

Figures were downloaded into an Excel file and imported to SPSS. Data were then scrutinized to identify missing information and conflicts. The intent was to address missing data through the process of multiple imputation in SPSS. Multiple imputation reinstates data (Ginkel et al., 2019). Once data were reviewed, it was evident that multiple imputation was not needed because there were no absent data.

A total of 209 surveys were analyzed using the Kruskal-Wallis *H* test. This test is considered an efficient way to investigate in a robust nonparametric method (Ali & Bhaskar, 2016). The test is rank-based and valuable when comparing three or more autonomous samples (Dag et al., 2018). This was an appropriate test since the research intent was to compare three independent groups (public, private, and charter schools). The Kruskal-Wallis *H* test does not make normality inferences, yet it does propose that each group's results originate from a similarly distributed population (Dag et al., 2018).

Qualitative Data Analysis

Qualitative study participants were posed a series of open-ended questions based on the following qualitative research questions.

- RQ1: How do special educators describe the relevance of their school policy concerning the education of severely autistic students educated in self-contained classrooms?
- RQ2: How do special educators describe the relevance of their schools' in-service training concerning the education of severely autistic students educated in self-contained classrooms?

- RQ3: How do special educators describe the relevance of their schools' administrator guidance concerning the education of severely autistic students educated in self-contained classrooms?

The coding process included open coding, axial coding, and selective coding. First, I transcribed qualitative interviews onto a Word document. Next, I uploaded the data into MAXQDA for better data analysis. Data were first coded using the open coding feature in MAXQDA. For validity, data were again coded using a Word document. During both MAXQDA and Word options, open-coded qualitative data were reduced through axial and selective coding. I organized the transcribed coded data in a Word document into codes, categories, and themes. The sample size for the qualitative phase of the research was derived from the original 209 survey participants. Of those participants, five indicated willingness to participate in the qualitative phase. All five were subsequently interviewed in an effort to include robust data.

Results

Quantitative

Quantitative results showed that there was no significant difference between the opinions of educators in the three school settings about the abilities of autistic students (p ranged from .130 to .982). There were no differences in opinions in educators at the three types of educational settings. Substantively, this means that there was no difference in the ways that public, charter, and private schools viewed the 20 independent variables regarding students with autism in the classroom. The mean score for all 20 questions was between 3.1538 and 3.7356, indicating that educators in general answered, "neither agree

nor disagree." Table 5 illustrates these findings that demonstrate no difference among the groups.

Table 5

Quantitative, Kruskal-Wallis H Results by Question

Students with severe autism that are educated in self-contained classroom units in general:	*M*	*SD*	Min	Max	Kruskal-Wallis *H*
Have the ability to be happy and satisfied	3.5072	1.10122	1	5	.082
Have the ability to attend higher education	3.4423	1.02460	1	5	.433
Have the ability to get married	3.3462	.95066	1	5	2.993
Have the ability to own a house	3.3654	.94340	1	5	2.813
Have the ability to have a support network of friends	3.6779	1.01062	1	5	1.628
Have the ability to have and participate in a religion of choice	3.6731	.92671	1	5	1.963
Have the ability to be accepted in the community	3.7356	.95921	1	5	.048
Have the ability to have a secure financial future independent of social benefits and disability programs.	3.3702	.99393	1	5	.558
Have the ability to be safe from physical harm	3.6298	.97430	1	5	1.150
Have the ability to achieve Doctoral level education	3.1635	1.02255	1	5	.708
Have the ability to help with household chores	3.7981	.95684	1	5	.978
Have the ability to be socially responsible and law abiding	3.6827	.87658	1	5	3.321
Have the ability to take care of their parents in old age.	3.158	.97574	1	5	4.080
Have the ability to participate in community activities	3.7692	.88717	1	5	1.902
Have the ability to live independently without assistance.	3.2596	.97302	1	5	.036
Have the ability to use their time to participate in and watch sporting events.	3.6490	.98633	1	5	.938
Have the ability to hold a job or vocation	3.6635	.85251	1	5	.274
Have the ability to have and raise children	3.2308	1.03308	1	5	1.583
Have the ability to utilize community services independently	3.3894	.86101	1	5	1.779
Have the ability to become educationally successful	3.5385	.91073	1	5	1.667

Again, these Kruskal-Wallis analysis demonstrate that there were no differences in the way that the three groups of schooling educators viewed the 20 different aspects of life tested. Some of the Kruskal-Wallis *H* test statistics indicated mild results, but none were significant at the $p = .05$ level.

In addition to the planned Kruskal-Wallis *H* test, I conducted a Mann-Whitney *U* test to explore two of the groups alone (see Table 6). Because the charter group consisted of a subsample of 10, my committee member suggested that run a second test excluding the smaller subsample and explore potential significance among just the public and private groups. The Mann-Whitney *U* test is appropriate for this circumstance as it is focused on two independent groups.

Table 6

Quantitative, Mann-Whitney- U Results by Question

	Type of school the participant primarily worked in	*N*	Mean rank	Sum of ranks	Mann-Whiney - *U*
Students with severe autism that are educated in self-contained classroom units in general have the ability to be happy and satisfied.	1.00 Public 2.00 Private Total	137 62 199	99.34 101.45	13610.00 6290.00	4157.0
Students with severe autism that are educated in self-contained classroom units in general have the ability to attend higher education.	1.00 Public 2.00 Private Total	137 61 198	98.63 101.45	13512.50 6188.50	4059.5
Students with severe autism that are educated in self-contained classroom units in general have the ability to get married.	1.00 Public 2.00 Private Total	137 61 198	103.92 89.57	14237.50 5463.50	3572.5
Students with severe autism that are educated in self-contained classroom units in general have the ability to own a house.	1.00 Public 2.00 Private Total	137 61 198	103.19 91.20	14137.50 5563.50	3672.5
Students with severe autism that are educated in self-contained classroom units in general have the ability to have a support network of friends.	1.00 Public 2.00 Private Total	137 61 198	96.32 106.64	13196.00 6505.00	3743.0
Students with severe autism that are educated in self-contained classroom units in general have the ability to have and participate in a religion of choice.	1.00 Public 2.00 Private Total	137 61 198	97.47 104.06	13353.50 6347.50	3900.5
Students with severe autism that are educated in self-contained classroom units in general have the ability to be accepted in the community.	1.00 Public 2.00 Private Total	137 61 198	98.94 100.76	13554.50 6146.50	4101.5

