Needs Assessment of Services Provided in a Rural School District for Students With Autism

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for Students With Autism

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A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Educational Specialist

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ABSTRACT

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The number of children diagnosed with autism spectrum disorder (autism) has steadily increased dramatically over the past generation, and more students with autism than ever before are enrolled in the public education system. Educating students with autism presents unique challenges (e.g., shortage of staff, low incidence of autism, limited programming) to rural school districts. Rural districts must adhere to the same federal and state guidelines (e.g., Individuals with Disabilities Education Act & Free and Appropriate Public Education) as urban districts that have more readily available resources in providing appropriate programming.

This study examined stakeholders’ perceptions of the current services offered in the targeted rural district including effectiveness of such resources. Fifty one stakeholders participated, including general education/special education teachers, related services providers, administration, parents, and students diagnosed with autism. Research questions were accessed through an online survey with the option of a follow up interview that addressed perceptions of current accommodations and modifications implemented in the general education classroom and their overall effectiveness. The data was analyzed by mixed methods, including both qualitative and quantitative data.

The findings from stakeholders presented four common themes: (a) increased trainings for stakeholders; (b) a need to improve collaboration amongst all school staff including communication with parents of autistic students; (c) enhanced Child Find through early identification of autistic students; and (d) access to additional resources within the rural school and the community.

Immediate recommendations for the rural district include: (a) web-based training options through email, school newsletters, inservice, and on the district’s special education site; (b) forming a quarterly focus and/or support group with parents, educators, and administration to strengthen the partnership between the school and the community; (c) initiating conversations with local pediatric offices to implement early identification autism screening tools; and (d) collaboration with the Utah Parent Center to organize parent meetings/trainings. Additionally, the Local Education Agency (LEA) should continue to utilize regional itinerant supports and explore options to increase these services for the district.

An executive summary was presented to the local school board to guide future decisions regarding the needs of students with autism as well as improve the outcomes and quality of their lives.

Keywords: autism, rural, accommodations, services
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CHAPTER 1

Introduction

Over the last decade, the prevalence of children diagnosed with autism spectrum disorder (autism) continues to increase with more children than ever before identified with autism and enrolled in public education (Maenner et al., 2020). With respect to the varying preferences of self-advocates, both person-first and identity-first language will be used throughout this document. The term “autism” will be used to denote a neurological difference the term “characteristics” will be used to describe its typography. As more children are identified, school districts are struggling to provide necessary resources for a free and appropriate and education (FAPE) to all students (Individuals with Disabilities Education Improvement Act [IDEA], 2004). Individuals on the autism spectrum can experience a range of characteristics that create barriers to social communication from mild or moderate, to severe/profound with co-morbid intellectual disability. Individualized Education Program (IEP) teams play a critical role in problem-solving and ensuring that individualized plans that require academic, behavioral, social/emotional goals are provided for students who need additional support and educational services beyond what the typical classroom can provide. When autism characteristics are relatively mild and academic supports can be accommodated in the general education classroom, autistic students often still need support and accommodations that may be provided through the Americans with Disabilities Act of 1990, Section 504, commonly referred to as a 504 plan.

Rural school districts are faced with significant challenges when trying to provide services for students with autism. Due to low student population numbers, and difficulties recruiting specialists to rural areas, programs often do not exist for autistic students requiring intensive services. Accessibility (i.e., cost) to provide professional development and resources are limited
in rural districts. High staff turnover rates affect program fidelity and validity. For example, in the
school district where the author has served as the special education director, each of these barriers
are mentioned on a regular basis in special education team meetings.

**Statement of the Problem**

Currently, there is limited research on services provided to students classified for special
education service under the category of autism in rural communities. Under IDEA, rural school
districts must implement policies and procedures that ensure that all children with disabilities are
identified, located, and evaluated, a mandate known as Child Find. Local Educational Agencies
(LEAs) must actively seek out children with suspected disabilities, including those who are
homeless, wards of the state, or attending private schools to determine if special education
services are required (IDEA, 2004). Lack of funding or staffing restrictions does not reduce IDEA
or Child Find responsibilities. Rural school districts must ensure all federal and state requirements
are met while still providing high-quality programs for students with autism spectrum disorder
with limited resources.

**Statement of Purpose**

The purpose of this study was to gather perceptions from community stakeholders of the
importance of services for individuals with autism in the target school district and the
effectiveness or quality of services currently provided in rural communities for students with
autism diagnoses or classifications.
Research Questions or Research Hypotheses

This study addressed the following research questions or research hypotheses:

1. What services are stakeholders (e.g., parents, individuals, educators, and community clinicians) aware of in a designated rural district in the Western United States (“the targeted rural district”)?

2. How satisfied (in terms of quality or effectiveness) are stakeholders with current autism special services provided in the targeted rural district?

3. What additional services do stakeholders think should be provided in the targeted rural district?

4. What accommodations/modifications are stakeholders aware of that are provided by general education teachers?

5. How satisfied are stakeholders with the current accommodation/modifications for students with autism in the targeted rural district?

6. What additional accommodations/modifications do stakeholders think should be provided in the targeted rural district?
CHAPTER 2

Review of Literature

Autism Definition/Prevalence

In the last decade, there has been a significant increase in students diagnosed with autism (Maenner et al., 2020, 2021). The Diagnostic and Statistical Manual of Mental Disorders – 5th Edition (DSM-5: American Psychiatric Association [APA], 2013) criteria for an individual to be identified as having an autism spectrum disorder describes autism characteristics as individuals who display persistent deficits in social communication and social interaction across multiple contexts and at least two of the following: restricted, repetitive patterns of behavior, interests, and/or activities; hypo-/hypersensitive tendencies; insistence on sameness or inflexibility; or stereotypical repetitive movements. Characteristics must be present in the early developmental period and cause clinically significant impairment in social, occupational, or other important areas of current functioning. These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay (APA, 2013).

The Centers for Disease Control and Prevention has been leading studies in conjunction with the Autism and Developmental Disabilities Monitoring (ADDM) Network since 2007. The methodology from year to year is consistent, allowing for conclusions about changes in prevalence as each new study is published. ADDM uses multisource, multisite records to provide estimates of the prevalence of autism spectrum disorder (autism) among children aged 8 years. Residents of 11 ADDM sites in the United States were included in a survey of 2016 data (Arizona, Arkansas, California, Georgia, Maryland, Minnesota, Missouri, New Jersey, Tennessee, Utah, and Wisconsin; Maenner et al., 2020).
A total of 220,281 children’s records were examined in 2016 for the study. The findings indicate that 23 per 1000 children aged 8 years have a diagnosis of autism, which was 4.2 times as prevalent among boys as among girls. From the first prevalence reports in 2000 - 2002, the number of children (aged 8) with autism in Utah increased from approximately 1 in 54 to 1 in 46 children in the 2020 report (Maenner et al., 2020).

**Increasing Prevalence**

The most drastic increase documented in the United States, according to the Department of Developmental Services (2003), occurred in California, reporting a 634% rise between 1987 to 2002 of students diagnosed with autism (Department of Developmental Services, 2003). California was not included in the CDC/ADDM prevalence studies in the past, but was included in the 2018 data collection, increasing the overall prevalence rate to 1 in 44 children nationally, with a prevalence rate of 1 in 26 in San Diego county. Earlier ages of identification in San Diego county were also noted. There has been a focus on early identification of autism through a research project and California has large regional centers for autism services. These are possible reasons why children in the California sample are identified earlier and why more children may be identified (Maenner et al., 2021).

The growth in individuals diagnosed with autism is not limited to the United States. The Special Needs Autism Project, in England, examined the diagnostic status of approximately 209 adults in South East England. The prevalence of autism was found higher in men (2.0 %) than women (0.3 %; Brugha et al., 2012). In adults with comorbidity (i.e., learning disabilities), the prevalence of autism ranged from 31.0% - 35.4 % (Brugha et al., 2012).
Three factors contributing to the rise in autism numbers include the following: (a) changing the autism diagnostic criteria per the DSM-5, which also included folding (Pervasive Developmental Disorder-Not Otherwise Specified (PDD_NOS), and Asperger's Disorder or Syndrome (autism without language or cognitive delays) into a single diagnosis of autism spectrum disorder; (b) an increase in awareness of autistic characteristics by professionals leading to an earlier diagnosis of autism; and (c) IEP teams determining eligibility for special education services under an autism classification to obtain services that may not be covered under other diagnoses (Leonard et al., 2010). With little overall change in total numbers of students identified as having a disability between 2000 (5,780,651) and 2014 (5,939,578), it is highly likely students with autism are being re-diagnosed from other eligibility categories (e.g., learning disabilities [LD], emotional disabilities [ED], other health impairment [OHI], and intellectual disability [ID]; Morningstar et al., 2017). As a result of these factors, an increase in the number of individuals classified or diagnosed with autism has implications for the provision of appropriate diagnostic, educational, and family support resources in communities and especially schools.

**Autism in Education**

There exists a vast spectrum of students under the autism classification, ranging from students classified as having autism with mild, moderate, or severe characteristics. Students considered high functioning (i.e., no language or cognitive delays, but some differences) previously described as having Asperger’s Syndrome, are often not identified as needing services in their toddler or preschool years. This means they may not be identified in the school system as needing additional support until elementary age or older. The financial implication of the rapidly increasing rate of diagnoses of autism spectrum disorders contributes to the growing costs associated with special education (Chasson et al., 2007).
In 2018, the No Child Left Behind Act was reauthorized as the Every Student Succeeds Act (ESSA) (Every Student Succeeds Act, 2015), holding schools federally accountable for all student outcomes. The majority of students diagnosed with autism are found eligible for individualized services through Special Education (IDEA, 2004). Special Education staff serve a vast array of disabilities within public school districts. Children with autism often require considerable support staff to access a free and appropriate education (FAPE) in the least restrictive environment. Rural school districts are faced with challenging demands as autism rates continue to increase, as they have limited resources and experience difficulties recruiting and retaining qualified staff.

Numerous studies have been conducted on the relationship between the quality of educational program environments and their impact on childhood education (Harms et al., 2014). Unfortunately, there is limited research on program development for students with autism. The increase in autism rates also comes with a need to provide appropriate and high-quality educational programs. Parents may seek legal actions against school systems for not providing such programs (Zirkel, 2011). An inability to document the effectiveness of a program often leads to losses in lawsuits for districts (Yell et al., 2003).

Legal Cases Related to Appropriate Services

Endrew F. v. Douglas County School District

School districts are required under IDEA to provide students with IEPs free and appropriate public education. If districts fail to do so, parents can seek outside resources, such as private school enrollment or reimbursement by the district for failure to meet measurable, annual IEP goals (IDEA, 2004). In the case of Endrew F., a boy with autism, was enrolled in public
education from the age of three through fourth grade (Endrew F. v. Douglas County School Dist. RE-1, 2015).