	Type of school the participant primarily worked in	*N*	Mean rank	Sum of ranks	Mann-Whiney - *U*
Students with severe autism that are educated in self-contained classroom units in general have the ability to have a secure financial future independent of social benefits and disability programs.	1.00 Public 2.00 Private Total	137 61 198	99.33 99.88	13608.50 6092.50	4155.5
Students with severe autism that are educated in self-contained classroom units in general have the ability to be safe from physical harm.	1.00 Public 2.00 Private Total	137 61 198	96.72 105.75	13250.50 6450.50	3797.5
Students with severe autism that are educated in self-contained classroom units in general have the ability to achieve Doctoral level education.	1.00 Public 2.00 Private Total	137 61 198	98.12 102.59	13443.00 6258.00	3990.0
Students with severe autism that are educated in self-contained classroom units in general have the ability to help with household chores.	1.00 Public 2.00 Private Total	137 61 198	96.96 105.21	13283.00 6418.00	3830.0
Students with severe autism that are educated in self-contained classroom units in general have the ability to be socially responsible and law abiding.	1.00 Public 2.00 Private Total	137 61 198	97.64 103.67	13377.00 6324.00	3924.0
Students with severe autism that are educated in self-contained classroom units in general have the ability to take care of their parents in old age.	1.00 Public 2.00 Private Total	137 61 198	97.72 103.50	13387.50 6313.50	3934.5
Students with severe autism that are educated in self-contained classroom units in general have the ability to participate in community activities.	1.00 Public 2.00 Private Total	137 61 198	97.71 103.52	13386.50 6314.50	3933.5

	Type of school the participant primarily worked in	*N*	Mean rank	Sum of ranks	Mann-Whiney - *U*
Students with severe autism that are educated in self-contained classroom units in general have the ability to live independently without assistance.	1.00 Public 2.00 Private Total	137 61 198	99.11 100.38	13578.00 6123.00	4125.0
Students with severe autism that are educated in self-contained classroom units in general have the ability to use their time to participate in and watch sporting events.	1.00 Public 2.00 Private Total	137 61 198	97.95 102.99	13418.50 6282.50	3965.5
Students with severe autism that are educated in self-contained classroom units in general have the ability to hold a job or vocation.	1.00 Public 2.00 Private Total	137 61 198	98.29 102.22	13465.50 6235.50	4012.5
Students with severe autism that are educated in self-contained classroom units in general have the ability to have and raise children.	1.00 Public 2.00 Private Total	137 61 198	101.92 94.07	13963.00 5738.00	3847.0
Students with severe autism that are educated in self-contained classroom units in general have the ability to utilize community services independently.	1.00 Public 2.00 Private Total	137 61 198	99.53 99.44	13635.00 6066.00	4175.0
Students with severe autism that are educated in self-contained classroom units in general have the ability to become educationally successful.	1.00 Public 2.00 Private Total	137 61 198	96.23 106.84	13183.50 6517.50	3730.5

The results of the Mann-Whitney *U* test also demonstrate a lack of significance between public and private educational institutions in this sample. After removing data from the lower subsample group of 10, the results did not change. There are still no significant differences between these groups of public and private.

Significant Differences Based on Age, Years of Experience, and Gender

When the 20 tested variables proved to be statistically not significant, I decided to review some of the other independent variables that I had captured. Although these were not planned with respect to my research questions and hypotheses, I felt it necessary to further explore whether other independent variables that I had measured would show an effect. Although no informative data was derived to substantiate differences in educator beliefs in the three settings regarding the Pygmalion Effect practices, there were statistically significant differences in opinion among those of different age groups, experience, and gender with reference to two questions in each subset. These results are explained in Tables 7–16 and detailed in each subsequent paragraph.

This was better demonstrated through cross-tabulation of the data. I performed several Chi-Square tests for independence to see if some of the independent variable I captured were significant. I examined these via the Kruskal-Wallis *H* test to compare expected values versus observed values. These figures are illustrated in Tables 7–16. Younger participants seemed to agree more, or "Agree or Strongly Agree" to the questions "Students with severe autism that are educated in self-contained classroom units, in general, have the ability to care for their parents in old age" and "Students with

severe autism that are educated in self-contained classroom units, in general, have the ability to have and raise children." See Tables 7–9.

Table 7

Kruskal-Wallis Age Group and Experience Group Significance – Students With Severe Autism Who Are Educated in Self-Contained Classroom Units Will Have the Ability to Take Care of Their Parents in Old Age.

Variable	K-W	*P*
Age	13.541	.004
Experience	9.940	.019

Table 8

Age – Students With Severe Autism That Are Educated in Self-Contained Classroom Units Will Have the Ability to Take Care of Their Parents in Old Age

Participant age	Strongly disagree/disagree	Neither agree nor disagree	Agree/strongly agree	Total
18–33	10.4%	**46.3%**	**43.3%**	100%
34–49	18.6%	**47.1%**	**34.3%**	100%
50–65	24.5%	51.0%	24.5%	100%
66+	**44.4%**	44.4%	11.2%	100%

Note. $p < .05$.

Table 9

Kruskal-Wallis H Test Age Group Significance – Students With Severe Autism That Are Educated in Self-Contained Classroom Units, in General, Have the Ability to Have and Raise Children

Participant age	Strongly disagree/disagree	Neither agree nor disagree	Agree/strongly agree	Total
18–33	17.9%	35.8%	**46.3%**	100%
34–49	18.6%	38.6%	**42.8%**	100%
59–65	17.0%	56.6%	26.4%	100%
66+	**44.4%**	33.4%	22.2%	100%

Note. $p < .05$.