Each year during annual IEP meetings, parents expressed that Endrew F.'s measurable goals were similar to previous goals from the following year. Frustrated with their son's lack of progress in education, his parents sued the district for failure in making "adequate progress" towards Endrew F.'s IEP goals and objectives. Endrew F. v. Douglas County School District is significant in that it challenged the previous interpretation of IDEA established 37 years ago. "Adequate progress" was initially defined as a school district providing an educational experience that minimally meets the requirements under IDEA and the child's IEP. The lower circuit courts ruled in favor of the school district claiming that the district did provide "some educational benefit" under IDEA, and that was adequate under the standard law (IDEA, 2004).

Endrew F.'s parents appealed, bringing the case to the Supreme Court in 2017. This was a monumental undertaking considering that the Supreme Court had only accepted 12 special education cases since P.L. 94-142 in 1975. The decision of the courts would directly impact school districts and how they provide and deliver services for students with special education needs.

In the Endrew F. case, his parents felt that their child's behavior was interfering with his academic growth and progress, which had not been addressed in his current school. Once Endrew was placed in a private school where his behaviors were addressed, he made academic progress and showed growth. The Supreme Court ruled that families of children with a disability should expect educational programs that challenge their child and should no longer expect a minimal education (Endrew F. v. Douglas County School Dist. RE-1, 2015). The term "appropriately
"ambitious" was left for administrators, school staff, and families to interpret and implement goals that are in the best interest of the individual child.

Endrew F. claims that the purpose of this provision, as declared by Congress, is to improve educational results for children with disabilities and to prepare them for additional education, employment opportunities, and independent living. Unfortunately, the application of the new interpretation is ambiguous, resulting in further legal cases between families and districts. The Endrew F. case provided parents with legal backing to challenge their child's IEP goals and recommendations if their child was not making adequate progress. This has wide-ranging implications, especially for school districts with significant barriers to accessing services (e.g., specialty services in rural areas).

**Board of Education of the Hendrick Hudson Central School District v. Rowley**

In the case of Amy Rowley, a kindergarten student with a hearing impairment, administrators and parents placed her in a temporary general education class to assess appropriate supplemental services needed to provide the child FAPE (Board of Education of the Hendrick Hudson Central School District v. Rowley, 1982).

At the duration of the trial period, it was determined that Amy would remain in a general education classroom with the use of an FM hearing aid. The FM system would amplify the teacher's voice providing direct audio input to Amy through a wireless receiver. Amy completed Kindergarten successfully that year.

In the fall of Amy's first grade school year, her parents requested an interpreter be placed in her general education classroom. School administration considered the request, consulting with the school's Committee on the Handicapped, testimony from Amy's teachers regarding her academic and social progress, and visited a school for students who are deaf. The district
concluded that Amy was advancing academically, socially, and educationally without an interpreter.

The Rowley’s disagreed with the district's decision filed in the United States District Court for the Southern District of New York, claiming denial of a sign language interpreter was a denial of a free appropriate public education. The District Court agreed that Amy was clearly an exceptional child progressing well within the public school. However, her disability of deafness affected her potential to excel given the fact that she understands considerably less than her typical peers. Public education was defined by the court as a free appropriate public education consisting of educational instruction specially designed to meet the unique needs of the handicapped child, supported by such services as are necessary to permit the child to benefit from the instruction (Board of Education of the Hendrick Hudson Central School District v. Rowley, 1982).

Since the Rowley case, courts have been faced with interpreting what constitutes an educational benefit for a child with a disability. Courts have settled in favor of and against school districts when referencing this historic Supreme court case.

Both Endrew F. and Rowley emphasize the legal implications school districts are faced with when they are unable to provide FAPE. This study’s targeted rural district’s community has limited resources, staff, and revenue creating pressure to be creative when developing goals, related services, and placement options on IEP’s.

**Autism Services in a Rural School District**

Since 2000, the population growth of a particular rural community in northern Utah has increased by 70.8%. Prior to this time, the majority of homeowners were farmers. As their land is sold off to developers, there has been an explosion of “affordable living” houses being built. The
mean household income (Lewis, Young, Robertson, & Burningham, 2018) is $74,552 with a median income of $61,000. Based on the 2018 U.S. Census there were 36,324 residents living in this county. Eighty percent of the population identifies as white, eleven percent Hispanic/Latino, and nine percent other or multiple races. The percentage of residents living in poverty is eleven percent (U.S. Census, 2018).

This targeted rural district is not immune to this epidemic growth. In the next five years, it is projected that new homes within the school district boundaries will increase student enrollment at the high school by 30%, middle school by 11% and the elementary school by 5%.

According to the district’s October 2019 Special Education state reports, there are 145 students classified with one of the 13 disability categories. Out of those 145 students, 9 children have been found eligible for special education services under an autism classification. This number does not reflect those students who may be served on Section 504 plans (ADA, 1990) or classified under Speech/Language Disability, Developmental Delay, or Other Health Impairment instead of Autism, despite having significant autism characteristics or a medical diagnosis of autism.

The Americans with Disabilities Act of 1990 prohibits discrimination based on a disability. School districts comply with ADA rules when putting together Section 504 plans. Title II, state, and local government activities provide people with disabilities an equal opportunity to benefit from all of their programs, services, and activities. This includes public education. ADA protects anyone with a physical or mental impairment which substantially limits one or more life activities including eating, seeing, hearing, speaking, learning, reading, concentrating, thinking, and communicating. Students with autism found ineligible for special education services may pursue a plan for accommodations according to Section 504 of ADA
(ADA, 1990). The 504 plans can provide accommodations and modifications that students require in order to be successful in the general education classroom.

In November of 2018, a district enrollment analysis was conducted by an independent company to aid in determining future building expansions (Lewis, Young, Robertson, & Burningham, 2018). Currently the district operates with two high schools, one middle school, and two elementary schools. The report indicates that within the targeted rural district’s boundaries, new construction or dwellings will increase from 1,147 units (in 2023) to 2,476 units (by 2028). The overall student population will increase from its current to date enrollment 1,693 (.53% identified as autism) to 2,739 students in 2028. Assuming the growth projections are accurate, in the next 7 years, the percentage of children that could possibly qualify under an autism classification could increase by 50 students (Maenner et al., 2020), or by as many as 58 given the latest Utah prevalence (Maenner et al., 2021).

Least Restrictive Environment/Free and Appropriate Public Education

The increase in the prevalence of autism has impacted the target school district’s ability to provide additional services to ensure that all students have access to a free and appropriate education. The least restrictive environment (LRE) mandate states to the maximum extent appropriate, that children with disabilities are educated with children who are not disabled. Placement in a more restrictive environment only occurs when the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services is a denial of FAPE (Morningstar et al., 2017).

In the targeted rural district, services for students with autism are often dependent on what grade they are currently enrolled in for the school year. At the elementary level (Pre K - fourth grade), all students with disabilities have access to inclusive (with typical peers) environments.
When the IEP team determines that additional support is necessary for a child to access a free and appropriate public education, paraprofessionals, or a self-contained setting may be provided. At the secondary level (5th-12th), the inclusion of students with severe characteristics of autism in core subjects can be challenging. Involvement with peers is often limited to lunch, recess, and specialist classes.

Rural school districts face barriers include the following: (a) low population of students who are identified as requiring moderate to intensive services; (b) programs do not exist for children to transition to as they progress through their schooling; (c) special education staff continuously need to create appropriate programs and placement options for students as they advance in grade levels where such programs had not existed before. IEP teams play a critical role in problem-solving and ensuring that individualized plans that require academic, behavioral, social/emotional goals with limited resources are provided.

**Individuals With Disabilities Education Act Part C – Early Intervention**

Early Intervention services in the district are currently offered through the County Health Department. The County Health Department receives referrals from pediatric offices and concerned parents. Children (aged 0-3) could be eligible if a delay is suspected in one or all developmental areas. These include cognitive, physical, communication, social or emotional, adaptive, or a diagnosed physical or mental condition that has a high probability of resulting in a developmental delay (Individuals with Disabilities Education Improvement Act [IDEA], 2004). If eligible, an individualized family service plan (IFSP) is created to address child deficits by providing necessary support staff and parent training. All services are implemented in the child's natural environment, the home. These services are mandated by Part C of IDEA, which addresses
Child Find and intervention needs for children 0-3 years, with Part B of IDEA addressing needs of children ages 3-21 years (IDEA, 2004)

As mandated by federal law, 90 days before the child turns 3, a transition meeting is held to discuss placement options, how services will be implemented, and determine Part B eligibility. An eligibility determination of the services that will be provided by the public schools. The district’s service model varies depending on the individual needs of the child and the preference of the parents. Services can be provided by appointment by district staff (e.g., speech pathologists), enrollment into an inclusive preschool program (ages 3-4) three days a week for a weekly total of 4.5 hours, or parents may choose to decline services.

If parents choose to send their child to the target rural district’s preschool, all special education services are provided in a general education setting. Related services providers, special education teachers, and itinerant services (Utah School for the Deaf and Blind) are accessible. Implementing services in the classroom also acts as a Child Find System for the district. Staff are able to identify at-risk children who have not transitioned into the program through Early Intervention.

Under IDEA, a State Educational Agency (SEA) must implement policies and procedures that ensure that all children with disabilities are identified, located, and evaluated, known as Child Find. Local Educational Agencies (LEAs) must actively seek out children with disabilities, including those who are homeless, wards of the state, or attending private schools to determine if special education services are required.

In the district’s Early Childhood Programs (Pre K - K), there are 157 children currently enrolled. Out of those students, 23 are on individualized education plans. Twenty-one are classified as having a speech-language disorder, one is developmentally delayed, and one is
classified with vision impairment. It is predicted based on classroom observations and curriculum-based assessments that four of the students with speech-language disorder classifications may eventually have their classification changed to autism.

The majority of students diagnosed with autism are found eligible under Part B or Part C, for individualized services through Special Education (IDEA, 2004). Special education staff serve a vast array of disabilities within public school districts. Children with autism often require considerable support staff to access a free and appropriate education in the least restrictive environment. The rural school districts are faced with challenging demands as autism rates continue to increase and experience difficulties recruiting and retaining qualified staff.

**Autism Interventions**

Research suggests that providing intensive early interventions drastically improves outcomes for children with autism (Woods & Wetherby, 2003). The most effective way to improve long-term social and academic abilities is to provide access to early intervention for children with autism (National Research Council, 2001).