Table 10

Kruskal-Wallis Age Group and Gender Group Significance – Students With Severe Autism That Are Educated in Self-Contained Classroom Units, in General, Have the Ability to Have and Raise Children

Variable	K-W	P
Age	9.619	.022
Gender	6.366	0.41

Tables 11–13 indicate two questions found to have a statistical significance about how many years the participant worked in special education. For the question "Students with severe autism educated in self-contained classroom units, in general, will have the ability to take care of parents in old age," educators with 6–10 years of experience more frequently answered agree or strongly agree than any other category of participants. Statistical significance was also present for this subgroup about the question "Students with severe autism educated in self-contained classroom units, in general, will have the

ability to get married." However, for this question respondents with 11–15 years of experience were most likely to answer strongly agree/agree with this question.

Table 11

Kruskal-Wallis H Test Experience Group Significance – Students With Severe Autism Educated in Self-Contained Units in General Will Have the Ability to Take Care of Parents in Old Age

Years participant worked as a special educator	Strongly disagree/disagree	Neither agree nor disagree	Strongly agree/agree	Total
1–5	13.4%	**55.1%**	**31.5%**	100%
6–10	21.3%	**34.0%**	**44.7%**	100%
11–15	**46.2%**	23.1%	30.7	100%
16+	**36.8%**	52.7	10.5%	100%

Note: $P < 0.05$.

Table 12

Kruskal-Wallis Experience Group Significance – Students With Severe Autism Educated in Self-Contained Classroom Units, in General, Will Have the Ability to Get Married

Variable	K-W	*P*
Experience	8.209	.042

Table 13

Kruskal-Wallis H Test Experience Group Significance – Students With Severe Autism Educated in Self-Contained Classroom Units, in General, Will Have the Ability to Get Married

Years participant worked as a special educator	Strongly disagree/disagree	Neither agree nor disagree	Strongly agree/agree	Total
1–5	10.2%	47.2%	42.6%	100%
6–10	27.7%	36.1%	36.2%	100%
11–15	7.7%	23.1%	**69.2%**	100%
16+	10.5%	63.2%	26.3%	100%

Note. $p < .05$.

Regarding gender, the results of the analysis and cross-tabulation show a statistical significance with respect to two questions. These questions are "Students with severe autism educated in self-contained classroom units, in general, will have the ability to live independently without assistance" and "Students with severe autism educated in self-contained classroom units, in general, will have the ability to have and raise children." Male respondents tended to answer agree or strongly agree to these two questions.

Table 14

Kruskal-Wallis H test Gender Group Significance – Students With Severe Autism Educated in Self-Contained Classroom Units Will Have the Ability to Live Independently Without Assistance

Gender identification	Strongly disagree/disagree	Neither agree nor disagree	Agree / strongly agree	Total
Male	18.7%	27.5%	**53.8%**	100%
Female	19.1%	**50.9%**	30%	100%
Non-Binary	33.3%	**50%**	16.7%	100%
Other	0%	100%	0%	100%

Note. $p < .05$.

Table 15

Kruskal-Wallis Gender Group Significance – Students With Severe Autism Educated in Self-Contained Classroom Units Will Have the Ability to Live Independently Without Assistance

Variable	K-W	*P*
Gender	8.655	.013

Table 16

Kruskal-Wallis H Gender Group Significance – Students With Severe Autism Educated in Self-Contained Classroom Units Will Have the Ability to Have and Raise Children

Gender identification	Strongly disagree/disagree	Neither agree nor disagree	Agree/strongly agree	Total
Male	13.1%	40.7%	**46.2%**	100%
Female	25.5%	41.8%	32.7%	100%
Non-Binary	33.3%	**50%**	16.7%	100%
Other	0%	100%	0%	100%

Note. $p < .5$.

Most respondents answered neither agree nor disagree to all 20 items on the survey. These suggests that respondents tended to feel more comfortable when not limiting or inflating their beliefs about severely autistic students. This consequence is listed in study limitations. According to Taherdoost (2019), the best way to obtain vigorous survey data is to use a six-point Likert scale that includes strongly disagree, disagree, slightly disagree, slightly agree, agree, and strongly agree responses. In the future I plan to eliminate this function from survey scales. Results also suggest that older respondents and respondents with more tenure tended to strongly disagree/disagree that severely autistic students held competencies. Male respondents were more inclined to strongly agree/agree with positive competencies of these autistic student's.

Qualitative

Qualitative interviews took place to better inform quantitative data and investigate any possible differences. Dawadi et al. (2021) advised that mixed methods designs are often set forth to develop advanced conclusions.

I asked the following questions of each interviewee. Each question was set forth to address the Qualitative research questions stated herein.

1. Describe your understanding of your school's policy regarding the education of autistic individuals educated in contained classrooms.
2. Explain your understanding of your school's policy regarding the Pygmalion Effect.
    a. Describe the relevance if any, this had on your awareness of the abilities of severely autistic students in self-contained classrooms.

3. Expand upon your perception of your school's procedure with reference to inclusion.
4. Define what in-service training means at your institution.
5. Describe your understanding of the Pygmalion Effect.
    a. Expand upon your experience if any, with the Pygmalion Effect during your in-service training.
    b. Explain your school's process of training with regard to the Pygmalion Effect.
6. Explain the process of in-service training at your school, for your program.
7. Describe the nature of your in-service training as it pertains to working with autistic individuals in contained classrooms.
    a. Expand upon your professional, peer, and supervisory experience during your in-service training, with reference to the ideologies of the abilities of autistic individuals educated in contained units.
8. Describe the impact if any this had on your beliefs about these autistic students' abilities.
9. Describe your experience with school administrators as it relates to guidance toward educating severely autistic individuals in self-contained classrooms.
    a. Explain the impact if any, this had on your ideologies about these autistic students abilities.

b. Elucidate what effect administrator guidance has had on your thought process concerning the abilities of severely autistic students educated in self-contained classrooms.

10. Describe the role your school administrators play in effecting the teacher/student education process.
11. Explain any guidance you received from administrators with regard to the Pygmalion Effect.