Children who have access to early intensive intervention at age three show the most long-term dramatic improvements in their behaviors (Cash, 2014). Professionals working with students with autism interpret “intensive services” as utilizing evidence-based behavioral programs. The most widely accepted programs include applied behavior analysis (ABA; Bear et al., 1968; Lovaas, 1987, pivotal response training (PRT), developed by Koegel and colleagues (1989), the TEACCH Model, developed by Schopler and colleagues (Schopler et al., 1971), the developmental, individual-differences, & relationship-based model (DIR/Floortime®) model (Greenspan & Wieder, 1999) and the use of Social Stories® by Carol Gray and Joy Garand, 1993.
These programs have been implemented in the target rural district by parents, special education and general education teachers, and related services providers.

ABA emphasizes a systematic approach targeting well-defined behaviors through repeated trials or discrete trial instruction (Corsello, 2005; Masse et al., 2007; Mesopotanese, 2004). To date, ABA is the most widely accepted intervention for improving student outcomes for children with autism (Bear et al., 1968; Lovaas, 1987). ABA focuses on increasing socially acceptable or positive interactions and decreasing negative or inappropriate social skills. School districts considering the use of ABA must have trained professionals to implement interventions successfully (Bear et al., 1968; Lovaas, 1987). Board certified behavior analysts (BCBAs) and registered behavior technicians (RBTs) are qualified professionals specifically trained in ABA to work with students with autism. This is likely to be problematic in rural districts when staff is not adequately trained in ABA and the number of students requiring these services are small. The targeted rural district is unable to justify the cost or find BCBA/RBT specialists to employ even if positions and qualified personnel were available.

Pivotal response training (Koegel et al., 1989), can be used to improve language, social, behavior, and play deficits for students diagnosed with autism. PRT emerged out of applied behavior analysis varying in its focus by including a generalization of learned skills to different environments. By increasing a child’s exposure to their natural environment, the child is more motivated to change his/her social behaviors for him/herself (Cash, 2014). Pivotal response training in the targeted rural district has proven to be easier for staff to implement. However, a high turnover in staff effects the consistency of training that students with autism receive.

The TEACCH model also grew out of ABA, focusing on the belief that children with autism are visual learners. TEACCH is not a set prepared program for professionals to use. It
requires staff to individually assess a student's strengths and interests, building a motivating and engaging curriculum for each student. Visual schedules, structured work areas, and clear expectations are integral components of the TEACCH model. School districts appreciate the ease of application. Training for staff consists of two-three day workshops, allowing professionals and parents from rural communities to acquire and facilitate an effective program for students with autism quickly. In the target rural district, TEACCH has been a successful support for students with moderate to severe autism characteristics. It is not, however, an intervention program.

Dr. Stanley Greenspan and Dr. Serena Wieder, in 1999, developed the developmental, individual difference, relationship model (DIR). Commonly referred to as Floortime®, a technique used when implementing DIR. Dr. Greenspan recognizes that the role of the child’s natural emotions and interests have been shown to be essential for learning interactions (Greenspan & Wieder, 1999). The different parts of the mind and brain must work together to build successively higher levels of social, emotional, and intellectual capacities (Greenspan & Wieder, 1999). This model requires a team approach, including parents and additional family members due to the importance of emotional connections. A unique child-centered program is then developed to include, home-based, individual therapies, and educational programming. Training in DIR is limited and costly. The staff in the target rural district have been able to integrate Dr. Greenspan’s and Dr. Wieder’s ideology when working with families of children with autism, primarily in early intervention and preschool populations, however, beyond the early childhood classroom it has not been an effective program for the district.

Engaging in inappropriate social skills is a defining characteristic of autism. In 1993, Carol Gray began writing social stories targeting maladaptive behaviors by using pictures and simple sentences. The majority of stories are told in the first person, with photos of the child,
feelings and emotions explicitly explained, and acceptable behaviors emphasized. Social scripts similarly describe how to behave in social situations through comments and questions appropriate to a particular social situation by the characters created for the social script (Duncan & Klinger, 2010). Carol Gray has published numerous books and resources for educators to learn how to write individualized Social Stories™, allowing rural districts easy access to literature that can improve the outcome for students struggling with social skills. Carol Gray’s and Joy Garand’s Social Stories™ have been widely accepted in the targeted rural district as a way to build adaptive skills but have not yet been shown to be effective for academic or other skills.

**Current District Accommodations/Modifications**

Accommodations and modifications for students with autism are determined during annual IEP meetings. These often consist of modified assignments, additional breaks, use of assistive technology, extended time, and preferential seating. General education teachers can implement these accommodations in the classroom with support from the special education department. According to Morningstar et al. 2017, highly inclusive schools that provide support to special education and related services in general education classrooms are incredibly effective. Key components of its effectiveness are participation support such as instructional staffing, peer-supported learning, adult engagement, and access to academic content. A multi-tiered system for all students to engage in learning includes a universal design for academic learning, behavioral interventions, and individualized accommodations and modifications when required.

The targeted rural district’s multi-tiered systems of support in academics have been implemented at the elementary level. Tier 1 and Tier 2 instruction is provided by general education teachers, reading specialists, and paraprofessionals. All students receive Tier 1 (universal) instruction by a general education teacher. Students in need of additional supports or
scaffolding of academic material receive Tier 2 instruction. General education teachers or paraprofessionals provide Tier 2 interventions. Students requiring additional supports/accommodations aligned with IEP goals are considered Tier 3. Tier 3 interventions in the targeted rural district are delivered by the special education department. Annual goals are addressed in the general education classroom setting or during small group instruction in the special education room by a special education teacher.

At the secondary level, a multi-tiered system has been implemented this year. Tier 1 is provided in the classroom, with some core classes having special education support by special education teachers (i.e., co-teaching). Tier 2 instruction fluctuates in services depending on the individual needs of students and their knowledge of current academic standards. Limited support staff becomes a challenge, at the secondary level, for students requiring additional instruction to master academic concepts. Tier 3 is considered special education, with services provided through a “directed studies” class or in a small group setting by a special education teacher modifying general education assignments.

Students diagnosed with Asperger's syndrome in the targeted rural district are often mainstreamed with their typical peers. The general education teacher consults with the special education teacher to provide accommodations and modifications. However, a high turnover rate of teachers and limited training for staff is problematic in ensuring that this population's needs are addressed appropriately and consistently. An inability to access mental health services throughout the district’s catchment area directly impacts students’ social-emotional capabilities and learning strategies to form relationships with peers.
Summary

The targeted rural district faces unique challenges in comparison to urban communities. Lack of resources (i.e., personnel, training), non-existent comprehensive programs for students with autism, and the ability to generalize expertise across grade levels (i.e., general education teachers’ level of knowledge about autism) are problematic. Accommodations and modifications for individuals with autism are either implemented with fidelity or are left for the child or parent to advocate for (Special education teacher, personal communication, 2019). Numerous autism programs have been introduced in the targeted rural district but not all are welcomed by faculty or parents (Speech Language Pathologist, personal communication, 2020).

As the targeted rural District’s community increases in population, more students will be identified with autism and additional staff to ensure that FAPE is provided will be necessary. Planning for this projected growth is difficult. Federal and state funding for school districts is allocated a year after students are enrolled, providing only partial reimbursement of special education funding. To offset this, the business administrator of the targeted rural district supplements funding through different sources such as general education (Business Administrator, personal communication, 2019).

If the targeted rural district’s population increases as projected, 19 or more additional students with autism will enroll (Maenner et al., 2020, 2021). This would bring the identified total of students diagnosed with autism to over 50 districtwide. A continued effort by professionals to ensure appropriate and effective autism programs, services, and supports are in place when these students arrive is imperative.
CHAPTER 3

Methods

For the purpose of this study, participants were stakeholders and community members within the targeted rural district who have contact with or have been diagnosed with autism. An Institutional Review Board approval was obtained prior to initiating research. Consent was required (electronically) by all respondents before administration of the survey. The study was voluntary and individuals could terminate participation at any time with no risk of retribution.

Participants

The participants currently reside or have resided in the past five years within the boundaries of the rural school district. According to the Centers for Disease Control and Prevention, the prevalence of autism is 1 in 44 people (Maenner et al., 2021). This would suggest that about 673 individuals residing in the county may be on the autism spectrum.

The district’s October 2019 state reports, there are 145 students classified with one of the 13 disability categories. Out of those 145 students, 9 children have been found eligible for special education services under an autism diagnosis. This number does not reflect those students who may be served on 504 plans or misclassified under the categories of Speech/Language Disability, Developmental Delay, or Other Health Impairment.

Within the district, this research study targeted all 89 general educators ranging from Pre-K - 12th grades, 9 building administrators, 6 special education teachers, 3 speech pathologists/technicians, 2 related service providers, and 19 special education paraprofessionals. The nine families with children who have current autism classifications also received notification of the questionnaire.
Both males and females from various ethnic backgrounds and socio-economic status were included in this study. Students currently receiving special education services under an autism classification had access to a student survey. The student survey had similar questions but with enhanced explanations of the questions. All questions were verified at the 5th grade reading level via Microsoft WORD’s Flesch-Kincaid algorithm.

**Settings**

*Online Survey, Phase 1*

Participants were invited to complete an anonymous online needs assessment questionnaire through Qualtrics (Provo, Utah). A QR code and URL link to the district’s website was provided on all flyers and electronic announcements. Hard copies were available, but none were requested.

*In-Person Interview, Phase 2*

At the conclusion of the online questionnaire, participants were invited to participate in a teleconference or telephone interview (with a researcher from a different school district) if they wished to provide more information. These interviews were recorded for accuracy in transcription.

**Measures**

The researcher developed two district assessments (one for adult stakeholders including parents, educators and providers and another for students). The assessments include Likert-type scale questions, rankings, and open-ended questions. The stakeholders survey had nine questions regarding demographic information about the respondent. The remainder of the online survey consists of 33 questions regarding the educational needs of students with autism. Stakeholders were asked to assess current autism programs used by the district, evaluate the effectiveness of
accommodations for autism students, prioritize the delivery of autism services (i.e., preschool vs. high school), and what changes need to be implemented districtwide to improve autism programs for all grade levels. The district needs assessment was previewed by staff members from the special education department, general education staff, and administration. Suggestions included web links providing examples of what current programs for students with autism are. The researcher also took these considerations into account when creating the student survey.

The student survey was available for participants who self-identify as students with autism. Students with autism classifications within the district accessed the questionnaire through their parents. Qualtrics (Provo, UT) was utilized to build the survey with 23 similar questions to the original (stakeholder) format.