Depending on each answer questions were sometimes followed up with starters to elicit further responses. These starters included:

1. Clarify your answer to
2. Illuminate other important factors in
3. Specify more precisely
4. Illustrate your understanding of

During the first phase of coding open codes such as the following were identified:

1. Hopeful for students
2. Autonomy of thought
3. Knowledge of policy
4. Desire for success
5. Doing something important
6. High expectations
7. Lack of support

Eleven primary codes emerged from the data. These were coded as one-word segments (lackpolicyguide, indpofthough, lackinsertrain, lackadminguid, adminhighthou, thrinimpact, limitedexpec, highhexpec, inclusivelear, lackpygknow, planbasedlearn). Codes were defined and grouped into similar categories (four). Emergentcategories were named; teacher learning, viewpoint influence, expectations, and student learning. This took place during axial coding. These findings are illustrated in Figure 1 and Table 17.

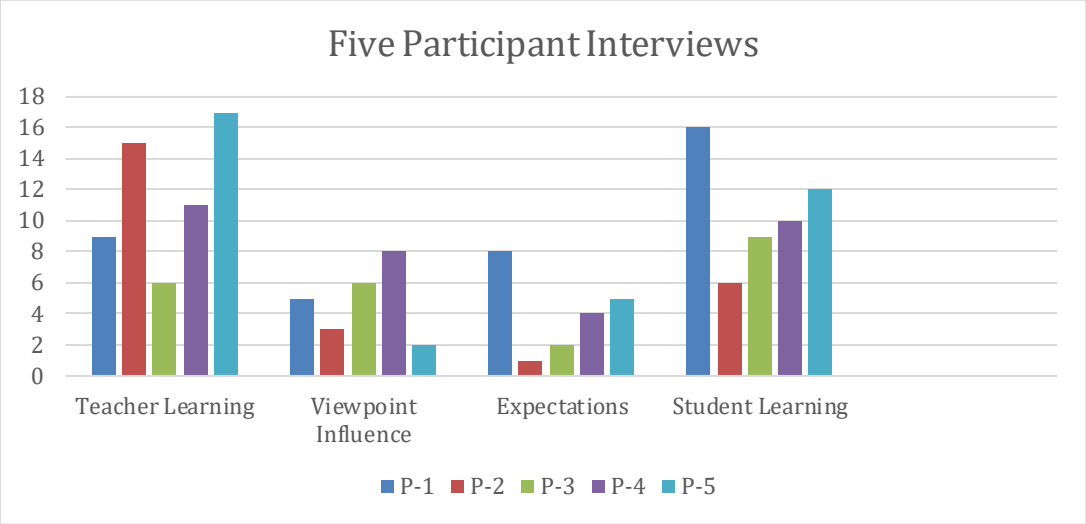
Table 17

Codes, Categories, and Themes

Code	Definition	F – per participant	F (f) total amount (*N* = 5)	Category	Theme
Lackpolicyguide	Felt they did not have appropriate knowledge of the policy.	P-2= 5 P-3=2 P-4=1 P-5=2	10	Teacher learning	Theme 1: Teachers indicate that more training, guidance, policy/awareness, with respect to how to best educate severely autistic individuals is needed.
Indpofthought	Felt they were required to use their own knowledge instead of policy, training, or guidance.	P-1= 4 P-2=3 P-4=7 P-5=6	20	Teacher learning	
Lacktraininser	Participant felt they did not receive sufficient in-service training.	P-1 = 5 P-2=4 P-3=4 P-4=2 P-5=6	21	Teacher learning	
Lackadminguide	Lacked guidance from Administrators on how to best educate these individuals	P-2=3 P-4=1 P-5=3	7	Teacher learning	
Adminhighimpthougt	Felt administrator guidance had a high impact on their thought process about the abilities of these students.	P-1= 4 P-2=3 P-3=5 P-4=6 P-5=1	19	Viewpoint influence	Theme 2: Teachers indicated that the Pygmalion Effect practices need to be further promoted in schools.
Trainimpact	Believed training had an Impact on beliefs	P-1 = 1 P-2 P-3=1 P-4=2 P-5=1	5	Viewpoint influence	
Limitedexpectations	Felt others expectations of these students were low or limited.	P-1 = 1 P-2=1 P-4=1 P-5=1	4	Expectations	Theme 3: Teachers indicated that there needs to be a revisiting of the bar set for high expectations of severely autistic students.
Highexpectations	Participants felt they held high expectations of the students	P-1 = 7 P-3= 2 P-4=3 P-5=4	16	Expectations	
Inclusivelearn	Teachers had an awareness of inclusive learning strategies	P-1 = 5 P-3=4 P-4=3 P-5=2	14	Student learning	Theme 4: Teachers indicated that more focus should be on education plans that promote the Pygmalion Effect concepts rather than prior student data.
Lackpygmknowl	Did they know what it was or have knowledge on the Pygmalion Effect concepts?	P-1 =2 P-2=5 P-3=4 P-4=3 P-5=2	16	Student learning	
Planbasedlearn	IEP, goals, education plans were written based on the students previous achievements and not on limitless expectations.	P-1=9 p-2=1 p-3=1 p-4=4 p-5=8	23	Student learning	

Figure 1

Axial Coding – Five Participant Interviews



Once were established four primary categories emerged. With regard to the research questions (How do special educators describe the relevance of their school policy, administrator guidance, and in-service training concerning the education of severely autistic students educated in self-contained classrooms?) and the theme entitled "Teacher Learning" It is evident that administrators and policy makers should increase teacher training, guidance, policy/awareness, with respect to how to best educate severely autistic individuals. Teachers largely expressed that they experienced a lack of training and guidance on how to best educate severely autistic students.