After both needs assessment questionnaires were completed (stakeholder and/or student), respondents were directed to a separate Qualtrics form detailing an opportunity to discuss responses through teleconference or telephone interview with a third party who is not affiliated with the district, thus protecting the confidentiality of their responses. There was no obligation to meet further, however, if participants chose to complete the follow-up interview with the third party, they completed a written informed consent (see Appendix A). Those following through with the consent form and interview were given the opportunity to discuss their answers to the needs assessment questions in more detail. The responses were recorded by the third-party researcher by means of audio and/or video recordings. Interviews were via Zoom during an agreed-upon scheduled time between the respondent and the third party. Transcripts were created of each meeting for analysis and submitted to Dr. Gabrielsen for researchers unrelated to the first author (e.g., research assistants) to interpret and analyze. Final results were provided to the researcher of the targeted rural district after analysis.
Procedure(s)

Recruitment

A flyer (see Appendix F) was sent to all staff employed by the targeted rural school district through their district email accounts. A QR-code was included on the flyer with direct access to the study questionnaire (including consent). A local social media site (i.e., Facebook) posted the survey as well for distribution into the community.

The targeted rural school district provided a survey link on its main website for stakeholders to access as an additional route to participation. A hard copy of the questionnaire could be requested through the researcher’s phone number listed on the flyer. Individuals with autism classifications and their families received a hard copy of the questionnaire and a flyer with the QR code if they wish to complete it online. If they completed the questionnaire on paper, a self-addressed stamped envelope was included in the mailing for respondents to return anonymous responses back to the researchers.

Phase 1- Online Questionnaire

A web-based needs assessment questionnaire on Qualtrics (see Appendix C), was the primary method for data collection. Consent was required (electronically) by all respondents before administration of the survey. Confidentiality of respondents was protected in that there was no way to determine who had completed the surveys. Participants were directed to the online Qualtrics survey, or they were emailed or mailed a paper copy of the need’s assessment questionnaire. Results from questionnaires using either method would be unidentifiable, thereby protecting the confidentiality of the respondents. Data were collected on the Qualtrics website for download and analysis.
**Phase 2 - Optional Interview**

Participants had the option to choose to participate in a follow-up interview if they wished to provide more extensive feedback to the researchers. Those requesting an interview were able to provide their contact information separately from their anonymous responses on the online survey (by means of an additional Qualtrics survey with separate data collection). These volunteers were able to choose to meet by phone or through Zoom, a teleconferencing platform online. Participants were given a written consent form to read and sign prior to the interview. Upon individual consent, participants were given the opportunity to provide more details about their perceptions of education for autistic students in the targeted rural districts. Participants could explain their responses in more depth if they wished.

**Research Design**

The research design for this study used mixed methods to include both qualitative and quantitative data. The Qualtrics survey contains open-ended responses as well as Likert-type scales and rankings. Participants also had the option to request an interview with open-ended responses.

**Data Analysis**

**Quantitative Data**

Many of the questions in the Phase 1 questionnaire are phrased as Likert-type ratings. Others are phrased as rankings of importance. There are also some demographic questions. These responses were analyzed using descriptive statistics to describe the respondents and their responses. Stakeholders were initially analyzed in groups (i.e., parents, educators and individuals with autism) to describe any differences in responses according to stakeholder roles.
Qualitative Data

Some of the Phase 1 questions were open-ended. These responses, as well as any data
gathered through Phase 2 interviews were analyzed using Consensual Qualitative Research
methods (CQR; Hill et al., 1997). Researchers who are not the first author were trained in CQR
by Dr. Gabrielsen and conducted the analysis to prevent any bias from a school district employee
to be introduced into the analysis. Dr. Gabrielsen reviewed the results as an expert for plausibility,
then results were reported to the first author for inclusion in the results section, discussion and in
the final report to the school district.
CHAPTER 4

Results

The researcher’s findings reveal that overall services for individuals with autism are effective as reported by educators, special educators, and parents. Stakeholders familiar with accommodations and modifications options that are offered within the district have varying perceptions of effectiveness, but that is still valuable information to gather and report to the district. The needs assessment results returned high rates of importance for early identification, increased training, improved collaboration, and additional resources for students with autism by both parents and educators. The effectiveness of other programs/interventions are reported as mixed by stakeholders within the rural district.

Demographics of Participants

Respondents of the study were first characterized by demographics. The majority of participants were educators (n=40) followed by parents/caregivers (n=8). Stakeholders’ experience with students/children with autism spectrum disorder (autism) varied from 1-5 years to over 21 years. Fifty-three percent of participating educators and 25 percent of parents/caregivers had over 21 years of experience with students with autism. See Table 1 and Figure 1.

General education teachers in the rural district were the largest group participating in the needs assessment at a rate of 40% followed by support staff (30%). The primary contributors within the category of support staff were special education paraprofessionals. All of the special education teachers throughout the district participated in the needs assessment survey. Unfortunately, representation from administration was minimal and responses may not accurately reflect administrators’ perceptions of autism services in the district.
Table 1

Demographic Characteristics of Respondents

<table>
<thead>
<tr>
<th></th>
<th>Individual with autism</th>
<th>Parent/Caregiver</th>
<th>Educator</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n=1 )</td>
<td>( n=8 )</td>
<td>( n=40 )</td>
<td>( n=2 )</td>
<td>( n=51 )</td>
</tr>
<tr>
<td>Gender, ( n ) (% of subgroup)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1(100)</td>
<td>1(12)</td>
<td>3(8)</td>
<td>1(50)</td>
<td>6(12)</td>
</tr>
<tr>
<td>Female</td>
<td>--</td>
<td>7(88)</td>
<td>37(92)</td>
<td>1(50)</td>
<td>45(86)</td>
</tr>
<tr>
<td>Race, Ethnicity ( n ) (% of subgroup)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian, not Hispanic</td>
<td>--</td>
<td>7(88)</td>
<td>40(100)</td>
<td>1(50)</td>
<td>48(91)</td>
</tr>
<tr>
<td>Caucasian, Hispanic/Latino</td>
<td>--</td>
<td>1(12)</td>
<td>--</td>
<td>1(50)</td>
<td>2(4)</td>
</tr>
<tr>
<td>Marital Status, ( n ) (% of subgroup)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>--</td>
<td>--</td>
<td>3(8)</td>
<td>--</td>
<td>3(6)</td>
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<tr>
<td>Married</td>
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<td>8(100)</td>
<td>29(73)</td>
<td>--</td>
<td>37(74)</td>
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<tr>
<td>Widowed</td>
<td>--</td>
<td>--</td>
<td>1(3)</td>
<td>1(50)</td>
<td>2(4)</td>
</tr>
<tr>
<td>Divorced</td>
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<td>--</td>
<td>4(10)</td>
<td>1(50)</td>
<td>5(20)</td>
</tr>
<tr>
<td>Separated</td>
<td>--</td>
<td>--</td>
<td>1(3)</td>
<td>--</td>
<td>1(2)</td>
</tr>
<tr>
<td>Cohabitating</td>
<td>--</td>
<td>--</td>
<td>1(3)</td>
<td>--</td>
<td>1(2)</td>
</tr>
<tr>
<td>Education Level, ( n ) (% of subgroup)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School Graduate</td>
<td>--</td>
<td>1(13)</td>
<td>2(5)</td>
<td>--</td>
<td>3(6)</td>
</tr>
<tr>
<td>Some College</td>
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<td>1(13)</td>
<td>7(18)</td>
<td>--</td>
<td>8(16)</td>
</tr>
<tr>
<td>Technical School</td>
<td>--</td>
<td>1(13)</td>
<td>--</td>
<td>--</td>
<td>1(2)</td>
</tr>
<tr>
<td>Associates</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Bachelors</td>
<td>--</td>
<td>2(25)</td>
<td>20(50)</td>
<td>--</td>
<td>22(44)</td>
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<tr>
<td>Graduate Degree</td>
<td>--</td>
<td>3(38)</td>
<td>11(28)</td>
<td>2(100)</td>
<td>16(32)</td>
</tr>
<tr>
<td>Years experience with autism, ( n ) (% of subgroup)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 5 years</td>
<td>--</td>
<td>--</td>
<td>8(20)</td>
<td>1(50)</td>
<td>9(17)</td>
</tr>
<tr>
<td>6-10 years</td>
<td>--</td>
<td>1(13)</td>
<td>2(5)</td>
<td>--</td>
<td>3(6)</td>
</tr>
<tr>
<td>11-15 years</td>
<td>--</td>
<td>3(38)</td>
<td>4(10)</td>
<td>--</td>
<td>7(13)</td>
</tr>
<tr>
<td>16-20 years</td>
<td>--</td>
<td>2(25)</td>
<td>5(13)</td>
<td>1(50)</td>
<td>8(15)</td>
</tr>
<tr>
<td>21+ years</td>
<td>--</td>
<td>2(25)</td>
<td>21(53)</td>
<td>--</td>
<td>23(46)</td>
</tr>
</tbody>
</table>

Note: Percentages in columns are based on respondent subgroup by column. Percentages may not exactly add up to 100% due to rounding. Dash (--) = not reported
Figure 1

Educator Participants by Role

<table>
<thead>
<tr>
<th>Role</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educator Special Education</td>
<td>8</td>
</tr>
<tr>
<td>Educator General Education</td>
<td>16</td>
</tr>
<tr>
<td>Administrative</td>
<td>2</td>
</tr>
<tr>
<td>Support Staff</td>
<td>12</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
</tr>
</tbody>
</table>

Note. Support = related service providers, special education paraprofessionals, specialists, etc.
Other = special education nurses

Perceptions of Priorities for Autism Services

Educators (n=34) and parents (n=8) prioritized early intervention as the most important intervention for students with autism. Educators in Figure 2 include all general and special education teachers as well as support staff. Middle school services were not generally named as most important amongst educators (n=1) and parents (n=0). Interestingly, early intervention services (Part C of IDEA), ranked as most important to educators and parents, are provided by the local health department and do not operate from within the rural district.
Figure 2

Priority for Autism Services as Perceived by Educators and Parents

Educator Perceptions

Effectiveness of Services

The effectiveness of services, perceived by educators (general, special education teachers, and support staff), currently offered in the rural district vary across school settings. Figure 3 shows that preschool interventions are ranked as very effective in providing appropriate services to autistic students, followed by transition to adulthood services, elementary school services, middle school services, and lastly high school services. All school environments in relation to perceived effectiveness are considered effective to somewhat effective (above 3.7 on a scale of 1-5, where 5=very effective).
Experience With Autism Services

Educators reported on their knowledge of interventions often used with individuals with autism (see Figure 4). Interventions included; self-regulating strategies (i.e., Zones of Regulation; Kuypers, 2021), applied behavioral analysis (ABA), learning strategies (i.e., “Get Ready,” from Superhero Social Skills; Jenson et al., 2011), visual schedules, assistive technology (i.e., speech to text), sensory strategies (e.g., weighted vests), and video modeling (i.e., social skill trainings with peers). Of these, educators ranked assistive technology as the intervention that the majority of staff have utilized in their classrooms. The district has a 1:1 ratio of computer devices and students. All computers contain universal accessibility features. This may have contributed to educators’ experiences with assistive technology. Video modeling is an intervention that 26/44 (59%) of educators had no experience with when working with students with autism. Additional
training for educators and accessibility to recording devices is a recommendation that the rural district can explore to address this discrepancy.

**Figure 4**

_Educators’ Experience With Autism Interventions_

*Effectiveness of Autism Strategies*

The most frequently reported effective autism strategy that is used by educators in the rural district is assistive technology (Figure 5). Self-regulating and sensory strategies are additionally viewed as effective when implemented. Least effective, as reported by general education teachers, is the use of applied behavioral analysis (ABA). Lack of training and knowledge amongst teachers regarding what ABA is and how it works may have skewed the perceived effectiveness. Additionally, limited district resources (i.e., access to a regional board-certified behavior analyst (BCBA) who covers multiple districts limits time required for training and follow up. A regional provider’s intervention implementation fidelity is additionally impacted, which may be contributing to the perceptions of usefulness of this strategy amongst educators.
Parents’ Perceptions

Experiences With Autism Interventions

Parents reported limited experience with interventions employed by the district. The majority of experience with interventions and strategies occurred outside of the district with other agencies. Two (of eight) parents have had opportunities with video modeling in the district. To improve communication between the district and parents of students with autism, community support groups and increased sharing of interventions by professionals should be considered (e.g., a school/home note or other communication). See Figure 6.
Effectiveness of Autism Strategies

Known strategies reported by parents are considered to be effective interventions for students with autism. Sensory strategies and self-regulating strategies are the interventions that most (75%) parents are familiar with. Limited awareness (50% of parents) of additional strategies included the use of learning strategies, assistive technology, and video modeling. See Figure 7.
**Special Education and General Education Perceptions**

**Experience With Autism Interventions**

Special education teachers have more experience with autism interventions than general education teachers, most likely due to training they receive while pursuing their special education degree and continuing education that is more focused on students with disabilities. General education teacher’s experiences with autism strategies report exposure to interventions on an as-needed basis or in previous districts. Administration, n=2, indicates limited strategies for students with autism with significant variation in known interventions. It should be noted that all roles were self-reported and not verified. See Figure 8.
Figure 8

*Experience of Autism Strategies*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Special Education n=18</th>
<th>General Education n=13</th>
<th>Administration n=2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Regulating Strategies</td>
<td>80%</td>
<td>60%</td>
<td>80%</td>
</tr>
<tr>
<td>ABA Learning Strategies</td>
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<tr>
<td>Assistive Technology</td>
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<tr>
<td>Sensory Strategies</td>
<td>50%</td>
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<tr>
<td>Video Modeling</td>
<td>30%</td>
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</table>

*Note.* Special Education = Special education teachers, support staff, and other.

**Effectiveness of Autism Strategies**

*Special Education.* Employees in the special education department’s interpretation of the effectiveness of utilized autism strategies within the rural district varies considerably. The majority of participants (>19) were familiar with five of the six presented interventions, with video modeling reported as the least recognized, so fewer educators rated its effectiveness. One individual views self-regulating strategies to be not effective. The effectiveness of applied behavior analysis (ABA) therapy is the most controversial, with ratings ranging from somewhat not effective to very effective. An explanation for this could be due to misinformation regarding current ABA practices as well as misperceptions based on historical lack of access to highly qualified ABA professionals. See Figure 9.
General Education. Out of the 16 general education teachers who completed the needs assessment, 12 were aware of self-regulating strategies for students with autism, and eight educators reported it to be somewhat effective. Applied behavioral analysis (ABA) is the most recognized strategy and perceived overall as somewhat effective amongst the other interventions. This is contrary to special education employees’ perceptions, ranking ABA as a group, the least effective. See Figure 10.

Administrative Personnel. Unfortunately, a limited number of administrators participated in this survey. As previously noted, individuals self-reported their current role in the rural school district. Administrator one indicated that five of the six autism strategies were not effective, with assistive technology reported as somewhat effective. In contrast, administrator two found all of the implemented autism strategies to be somewhat to very effective. See Figure 11.
How Informed Were Stakeholders?

Analyzing these data provides useful insight into the perceived information available to stakeholders within the rural district. Special education teachers (40%) report they are not well
informed on the autism services and strategies within the school, whereas general education teachers (42%), say they are well informed regarding autism supports for their students. There is a disconnect between general and special educators and their interpretation of available services. If special education teachers are unfamiliar with district programs/supports how are general education teachers feeling well informed? Where are general education teachers receiving their information about resources? Additionally, support staff report they are well informed (64%) of services/strategies. Who is providing the training for paraprofessionals to indicate a high level of understanding of autism and appropriate resources? Or is the difference related to perceptions rather than actual knowledge? Lastly, 38% of parents/caregivers feel well informed with 25% split between no information and not well informed. One parent remained neutral on their knowledge regarding autism resources. See Figure 12.

Qualitative Responses

*General Educator Perceptions*

Stakeholders were provided the opportunity to answer open-ended questions regarding autism services in the rural district. Common themes amongst the general education teachers who participated include staffing needs, current accommodations, the use of consistent services and routines, supportive special education staff, and a need for district level supports.
Areas in Need of Improvement. The rural district experiences a high annual turnover rate within the special education department. Staffing needs is an area that multiple general educators commented as needing improvement. Participant 12 stated there is “not enough training, space, or people.” Increased compensation was proposed as a means to retain qualified and trained support staff.

For autistic students and SPED students in general: Higher compensation needs to be provided to those working with students receiving SPED services. The district can't attract and keep committed, superior paras [paraprofessionals] when they are doing jobs that require heavy lifting, changing and assisting in the bathroom, physical abuse from students, etc. for lower wages. The district loses great paras to other higher paying jobs and the vacant jobs are sometimes filled by uncommitted people just looking for a job to keep them afloat. The district also needs to be willing to hire enough paras to provide services to ALL kids, according to their IEP specifications. I have first-hand experience
with seeing these exact, unfortunate scenarios happen in my own classroom. (Participant 13)

Increased collaboration implemented through a district level approach is another theme suggested by general educators.

As a gen-ed [sic] teacher I would really love even more time to work with and plan for these students' unique needs. More input when developing a plan for the school year; a way to quickly convene and adapt the plan as needs change often and without notice; more of a voice in the process. It is not a burden to involve the gen[eral] ed[ucation] teacher in these conversations, and I hope I'm not burdening the sped [special education] team when I come with observations, questions, or ideas. I don't think it's intentional, but I do see that when we are in the throes of a busy school day, the default (what is most comfortable to the adults) is to just take the student out of class to meet student needs and avoid disruption to learning for the rest of the class. But I think we can be more adaptive, and I think we underestimate the value for *all* students to learn flexibility, empathy, and adaptability. It seems that often the needs of students with ASD are just more apparent, but a reflection of what all students can benefit from. (Participant 14)

“There needs to be time built into the school day for increased “integration between gen ed teacher and sped teachers/aides instead of just taking the student out of the classroom to meet these needs” (Participant 15).

Additionally, general educators commented on the need for self-regulation supports for autistic students and targeted trainings for teachers. Sensory resources and accommodations that can be accessed with minimal adult assistance in the general education classroom is another area needing improvements.
Strengths of the District as Perceived by General Educators. A supportive special education staff is considered a strength by general educators who provided narrative feedback on the rural district’s needs assessment survey. “I think we have an amazing team of sped experts and educators! I think most gen ed teachers are willing to participate and learn how to support these students within the classroom (Participant 16).” Also, “The staff is amazing that works with these students” (Participant 17).

Accommodations utilized in the general education classroom include modified assignments, utilizing technology (e.g., computers, iPads) to help with work, extra time on tests, para educator assistance, verbal responses on tests, and modified testing environment. Preventative interventions such as access to daily schedules (e.g., visual), classroom routines, maintaining consistency, were strategies mentioned by general educators to reduce student anxiety.

Sensory strategies that general educators have used with autistic students involve limiting environmental stimuli, self-regulation programs (e.g., Zones of Regulation), and alternate seating.

General Educator Interview

Opportunities to participate in extended interviews were offered to all stakeholders completing the needs assessment survey. The interviewer was an individual outside of the school district to reduce bias and encourage free expression. Volunteers remained anonymous and educators were provided time to discuss additional concerns and strengths they perceived within the rural district.

Early Identification. One interviewee (general educator) stressed the importance of early identification and diagnosis of autistic students, suggesting that a diagnosis would provide clarification and direction for administrators (i.e., principals), teachers, and parents. Furthermore,
education on current levels of support, (e.g., 504 plans vs. individualized education plans) that school districts can provide is needed for teachers and parents to have a better understanding of eligibility requirements and available services.

**Space to Calm Down.** Additional needs in the district addressed needing a space to calm down for autistic students when their behaviors are escalating. Access to consistent personnel to collaborate on behavior intervention plans (BIPs) is a resource that is understaffed. A regional board-certified behavioral analyst (BCBA) conducts FBAs (functional behavior assessments) and creates BIPs for the district. However, limited staff resources affect the implementation of plans with fidelity. Lastly, compliance concerns about IEP paperwork and documentation to ensure that the district is consistently monitoring progress towards IEP goals for autistic students.

**Special Educator Perceptions**

Special educators’ participation ranged from teachers working with autistic students eligible under mild-moderate classifications, to a teacher assigned to work with autistic students with severe delays. General themes that emerged from analyzing the data were need for increased training, collaboration, lack of follow through on strategies implemented (e.g., tracking systems), an individualized approach, current accommodations offered and a need for additional resources (e.g., staff).

**Areas in Need of Improvement.** The majority of special educators’ perceptions included the lack of training (e.g., for all staff) and availability of evidence-based strategies for autistic students, throughout their school career, as a high-level need in the rural district. We need to “meet each student's needs individually. Educate the teacher about our students and make sure they understand what works and what doesn't,” (Participant 18). Another special educator further explained,
Lumping all the autistic students with the same disorder just doesn't work. Each student is unique with their specific needs and as well as educational needs. We say “autism” and everyone thinks they are all the same and that's not the case. (Participant 19)

The implementation of tracking systems to improve fidelity and measure effectiveness of recommended interventions is also an area in need of improvement. One stakeholder commented that there exists a “lack of follow-through (in general education setting) of agreed-upon strategies for an evidence-based amount of time” (Participant 20).

Further perceived needs in the rural district are limited special education staff and supplies needed to implement Individualized Education Plans (IEPs) per team recommendations.