A second emergent category was termed "Viewpoint Influence." This category denotes that educators thought that administrators outlooks about severely autistic students abilities had an impact on their own ideas about these students. The resulting theme advised that policy makers and administrators should improve upon promoting the Pygmalion Effect practices in schools. The third category that developed was labeled

"Expectations". This category represented opinions that despite low expectations of constituents, participants felt they had high expectations of the students. The subsequent conclusion is that administrators need to do more to set the bar for high expectations of severely autistic students. The final emergent category is entitled "Student Learning". This category was created from participant information about the Pygmalion Effect knowledge, and the student educational goal process at their school. Although participants felt that their students had limitless possibilities, goals and IEP plans were written based on each students previous academic data. The resulting theme informed that policy makers and administrators need to encourage education plans that promote the Pygmalion Effect concepts rather than prior student data.

Although there was a lack of guidance in each area, teachers expressed that their opinions about the abilities of autistic students were influenced by administrators, training, and policy. In addition, even though teachers believed that autistic students had limitless abilities and performance was tied to expectations, goals were written based on the student's previous measured success. Teachers believed in the concept of the Pygmalion Effect but continued to derive limited goals for students. Even though interviewees all diverged that expectations were paramount to outcomes in severely autistic students they all also expressed that educational goals were set based on each individual's previous classroom data. Qualitative data saturation was apparent after the third interview. Participants 1, 2, and 3 expressed throughout the interview a lack of training and knowledge of the Pygmalion Effect. Each participant conveyed that they were more familiar with plan based goals and that these goals were identified based on

previous data of the student's abilities. All qualitative participants explained that goals were derived from a student's previous classroom data rather than the notion of unlimited competencies. Participants 2,3,4, and 5 voiced a lack of policy guidance in each area when questioned about the Pygmalion Effect, the overall education of autistic individuals, and inclusion criteria. Each of these participants felt that they were expected to learn how to teach students on their own. All participants expressed a limited amount of support. Table 17 describes the codes, categories, and themes that were used.

Theme 1: Teachers Indicate That More Training, Guidance, Policy/Awareness, With Respect to How to Best Educate Severely Autistic Individuals Is Needed

Although school administrators may vary in their approach to promoting special educator training, guidance, and policy awareness about educating the severely autistic, all participants agreed that they received a lack of respective training and guidance. Education policymakers could also do a better job at explaining best practices for policy circulation. Study participants expressed that they were not aware of policies concerning educating their students. Increasing teacher training, guidance, and policy awareness about best practices for educating severely autistic students is needed for several reasons. First, it would help teachers understand what is expected from them. Participants described the lack of guidance and awareness as propelling vulnerability in their teaching habits and how standards for each student are set. Second, better advocates are essential. Goldman et al. (2019) found that advocacy levels of future family support advocates were significantly increased with disabilities trainings. Third, teacher attrition rates are largely affected by lack of guidance and support from administrators (Hester et al., 2020).

Student learning can be directly linked to teacher attrition, which make competent special education problematic where high attrition rates are concerned (Billingsley & Bettini, 2019).

Participants described the lack of support resulting into uncertainties for how to best educating students and that this caused them to use a "learn as you go" approach, potentially losing valuable learning power for students. Participant number two advised "Gosh, I'm not even sure I know what that is", when asked what was her school's policy about educating severely autistic individuals. Participant number three answered the same question with "I had limited awareness of that". Lack of awareness and support for education policies indirectly and directly affects the student learning process (Hester, et al., 2020).

There is an immediate need for administrators and policy makers to promote increased awareness about how to effectively educate severely autistic individuals. All participants advised they lacked administrator and policy guidance with how to best educate these students. All participants indicated they were more "self-taught" than educated on policy or guidance. This lack of critical information has potential for a high impact on students efficacy.

Theme 2: Teachers Indicated That the Pygmalion Effect Practices Need to Be Further Promoted in Schools

Concepts of the Pygmalion Effect are rooted in the understanding that mentors and teachers guide affect through their expectancy of students (Szumski & Karwowski, 2019). It is widely accepted that people develop further when their mentor's expectations

of them are high (Freidrich et al., 2015). All participants advised that they did not have a understanding of the Pygmalion Effect. Once the concept was explained, all participants advised that they had not been taught about the Pygmalion Effect or Efficacy and how these ideas relate to the student education process. Improved promotion of the Pygmalion Effect by policy makers and administrators is needed to further educate teachers about critical thinking. When it comes to human behavior and even more so for those with severe impairments, there is not a box that can be checked for accuracy. Severely autistic student's need teachers that know how to think outside the box.

When asked about awareness of the Pygmalion Effect, participant number one stated "I don't know that, can you explain it to me?". Participant number two said "the what" and "I never even heard of that", once explained. During each interview once the concept was explained participants advised that they had never heard of it. However, through experience the teachers learned that students would achieve based on the goals that were set for them. All participants agreed that the goals were written based on previously achieved objectives and not based on high expectancies. However, all participants advised that they did have high expectations for their students.

Theme 3: Teachers Indicated That There Needs to Be a Revisiting of the Bar Set for High Expectations of Severely Autistic Students

Student achievement may be widely linked to ideas mentors hold about their abilities. Jahan and Mehrafzoon (2020) found that Pygmalion Effect practices by teachers influence students' self-efficacy and academic accomplishments. Where student achievement is linked to teacher's opinions about the student's capabilities,

administrators and policymakers should do more to promote expectancy practices (efficacy and the Pygmalion Effect). There are various ways to promote expectancy-based training. This advocacy can be accomplished through in person trainings, online training (prerecorded or live), or through producing emails and digital formats for teachers. Promoting effect-based coaching for teachers can lead to a more self-sufficient population of student's (Jahan & Mehrafzoon, 2000).

All five participants expressed that they felt their school administrators held high expectations for the educational systems in place, but were not aware of any training or information that had to do with expectation-based teaching. Participant number four stated "I think it depends on the individual teacher and their understanding of the child" when asked about their experience with expectancy teaching. Participant number one stated, "So teachers meet and we talk about it about student's expectations and how my expectation effects how students perform" and "No, I was not trained" when asked the same question.

Study results point to the notion that administrators are not currently doing enough to increase success rates of severely autistic students. Although study participants idealized that administrators held high expectations, teachers were unknowledgeable about any training or information that had guided them with respect to expectancy-based teaching. Teachers believed that students could succeed, but voiced they had little guidance on how to implement strategies for improvement. Since raising the bar to include training on the Pygmalion Effect could impact student self-efficacy and learning,

this approach should be considered during in person trainings, policy creation, and administrator guidance.

Theme 4: Teachers Indicated That More Focus Should be on Education Plans That Promote the Pygmalion Effect Concepts Rather Than Prior Student Data

Encouragement of education plans such as IEPs and Student Education Plans (SEPs) that develop student achievement goals through a thoughtful analysis of capabilities rather than relying on achievement data could result in increased learning for students. Swain, et al. (2022) found that although practices vary, teacher us observation data most to inform IEP goals. Another commonly accepted standard for IEP goal writing involves using the student's previous measurable data (Swain et al., 2022). This process leaves out the inclination that the Pygmalion Effect exists. Education researchers Gunduzalp and Ozan (2019) found that teachers with high expectations generally produced students with high results. While previous student data can be insightful, it should not be the principal information driving education plan goals.

Although study participants voiced that they held high expectancies for their severely autistic students, teachers continued to write education plans with limited goals. All participants voiced that they had not heard of the Pygmalion Effect and did not consider high expectations when writing the student's education plans, yet they did have high expectations of students. All contributors also stated that they largely acted autonomously with little guidance. Participant 4 answered "So the school might have a policy that every child should learn, but if I don't encourage children, they might not learn anything. So I think its up to the individual teacher", when asked about how goals

were written. Participant five stated “Education of the students was a lot better once they decided to make bigger strides for students to have goals in their education plans”. Participant five advised that goals were initially not a part of the education plan for student’s with severe autism and she felt like students achieved better when they introduced goals to the plan.

Writing and implementing student education plans that focus on previous student achievements limits student’s possibilities. Education plans should reflect a more robust approach to learning for severely autistic students. Each participant informed that they held vigorous personal beliefs about severely autistic student’s abilities, yet participated in writing goals with limited possibilities. Each participant voiced that they had inadequate guidance and training. This lack of knowledge and support could be staggering the development of these severely autistic individuals. Encouragement of critical education plans centered on goals with robust possibilities could lead to less deficits in academic progress for these students.

Evidence of Trustworthiness

Verifying trustworthiness in mixed methods studies is essential in providing ethical research practices. The primary components of establishing trustworthiness are rooted in elements of credibility, transferability, dependability, and confirmability. I utilized transparency in my research study to contribute to these components. Tuval-Mashiach, (2017) found that transparency was a primary component in establishing trustworthiness in qualitative research because it decreases obscurities.

Credibility in research is often established through models of transparency (Shufutinsky, 2020). I promoted internal validity (credibility) in the quantitative phase of this research through utilizing all of the data from the 209 survey respondents even though only 159 were needed. Campbell and Stanley (1963) advised that strengthening the population range was an appropriate way to increase internal validity. To promote credibility for the qualitative phase of this study I employed a tactic of reflexivity. *Reflexivity* in qualitative research refers to a process where the researcher reflects on their own biases and is essential to the formation of knowledge (Peddle, 2021). To achieve reflexivity, I kept a journal of my thought processes, experiences, assumptions, and possible biases and used this to promote transparency among participants.

Transferability in both the quantitative and qualitative phases of this study was addressed through the utilization of purposeful sampling techniques. Purposive sampling stresses the parallels of participants (Palinkas et al., 2015) and helps the researcher access those with needed credentials. Purposive sampling was used to gain access to educators with specific credentials. Only credentialed special educators would have appropriate knowledge to address this research.

Dependability in research is determined by the extent to which a study can be repeated and produce the same result (Janis, 2022). Dependability of the quantitative phase of this research was established through first conducting peer debriefing. This took place prior to the study implementation. I consulted with peers not related to the research to gather a detailed account of their analysis of the research. In addition, during the project I kept a reflexive journal account of my upbringing and personal life, beliefs

about special education and autistic individuals, values I have that could impact my analysis, a record of decisions, items and conclusions that gave my anxiety.

Confirmability in research considers the degree to which study results exhibit participants responses versus the researchers opinions (Kyngas, et al., 2019). To ensure confirmability of this research qualitative interviews were first transcribed using word. Once transcribed, data was reviewed thoroughly to make sure wording was correctly depicted. Data were also uploaded into MAXQDA for a more thorough analysis. After that, a coding table was created to help depict codes, definitions, totals (each participant), categories, and themes. The transcriptions were carefully coded using coded words. Categories emerged from these codes and subsequent themes identified. This sequence of coding was checked and rechecked a total of 5 times for each interview to better represent reliability.

Summary of Overall Results

First phase quantitative data informed the study results by identifying that there is no difference in opinion among educators at public, private, and charter institutions of learning about the abilities of severely autistic students. However, several differences in opinions emerged amongst age group, experience, and gender with reference to two questions for each subset. Younger participants were more likely to agree or strongly agree that students with severe autism have the ability to care for parents in old age and have the ability to have and raise children. Participants with 6-10 years of experience were more likely to agree or strongly agree that students with severe autism will have the ability to take care of parents in old age and those with 11-15 years of experience were

most likely to agree or strongly agree that these students will have the ability to get married. Male respondents were more likely than female respondents to agree or disagree that students with severe autism will have the ability to live independently without assistance and have the ability to have and raise children.