**Strengths of the District as Perceived by Special Educators.** Special educators shared similar responses to general educators when asked about current accommodations available in the rural district. Strategies mentioned that varied from the general education staff include the use of computation devices (e.g., calculator), audiobooks, or “programs where students can have their assignments read to them” (Participant 18), commonly referred to as speech-to-text, a universal design feature in the rural districts student’s computers. To address self-regulation gross motor strategies for autistic students such as motor breaks (e.g., scheduled time for physical activity) and proprioception activities (e.g., swings) were suggested. Participant 19 recommended additional “sensory strategies such as seating options, weighted objects, oral seeking objects/food, and the use of various writing tools” as interventions available through the district.

Collaboration among IEP team members (e.g., special educator, general educator, administration, parents, related service providers), acceptance of creative ideas as well as traditional strategies, and the support of administration is considered a strength.

Participant 20 shared,
I feel a close interaction with the parents in educating me about what works with their child and where their limits are in dealing with completing assignments, behavior, and the student’s way of learning. Parents have been my best source at this time in working with [the autistic student].

**Support Staff Perceptions**

Support staff participants include special education paraprofessionals, specialists (e.g., librarians, secretaries), and related service providers (e.g., occupational therapists, physical therapists). Themes that emerged from narrative responses are similar to previous stakeholders’ areas of needs and strengths. Support staff are aware of the following types of accommodations: extra time, breaks, sensory breaks, use of a scribe, speech to text, text to speech, modified assignments, and verbal responses to replace written assignments.

**Education and Training for Staff.** Support staff (Participant 21) stressed the importance of “education and training for Gen Ed students regarding understanding ASD and how to best support positive interactions and learning throughout the school environment.” A common suggestion from teachers referenced extending training beyond the classroom, including unstructured areas within the rural school campus. Increased education for all staff, “not just the teacher with the student in their class. Paras at recess duty could greatly benefit from knowing what to expect or how to appropriately intervene” (Participant 22).

**Increased Collaboration.** The need for increased collaboration with staff is a common need expressed across stakeholder groups. Support staff need to know who the autistic students are and what their needs are in order to reinforce appropriate social skills across the school setting.
**Other Perceptions**

One stakeholder identified as “Other” when completing the rural district’s needs assessment. Others in the district include school nurses, office staff, cafeteria staff, and custodians. Recommendations mentioned by this respondent included district-wide areas for autistic students to calm down when overloaded in conjunction with additional supports (personnel) for teachers working with explosive or sensory-seeking or sensory-avoidant students. Furthermore, intensive training from outside resources to direct educators in developing evidence-based interventions and understanding of autistic individuals was suggested.

**Parent Perceptions**

Overall participation by parents completing the rural district’s survey is limited ($n=8$). However, areas of need and strengths reflected in the data suggest varying perceptions of current interventions for autistic students than reported by educators, support staff, and other. Limited communication between district staff and parents is an area that could be improved. This is evident in overall statements by parents expressing frustration with the IEP process, availability of services (e.g., occupational therapy), lack of implementation of interventions and accommodations by general education teachers, and limited post-secondary resources available for autistic students. Additionally, accessing Child Find and obtaining early identification of students with disabilities is another perceived district weakness by parents.

Areas working well for autistic students are the availability of support staff in the classrooms (e.g., paraprofessionals), accessibility to fidget items, ear buds, modified instruction, and extra time allowed on classwork. Participant 23 stated, “the school and community are supportive and positive.”
CHAPTER 5

Discussion

The needs assessment revealed specific areas that are working well for students with autism and their parents. Educators perceived strengths to include the effectiveness of services in school environments (e.g., preschool, elementary, middle, high school, post-secondary). For example, the district has a 1:1 ratio of students to computers. This has contributed to educators implementing assistive technology through universally built-in design features (e.g., speech-to-text). General educators also commented on the support they receive from the special education department when students with autism are in their classrooms.

A variety of evidence-based accommodations in the general education classroom is contributing to positive outcomes for students. Preventative interventions consisting of classroom routines, visual schedules, and sensory strategies were also considered to be effective.

Recommendations

Four common themes emerged from the district’s needs assessment from stakeholders as follows: (a) increased trainings for general and special education teachers, paraprofessionals, administration, support staff, and parents; (b) a need to improve collaboration amongst all school staff including communication with parents of autistic students; (c) enhanced Child Find through early identification of autistic students; and (c) access to additional resources within the rural school and the community.
**Training**

Participants in the autism needs assessment indicate that lack of educator and parent training is a major area of weakness for the rural district. Strategies to improve social, emotional, and behavioral supports are recommended by stakeholders. Specifically, identifying and implementing appropriate, targeted training options for parents and educators (see Appendix G) to improve access to evidence-based strategies for autistic students in the general education setting. This goal may be achievable without undue expense to the district through existing training resources.

As just one example of the ease of access to effective training options, secondary teachers could benefit from watching a four-part video series titled, Understanding Autism: A Guide for Secondary School Teachers, released by the Organization for Autism Research (OAR) designed explicitly for teachers of students with autism. This free series details frequent difficulties high school students on the spectrum face on a daily basis. These struggles include: understanding social cues, communication deficits, tasks requiring extensive writing, navigating a schedule with multiple classes, and the organization, planning, and completion of assignments on time. The videos re-enact common misconceptions of students with autism and how to support them within the general education environment. They are easily accessed, are relatively brief (averaging about 15 minutes each) and focus on specific skills for supporting secondary students with autism.

Another example, *Autism in the Classroom* modules, from the Ohio Center for Autism and Low Incidence disabilities (OCALI) Autism Internet Modules (AIM) are self-paced, free, and appropriate for elementary teachers. These modules cover various topics and average 1.5 hours viewing time. Topics include but are not limited to the following: emotional vulnerability, girls on the autism spectrum, language differences, peer-mediated instruction and intervention,
restricted patterns of behavior, interests, and activities, transitioning between activities, and visual supports.

Early Childhood teachers and parents with a new autism diagnosis will find the Autism Navigator website helpful. The ASD Video Glossary is a web-based tool for parents and teachers to identify early indicators or signs of autism. This is a self-paced course and free. Over 100 videos of children (ages 0 – 8) show typical behaviors versus atypical behaviors at various developmental stages. Treatment options and strategies are additionally included for parents and early childhood educators to explore. For more examples of easily accessible training options, see Appendix G.

**Collaboration**

The rural district should continue to seek out and form collaborative relationships with parents. Increased communication amongst school staff (e.g., general and special educations, paraprofessionals, administrators) and families of children with autism will improve student outcomes. Positive outcomes for students go beyond academic advancement including speech and language, social/emotional, behavior, motor, and adaptive skills.

Ideas or tools to improve collaboration are needed. Some ideas include the use of shared google documents, accessible to staff and parents, to report on student’s daily progress. This provides opportunities for parents to communicate with staff by regarding students’ home life and variables that may impact school functioning. Other recommended ideas include forming a quarterly focus and/or support group with parents, educators, and administration. This will strengthen the partnership between the school and the community and improve outcomes for students with autism.
The organization of outreach events for students with autism and parents will provide access to resources (e.g., vocational rehabilitation, workforce services) within the community. Further partnerships can be developed by appointing a school representative to coordinate with the Utah Parent Center to set up parent trainings. Supports are available for parents through webinars on the Utah Parent Center website (Utah Parent Center.org/trainings/webinars). Webinars can be accessed anytime and at no cost to parents. An example of webinar topics includes the following: IEP, Transitions to Adulthood, Autism, Bullying, and Keeping a Job.

The use of video modeling and social stories can assist in improved communication between educators and families. Video modeling and social stories introduced in the school setting can be shared with parents and rehearsed in the home environment. Duplicate copies of social story books for parents can be provided as well as shared videos via cell phone or iMovie. By providing repeated exposure and repetition students introduced to new skills will improve autistic students’ ability to generalize concepts.

**Early Identification**

Child Find and early identification of autistic students is another perceived weakness in the rural district. A recommendation to facilitate early identification of students with disabilities is to establish relationships with local pediatric offices. By familiarizing pediatricians with universal screeners such as the M-Chat -R/F (Modified Checklist for Autism-Revised, with Follow-up) (https://mchatscreen.com/) and the POSI (Parent Observation of Interaction) early warning signs of autism can be identified. These short checklists are free, require very little training, and can be administered to children 16 - 35 months. At-risk children identified by their pediatrician can be provided contact information for the local school district or Early Intervention (0-3 yrs.) support.
A Child Find evaluation can then be initiated and eligibility for special education services can be
determined, hopefully at earlier ages (Maenner et al., 2020, 2021).

**Access to Resources**

Lastly, stakeholders suggested limited resources (e.g., staff) is a weakness for the rural
district. The special education director can facilitate conversations with state-funded regional
agencies to increase itinerant staff. The use of registered behavioral technicians (RBTs) can
consistently support autistic students on behavior plans as well as provide informal training for
school staff (e.g., teachers, paraprofessionals, other) in the rural district. In addition to the school
psychologist assigned to the rural school district, additional support in early identification could
also come from the regional service center’s school psychologist who could assist in early
identification of autistic students in a timely manner through early intervention and preschool
programs.

**Summary**

This study was conducted in conjunction with two other research projects examining the
needs of rural districts for students with autism in three very different rural areas within the same
state. Participants in these studies were from varying demographic backgrounds representing their
unique perspectives on the challenge’s rural districts face. The researcher has uncovered four
common themes in the target district: a need for further training, improved collaboration, early
identification, and additional resources. Collectively, these themes can be used to aid in providing
effective services (e.g., accommodations), make data-based decisions, and improve programs for
individuals with autism. Immediate recommendations for the district are as follows:
1. The district will distribute web-based training options for all stakeholders (e.g., parents, teachers, administration) through email, school newsletters, and on the district’s special education site.

2. The LEA will connect with the Utah Parent Center to identify a representative for the district and organize parent meetings.

3. Special education teachers will provide trainings for staff on how to create social stories and video modeling.

4. The special education director will initiate conversations with local pediatric offices to implement early identification autism screening tools.

5. The LEA will continue to utilize regional itinerant supports and explore options to increase these services for the district.

An executive summary with graphs and action items was shared with the targeted district’s superintendent and school board members. Board members endorsed the implementation of early identification methods to provide resources for parents, teachers, and students. The Centers for Disease Control and Prevention (CDC) data from 2021, (Maenner et al., 2021) (i.e., 1 in 44 children aged 8 have autism) was shared with board members. These data suggest that Utah has experienced an increase from 1.7% of the population of children identified as having autism in 2012 to 2.2% in 2018. In the targeted rural district, fewer than 10 students are currently receiving special education services under an Autism classification. The 2018 data indicates that there are possibly 37 students within the rural district that have not been identified or are receiving specialized services under a different classification (e.g., speech and language impairment).
Access to free trainings for all stakeholders was endorsed by board members. The accessibility and convenience of these trainings was an important feature. Increased collaboration and additional resources for staff, families and students was also viewed favorably. Community participants at the board meeting expressed appreciation for the needs assessment for students with autism and stressed the importance of early identification. Additionally, faculty meetings to reveal findings to stakeholders will also be held in an effort to make positive changes in the educational system and the future lives for autistic students.
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APPENDIX A

Consent Form

BRIGHAM YOUNG UNIVERSITY-- Provo, Utah

Consent Form for Research Participation

Study Title: Educational Needs of Students with Autism Spectrum Disorder

Principal Investigator: Terisa Gabrielsen, PhD.

Student Researcher: Danielle Katterman

IRB Study Number:

My name is Danielle Katterman, I am a student at Brigham Young University and I am conducting this research under the supervision of Professor Terisa Gabrielsen, PhD. You are invited to participate in this research study of the educational needs of students with autism spectrum disorder (ASD) because you have lived in [targeted rural school district] boundaries within the last 5 years and you have requested further contact with the researchers to provide more in-depth responses to a needs assessment questionnaire that you completed on Qualtrics in the first phase of this study.

This form contains important information about the study and what we will ask you to do if you decide to be in this study.

The purpose of the study is to determine the educational needs as perceived by parents, educators, community care providers, and individuals on the Autism spectrum. The responses will be de-identified and shared with educational leaders of the [targeted rural school district] to celebrate successes and make plans for any potential improvements that need to be made.

- Your participation in this interview will require approximately one hour or less during one session. Your participation will be confidential and you will not be contacted again in the future. You will not be paid for this study.

Study Location: Interviews will take place at the school district offices or at the home of participant if that is their request. Phone interviews or teleconference interviews (on Zoom, a free software download) may also be conducted at the participant’s request. Interviews will be audio recorded, de-identified, and analyzed by BYU students who are not associated with the school district for coding.

Possible risks/discomforts: To the best of our knowledge, this activity will have no more risk of harm than you would experience in everyday life. We will take steps to minimize the risk of confidentiality being breached, to the extent possible. You will not be talking to anyone employed by the school district, and you will not be talking to anyone who lives in your community. Your name will never be associated with your responses. Your identity will only be used to contact you. See the section on information protection below for more measures to protect your confidentiality.

Possible benefits for participation: Participants will not have any direct benefit from being in this research study. The study is designed to learn more about educational needs of students with ASD. The study results may be used to help other people in the future. You will not be compensated for your participation.

How will information collected be protected, and how will that information be shared: Results of the study may be used in publications and/or presentations. Your study data will be handled as confidentially as possible. If results of the study are published, names and identifiable information will not be used.

To minimize the risks to confidentiality, we will store data and interview information in a locked cabinet, within a locked office.
Rights of participant: Participation in the research study is voluntary. You are not compelled to answer any question you choose not to answer. If at any time and for any reason, you would prefer to end your participation, please tell me. We may take a break or stop all together. You may withdraw from this study at any time and will not be penalized for withdrawing.

Any questions or concerns you may have regarding this research study: You do not have to be in this study if you do not want to be. You do not have to answer any question that you do not want to answer for any reason. We will be happy to answer any questions you have about this study, you are free to ask them now. If you have questions later, you may contact the researchers by means of email at: terisa_gabrielsen@byu.edu.

If you have any questions about your rights as a research participant you may contact the IRB administration at A-285 ASB, BRIGHAM YOUNG UNIVERSITY, Provo, Utah 84602; IRB@BYU.EDU; (801) 422-1461. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

As part of this research, I will be making an audio recording of you during your participation. Please indicate that you permit audio recording, by initialing next to the use of recording and sign at the end. The choice is completely up to you. I will only use the audio in the ways you agree to. In any use of the audio, you will not be identified by name.

________ Audio can be studied by the research team for use in the research project.

(Initial)

*I give consent for audio recording of this interview ________________________________________________

PARTICIPANT SIGNATURE

*I do not consent for audio recording of this interview, I understand that the interview could take longer, as all comments will need to be transcribed verbatim by the interviewer

__________________________________________

PARTICIPANT SIGNATURE

CONSENT:

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above, including audio recording of my participation, and will receive a copy of this consent form.

__________________________________________

Participant’s Name (printed)

__________________________________________

Participant’s Signature Date
APPENDIX B

Instruments

School District Autism Needs – Interview Script:

Thank you for being willing to meet with me today. I have provided you with a consent/assent form. Please feel free to read through the consent form and let me know if you have any questions before you sign the form giving your consent to participate in this interview. (Participant read consent form)

This interview will be recorded (audio only). As I am not an employee of [targeted rural school district], I want to assure you that your responses will be de-identified and reviewed by a team of students at Brigham Young University. Their goal will be to find common themes and concerns in regards to education for students with autism in the school district among interviewees. Their findings will be returned to me without attached names or identifying information to help participants maintain confidentiality. If at any point during the interview, you feel you would prefer to leave a question un-answered or you need to discontinue the interview all together, please let me know.

To protect your family member/student’s privacy, please refer to him/her as “my student.” If you happen to forget and say their name, it will be flagged and edited out before shared with the BYU undergraduate students.

The purpose of this interview and the previous online questionnaire is to obtain perspectives on the educational experiences of students with ASD and create a summary of concerns and needs for the [targeted rural school district].

Any questions?

As we proceed, you are encouraged to avoid using your/the child with autism’s name, as well as your own name and/or educators’ names. To retain confidentiality and privacy of individuals. Let’s begin…

(1) Please clarify any concerns you were unable to share on the online questionnaire.
(2) What services do you feel that your child/student needs, include services that aren’t currently being offered?
(3) What services are you being provided or were provided previously?
(4) How effective do you feel the services being provided or that were provided were?
(5) Any final concerns/thoughts regarding effective education services for students with ASD?

Thank you for your time. You may access final report information by contacting Terisa Gabrielsen at terisa_gabrielsen@byu.edu or 801-422-5055.
APPENDIX C

Recruitment Scripts

Email Script sent to EDUCATORS and FAMILIES (families will also receive a hard copy in the mail).

We are working with BYU on a research study to find out what is working well and what improvements need to be made in our autism services in the school district. Please take just a few short minutes to respond to this survey. Your responses are completely anonymous. If you want to talk to someone about your experiences with autism in the district, you will be able to request a contact from a BYU researcher who is NOT an employee of the school district.

When the questionnaires have been completed, the BYU researchers will share results with us (there will be no identifying information collected or reported) so we can work to better serve students and families with autism in the school district.

Thank you in advance for your help with this important effort. If you have any questions, please contact Terisa Gabrielsen at BYU (terisa_gabrielsen@byu.edu, 801-422-5055) if you wish to remain anonymous to the school district or contact Danielle Anne Katterman [personal contact removed].
Thesis social media script

We have the opportunity to gather your perspective about educational needs of students with Autism Spectrum Disorder in [targeted rural school district] this month. This research study is being conducted by BYU graduate student and Danielle Katterman and her advisor Terisa Gabrielsen, PhD.

If you have a moment, we would invite you to take our online needs assessment questionnaire. The needs assessment should take 3-5 minutes to complete. You will not be asked to give any identifying information. Your anonymous responses will be used for research purposes to improve services for students with autism spectrum disorder.

[link will differ for each school district, and QR codes may also be used]
The needs assessment can be accessed by clicking on the following web address https://bit.ly/2RRWP fz (or copy and paste into your web browser) or by a link on the [targeted rural school district] webpage [omitted].

If you have any questions regarding this research project or the needs assessment please contact Danielle Katterman or Terisa Gabrielsen terisa_gabrielsen@byu.edu or 801-422-5055
APPENDIX D

Needs Assessment (Educators and Parents)

BYU Autism Needs Assessment

My name is Danielle Katterman. I am a graduate student at Brigham Young University and I am conducting this research under the supervision of Professor Terisa Gabrielsen, from the Department of Counseling, Psychology and Special Education. You are being invited to participate in this research study of Needs Assessment for Individuals with Autism for people who live in your school district. I am interested in finding out about what educators, families, and individuals with autism think about autism services in the school district.

Your participation in this study will require the completion of the attached questionnaire. This should take approximately 10 minutes of your time. Your participation will be anonymous on this questionnaire and you will not be contacted again in the future unless you specifically ask us to contact you (at the end of the survey). You may want to talk to us more about your answers, but you don’t have to.

You will not be paid for being in this study. This survey involves minimal risk to you. The benefits, however, may impact society by helping increase knowledge about how to better serve individuals with autism in schools.

You do not have to be in this study if you do not want to be. You do not have to answer any question that you do not want to answer for any reason. We will be happy to answer any questions you have about this study. If you have further questions about this project or if you have a research-related problem you may contact me, Danielle Katterman [personal contact removed] or my advisor, Terisa Gabrielsen at [terisa_gabrielsen@byu.edu or 801-422-5055.

If you have any questions about your rights as a research participant you may contact the IRB Administrator at A-285 ASB, Brigham Young University, Provo, UT 84602; irb@byu.edu; (801) 422-1461. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

The needs assessment will begin with questions regarding who you are and your relationship to individual(s) with Autism (ASD). Responses will be kept anonymous and used for the purpose of improving the educational needs of students with ASD. The [targeted rural school district] has approved of this research project. The BYU Institutional Review Board has also approved this research study.

The completion of this survey implies your consent to participate. If you choose to participate, please complete the Qualtrics survey. Thank you!
By checking the following circle you indicate your consent to participate in this research project. (You may stop participating at any point, but only questionnaires that are more than 50% completed will be included in research). IF YOU ARE COMPLETING THIS ON A PHONE, USE THE NEXT AND BACK BUTTONS AT THE BOTTOM OF EACH PAGE TO NAVIGATE.

☐ I give my consent to complete this questionnaire. (1)

Q1a Are you currently a resident of [County], Utah? (Research intends to include current residents or those who have resided in [County] sometime in the past 5 years)

☐ Yes (1)

☐ No, but I have lived in the [County] within the past 5 years (2)

☐ No (Research intends to include current residents or those who have resided in the [County] sometime in the past 5 years) (3)

Q1b How long have you been a resident of [County], Utah? (Even if you don't live in [County] currently)

☐ Less than 5 years (1)

☐ 6 - 10 years (2)

☐ 11 - 15 years (3)

☐ 16 - 20 years (4)

☐ 21+ years (5)

Q2a What is your relationship to person(s) with Autism Spectrum Disorder (ASD)? (Check all that apply)

☐ Parent/Guardian (1)

☐ Other Caregiver (2)

☐ Educator - teaching role - special education (3)
Educator - teaching role - general education  (4)

Educator -- administrative role  (5)

Educator - support role (e.g. paraprofessional, secretary, counselor, psychologist, therapist, librarian)  (6)

I have an autism spectrum disorder  (8)

Other (comment):  (9) ____________________________

Display This Question:
If What is your relationship to person(s) with Autism Spectrum Disorder (ASD)? (Check all that apply) = I have an autism spectrum disorder

Q2b If you are an individual with autism spectrum disorder, how would you like to answer this questionnaire?