Qualitative data pointed to a trend that special educators described having a limited amount of knowledge about the Pygmalion Effect. Those interviewed showed a lack of understanding of the terms and concepts of Pygmalion in education. There was also a perpetual theme that the autonomy of educators is expected by administrators. All interview participants relayed confidence that they understood their schools' policy with regard to inclusion. However, all expressed little to no knowledge about a policy promoting the Pygmalion Effect concepts. In fact, none of those interviewed knew the definition of the term Pygmalion independently. Special educators expressed that they felt guidance from administrators affected their thought processes about the abilities of severely autistic students. All participants expressed that there was a lack of training, policy and administrator guidance with how to educate severely autistic individuals. Although all expressed that they had high expectations of severely autistic students, the majority advised that they wrote educational plans based on prior data.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this mixed-methods study was to describe and investigate whether there is a statistical significance in public, private, and charter special educator beliefs concerning the abilities of severely autistic students in self-contained settings. The study also examined how special educator beliefs may be shaped by perceptions of administrator guidance, school policy, and in-service training, and how this affected published student goals. There was no statistically significant difference between the beliefs of educators in the three school settings about the abilities of autistic students. However, discovery of statistical significances in beliefs about abilities was realized across gender, age, and the length of time working in the field of special education. It was also evident that although teachers expressed they believed students could achieve limitless possibilities, goals were derived with limitations based on previous student data. In this chapter, I will put forward findings, profile recommendations, and consider implications of the study.

Interpretation of the Findings

I found that special educators in the three school settings in general answered "neither agree nor disagree" to survey questions. Although there was no statistically significant relationship among participant beliefs in the three schools, I found there was a correlation of beliefs among participant age groups, gender, and years on the job. The youngest participant group (18–33) agreed more that Students with severe autism can take care of their parents in old age and can have and raise children of their own. Results for these two questions were followed in chronological order from the youngest to oldest

participant age groups with the youngest age group being most supportive of high potential. As it pertained to years on the job those with 6–10 years of experience more often indicated that they believed that students could take care of parents in old age. Participants with 11–15 years of experience were most likely to agree that students would be able to get married. When it comes to gender, men more often than women agreed that these students would have the ability to live independently without assistance and have and raise children. Performance goals were not driven by the Pygmalion Effect practices; rather, they were driven by past student experiences. Although years on the job and participant age were significant to two questions, there is insufficient data to suggest whether either of these categories were significant to how goals were written.

One explanation for participants in the three school settings answering questions as "neither agree nor disagree" is the belief that educators in general do not want to see themselves as limiting students' abilities yet could not completely agree to the question. This answer reflects a safe way to mitigate that factor. A study to understand the effects of Likert scaling conducted by Taherdoost (2019) concluded that the best style of Likert scaling to gather data on one side or the other is the 6-point Likert scale. In reflection, better data may have been derived from forcing participants to answer questions without providing the safety net of a neutral response.

In terms of the age of special educators being a factor in the Pygmalion Effect practices, younger participants could also be less experienced and less touched by factors that may influence their viewpoints. Saloviita (2020) found that younger teachers in general were more likely to have positive viewpoints about the inclusion of students with

disabilities. This could reflect younger teachers' generational factors as well. Yada et al. (2018) suggest that younger teachers may be more educated about inclusion standards.

With reference to gender and Pygmalion practices, men may be more sensitive to the values of the Pygmalion Effect concerning autistic students because of gender biases. According to Hentschel et al. (2019), women rate themselves lower than men in leadership competence and assertiveness. Men may have more experience in these strategies. Men could be asserting these principles onto their students as well.

When it comes to years on the job and Pygmalion practices, those with 6–10 years of experience may have just enough experience to be knowledgeable on the subject, but not so much experience that they are tainted by limited research. This may also be true of those with 11–15 years of experience. These were the two experience groups that more often agreed that students with severe autism could be successful. It is also possible that more than 5 years of experience allows teachers to see students be successful despite preconceived notions. This sentiment was a continual theme during the qualitative portion of the research.

The incongruity that exists between teacher ideas about autistic students' abilities and the written goals could be a result of policy, guidance, and training. Although the majority of those who were interviewed did not seem to know or understand what the school's policy or guidance was with reference to creating goals for students, all suggested that goals were data-driven. Harmon et al. (2020) suggested that current data allow an IEP team to set appropriate goals for students, however, adding historical information will drive more significant information. Also pointed out by Harmon et al. is

the Supreme Court decision to require educators to decide if IEP goals are assigned based on the student's circumstances. This points toward a legal obligation to base goals on past performance and not the Pygmalion Effect attributes. Qualitative participants also indicated that they were initiative-taking yet followed the direction of other staff members. Policies therefore were largely unavailable or misunderstood with each school acting in an autonomous nature. This could be a result of different demographic populations for each school driving the perpetual nature of student needs.

Limitations of the Study

Several limitations exist in this study, one of which is the simplification of survey data with the answer "neither agree nor disagree." Better data may have been derived from forcing participants to answer this question without having a way to opt out. Taherdoost (2019) concluded that the best way to derive robust information from survey data is to use a 6-point Likert scale. This scale would include *strongly disagree*, *disagree*, *slightly disagree*, *slightly agree*, *agree*, and *strongly agree* response markers (Taherdoost, 2019).

A second limitation includes the translation of the structured interviews. Two of the participants were second language English speakers, and although their data was transcribed word for word, I found interpretations of meanings more difficult than for native English speaker data. To help mitigate any loss of information or wrong interpretations, I asked follow-up questions to clear up misunderstandings. In addition, I used two forms of instruments to help code the data (MAXQDA and Word) to ensure reliability.

A third limitation present was the way the sample was derived. Participants were ultimately selected through a nonrandomized method of convenient sampling, possibly posing a threat to internal validity. To raise internal validity capability, the population scope should be increased (Campbell & Stanley, 1963). The population for this study increased, and 209 participants were included although only 159 were needed.

Recommendations

More data is needed to understand why participants answered, "neither agree or disagree" and or alleviate factors of this. Based on study findings, I would recommend a scale that did not include a neutral answer option, such as a 6-point Likert scale. I would also suggest new research should consider teacher self-efficacy as a contributing factor to outcomes. Further research is needed to find out how efficacy practices may influence Pygmalion practices in special education classrooms.

With younger participants agreeing more than older participants that students with severe autism can take care of their parents in old age and can have and raise children of their own, it is apparent that age plays a role in beliefs about domestic interactions. Although there could be many reasons for this, one explanation is that younger generations feel more connected to family as a result of an exploding social media use and availability. With reference to years on the job, participants with 11–15 years of experience were most likely to agree that students would be able to get married. This could be because those participants are also most likely to be married themselves versus younger participants who may not have been married yet. According to the U.S. Census Bureau (2022), the average age for a first marriage was 28.2 for women and 30.1 for

men. When it comes to gender, men more often than women agreed that these students would have the ability to live independently without assistance and have and raise children. This could be a result of men tending to hold higher views about independence in general as a result of traditional gender roles. Further research could help produce a better understanding of why age, gender, and years on the job reflected significant differences in beliefs about abilities. Also, it could help determine how these beliefs relate to the differences between varying degrees of autism. This research set out to explore attitudes about severely autistic students' abilities. There is a large spectrum of mid to high-functioning autistic individuals who were left out. The Pygmalion Effect is not specific to any population of children. Perhaps comparative research could yield answers with reference to these differing ranges of autistic students.

Implications

The most significant implication of the quantitative portion of the research is how ideas about autistic student abilities develop within the varying categories of participants (age, gender, years on the job) and what can be done to form better practice. Schools and policymakers may use this data to inform special educators about the Pygmalion Effect and to help guide opinion and better, to guide practice. Furthermore, this information can inform lawmakers about best practices when it comes to the contradiction of beliefs versus action within the educational system, which was apparent with the qualitative portion of the research represents a far-extending problem within institutions. Educational systems and policymakers may use this data to reflect upon new ways of goal attainment and reciprocity among students with disabilities in general. Furthermore,

practices for all students could be affected as classroom goals and expectations are largely driven by the previous year's performance and experiences.

Conclusions

The goal of this study was to define and inspect the public, private, and charter special educator beliefs concerning the abilities of severely autistic students in self-contained settings. The focus was to understand whether there was a difference in educator opinion within the three school settings and investigate differences as they relate to policy, administrator guidance, and training. The significance was to address the need to understand if Pygmalion practices were more present in one institution over another so that parents are able make more informed decisions about where to educate their severely autistic children. Although the study yielded results showing no difference in opinion among educators at the three school settings, it provided a wealth of information that supports there is a difference in opinion among three groups of participants (age, gender, years on the job), how this opinion is shaped, and outcomes of the opinions as they relate to written goals for autistic students. School administrators and policymakers may use this information to derive new tools to educate autistic students. Parents may effectively use this data to drive their participation in performance goal setting for their children's educational goals.

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Appendix A: Demographics Survey

Name: **Phone Number (For potential 2ND phase interview only):**	**Email Address:**
What is your age? 18 to 33 34 to 49 50 to 65 66 and above	**What is your gender?** Male Female Non-Binary Other
Years on the job as a Special Educator 1 – 5 6 – 10 11 – 15 16 – 20 21 +	**Type of school worked at primarily (choose only one)** Public Private Charter
Current state special education certification/license or licensed within the past 5 years. Yes No	**Special Educator Employment Status** Currently working in the field Previously employed as a special Educator within the last 5 years

Appendix B: Educator Survey about Autistic Students

Teachers' Expectations for Future Outcomes

For each of the questions below, indicate the response that best characterizes how you feel about the statement below.

Students with severe autism that are educated in self-contained classroom units, in general, have the ability to:	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. Be happy and satisfied	1	2	3	4	5
2. Attend higher education	1	2	3	4	5
3. Get married	1	2	3	4	5
4. Own a house	1	2	3	4	5
5. Have a support network of friends	1	2	3	4	5
6. Have and participate in a religion of choice	1	2	3	4	5
7. Be accepted in the community	1	2	3	4	5
8. Have a secure financial future independent of social benefits and disability programs	1	2	3	4	5
9. Be safe from physical harm	1	2	3	4	5
10. 1Achieve doctorate level education	1	2	3	4	5
11. Help with household chores	1	2	3	4	5
12. Be socially responsible and law abiding	1	2	3	4	5
13. Take care of their parents in old age	1	2	3	4	5
14. Participate in community activities	1	2	3	4	5
15. Live independently without assistance	1	2	3	4	5
16. Use their time to participate in and watch games	1	2	3	4	5
17. Hold a job or vocation	1	2	3	4	5
18. Have and raise children	1	2	3	4	5
19. Utilize community services	1	2	3	4	5
20. Become educationally successful	1	2	3	4	5

Appendix C: Qualitative Interview Questions

School Policy:

1. Describe your understanding of your school's policy regarding the education of autistic individuals educated in contained classrooms.
2. Explain your understanding of your school's strategy or rule regarding the Pygmalion Effect.
    a. Describe the relevance, if any, this has had on your awareness of the abilities of severely autistic students in self-contained classrooms.
3. Expand upon your perception of your school's procedure with reference to inclusion.

In-Service Training:

1. Define what in-service training means at your institution.
2. Describe your understanding of the Pygmalion Effect.
    a. Expand upon your experience, if any, with the Pygmalion Effect during your in-service training.
    b. Explain your school's process of training with regard to the Pygmalion Effect.
3. Explain the process of in-service training at your school, for your program.
4. Describe the nature of your in-service training as it pertains to working with autistic individuals in contained classrooms.
5. Expand upon your professional peer and supervisory experience during your in-service training, with reference to their ideologies of the abilities of autistic individuals educated in contained units.

a. Describe the impact, if any, this has had on your beliefs about these autistic students' abilities.

Perception of Administrator Guidance:

1. Describe your experience with school administrators as it relates to guidance toward educating severely autistic individuals in self-contained classrooms.
   a. Explain the impact if any, this had on your ideologies about their abilities.
2. Elucidate what effect administrator guidance has had on your thought process concerning the abilities of severely autistic students educated in self-contained classrooms.
3. Describe the role your school administrators play in effecting the teacher/student education process.
4. Explain any guidance you received from administrators with regard to the Pygmalion Effect.

Follow-Up Question Starters:

1. Clarify your answer to ……
2. Illuminate other important factors in……
3. Specify more precisely……..
4. Make clear your experience with…….
5. Illustrate your understanding of……..