O As a parent, I have a child with ASD  (1)

O As an individual, I am/was a student in [targeted rural school district] with ASD  (4)

Q3 What is the age group of person(s) with Autism Spectrum Disorder that you interact with? (Check all that apply)

O Birth to 2 years  (1)

O Preschool -Kindergarten  (2)
☐ Elementary (3)

☐ Middle/Junior (4)

☐ High School (5)

☐ Post-Secondary (6)

Q4 What is your gender?

☐ Male (1)

☐ Female (2)

☐ Other response (3) ________________________________________________

Q5 Race (you may check more than one):

☐ White (1)

☐ Black or African American (2)

☐ American Indian or Alaska Native (3)

☐ Asian (4)

☐ Native Hawaiian or Pacific Islander (5)

☐ Other (6) ________________________________________________

Q6 Ethnicity:

☐ Hispanic (1)
Non-Hispanic (2)

Q7 Marital Status:
- Single (1)
- Married (2)
- Widowed (3)
- Divorced (4)
- Separated (5)
- Cohabitating (6)

Q8 How many years have you been involved with students diagnosed with Autism Spectrum Disorder? (caregiving or educating)
- Less than 5 years (1)
- 6 - 10 years (2)
- 11 - 15 years (3)
- 16 - 20 years (4)
- 21+ years (5)

Q9 Educational Background:
- Some High School (1)
- High School Completion (2)
- Some College (3)
Q10a In general, when thinking about all individuals with autism in our community, what age group would you rank as the highest priority for [targeted rural school district] to support with additional resources? 1- Most Important to 7- Least Important in terms of the following services? (click and drag the following items to reflect your ranking, they will automatically change numbers) Be careful scrolling on a phone, as the ranks will change if you touch and move them.

____ Early Intervention (1)
____ Preschool Services (2)
____ Elementary School services (3)
____ Middle School services (5)
____ High School services (6)
____ Transition to adulthood services (7)

Q10b In your experience, rank the effectiveness of educational services at each level.

<table>
<thead>
<tr>
<th></th>
<th>1 Not Effective</th>
<th>2 (2)</th>
<th>3 (3)</th>
<th>4 (4)</th>
<th>5 (5)</th>
<th>NA (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preschool services (2)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Elementary School services (3)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Middle School services (5)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>High School services (6)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Transition to adulthood services (7)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Q11 Do you have any experience in the school district with self-regulating strategies (e.g., Zones of Regulation)? Self-regulating strategies include visual supports are provided to help children recognize and self-correct their emotions.

0 Yes (1)

0 No (2)

0 Yes, but not in the school district (3)

Display This Question:

If Do you have any experience in the school district with self-regulating strategies (e.g., Zones of... = Yes

Or Do you have any experience in the school district with self-regulating strategies (e.g., Zones of... = Yes, but not in the school district

Q32 How effective do you think self-regulating strategies is/has been in the school district as far as you know?

0 Not Effective (1)

0 Somewhat Not Effective (2)

0 Neutral (3)

0 Somewhat Effective (4)

0 Very Effective (5)

Q40 Do you have experience in the school district with applied behavior analysis (ABA)? ABA includes changing student's behaviors through a system of rewards and consequences.

0 Yes (1)

0 No (2)

0 Yes, but not in the school district (3)
Q41 How effective do you think applied behavior analysis (ABA) is/has been in the school district as far as you know?

- Not Effective (1)
- Somewhat Not Effective (2)
- Neutral (3)
- Somewhat Effective (4)
- Very Effective (5)

Q39 Do you have experience in the school district with learning strategies on how to pay attention and work completion in class (using programs such as Get Ready or visual schedules)?

- Yes (1)
- No (2)
- Yes, but not in the school district (3)

Q42 How effective do you think these learning strategies is/has been in the school district as far as you know?

- Not Effective (1)
Q43 Do you have experience in the school district with communication services such as assistive technology? Assistive technology includes speech to text, text to speech, individualized communication boards/devices, adaptive pencil grips, computer apps., etc.

0 Yes (1)

0 No (2)

0 Yes, but not in the school district (3)

Display This Question:

If Do you have experience in the school district with communication services such as assistive techn... = Yes
Or Do you have experience in the school district with communication services such as assistive techn... = Yes, but not in the school district

Q44 How effective do you think these communication services such as assistive technology is/has been in the school district as far as you know?

0 Not Effective (1)

0 Somewhat Not Effective (2)

0 Neutral (3)

0 Somewhat Effective (4)
Q45 Do you have experience in the school district with improving student's sensory sensitivities or tactile defensiveness? Examples include occupational therapy assistance (e.g., weighted vests, sensory diets, breaks, brushing).

- Yes (1)
- No (2)
- Yes, but not in the school district (3)

Q46 How effective do you think these sensory strategies is/has been in the school district as far as you know?

- Not Effective (1)
- Somewhat Not Effective (2)
- Neutral (3)
- Somewhat Effective (4)
- Very Effective (5)

Q47 Do you have experience in the school district with student's learning a new skill through watching videos or peer groups (Such as video modeling or social skills training with peers)?

- Yes (1)
Display This Question:

If Do you have experience in the school district with student's learning a new skill through watchin... = Yes
Or Do you have experience in the school district with student's learning a new skill through watchin... = Yes, but not in the school district

Q48 How effective do you think these social skills and video modeling strategies is/has been in the school district as far as you know?

- Not Effective (1)
- Somewhat Not Effective (2)
- Neutral (3)
- Somewhat Effective (4)
- Very Effective (5)

Q33 Do you have other interventions that you would like to rank effectiveness on? (name the intervention if YES)

- Yes (1) ______________________________

- No (2)

Display This Question:

If If Do you have other interventions that you would like to rank effectiveness on? (name the intervention if YES) Yes Is Not Empty
Q34 How effective do you think the intervention has been in the school district?

0 Not Effective (1)
0 Somewhat Not Effective (2)
0 Neutral (3)
0 Somewhat Effective (4)
0 Very Effective (5)

Q12 In your experience, how well informed did/do parents feel in regards to autism services provided in [targeted rural school district]?

<table>
<thead>
<tr>
<th>Parents feel like they are (1)</th>
<th>1 No information (1)</th>
<th>2 Not well informed (2)</th>
<th>3 Neutral (3)</th>
<th>4 Well informed (4)</th>
<th>5 Very well informed (5)</th>
<th>NA (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Q13a What accommodations/modifications are you aware of that are provided by general education teachers for students with ASD? Some examples of accommodations are things like extra time on tests, modified assignments, verbal responses on tests, using technology to help with work, etc.

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
Q13b In your experience, rank the effectiveness of these current accommodations/modifications for students with ASD in the [targeted rural school district]?

<table>
<thead>
<tr>
<th>How effective are the accommodations/modifications. (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not effective at all (44)</td>
</tr>
<tr>
<td>Slightly effective (45)</td>
</tr>
<tr>
<td>Moderately effective (46)</td>
</tr>
<tr>
<td>Very effective (47)</td>
</tr>
<tr>
<td>Extremely effective (48)</td>
</tr>
</tbody>
</table>

0 0 0 0 0

Q14 What additional accommodations/modifications do you think should be provided in [targeted rural school district]?

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

Q16 In your opinion, what has worked well in educating students with Autism Spectrum Disorder in the [targeted rural school district]?

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

________________________________________________________________
Q17 In your opinion, what has NOT worked well in educating students with Autism Spectrum Disorder in the [targeted rural school district]?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

Q18 If any, what changes should be made to better serve students with Autism Spectrum Disorder?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

Q19 When you click the arrow below, you will be automatically redirected to a separate place that will allow you to request some time to talk to us about your answers if you wish. This is completely optional; YOU DON'T HAVE TO GIVE ANY INFORMATION if you don't wish to. (Your answers above will not be connected to your name, email or phone number when you click on this link, all of your answers here are completely anonymous). Please click the arrow below to finish this survey.

Display This Question:
If you are an individual with autism spectrum disorder, how would you like to answer this question? = As an individual, I am/was a student in [targeted rural school district] with ASD

Q20
If you have autism, click on this link to go to a new survey.

CLICK HERE FOR STUDENT SURVEY

End of Block: Default Question Block
APPENDIX E

Needs Assessment (Students)

BYU Autism Needs Student Survey

Start of Block: Default Question Block

Q24 Just as a reminder, you have already said that you want to answer these questions when we asked you before. Do you still want to answer these questions about you and your school?

- Yes, I want to answer these questions. (1)

Q1 What kind of school do you go to now?

- Elementary School (1)

- Middle School (2)

- High School (3)

- College (4)

- I am not in school (5)

Q2 Are you a girl or a boy?

- Girl (1)

- Boy (2)

- Other (3)

Q3 Is your family (you can mark more than one)
Q4 Is your family

- Hispanic (1)
- Not Hispanic (2)

Q5 At school, did you learn how to regulate yourself? This means deep breathing or taking breaks or something to help you calm down if you are upset.

- Yes (1)
- No (2)
- Yes, but I did not learn it at school (3)

Display This Question:

If At school, did you learn how to regulate yourself? This means deep breathing or taking breaks or... = Yes

Or At school, did you learn how to regulate yourself? This means deep breathing or taking breaks or... = Yes, but I did not learn it at school

Q6 How much do you think you learned about deep breathing, taking breaks, or something to help you calm down if you are upset?
Q7 At school, did you learn how to earn points or tickets for doing your work (called a token system)?

- Yes (1)
- No (2)
- Yes, but not at school (3)

Q8 How much do you think you learned while you were earning points or tickets for doing your work (token system)?

- I didn't learn anything (5)
- I didn't learn very much (4)
- I kind of learned some things (3)
- I learned some things (2)
- I learned a lot (1)
I learned a lot (1)

Q9 At school did you ever use a visual schedule or a checklist of things to do?

   Yes (1)
   No (2)
   Yes, but not at school (3)

Display This Question:

   If At school did you ever use a visual schedule or a checklist of things to do? = Yes
   Or At school did you ever use a visual schedule or a checklist of things to do? = Yes, but not at school

Q10 How much did it help you when you used a visual schedule or a checklist of things to do?

   It didn't help me at all (5)
   It didn't help me very much (4)
   It kind of helped me (3)
   It helped me some (2)
   It helped me a lot (1)

Q11 At school, did you get any help with from a speech teacher or use anything that helped you to talk?

   Yes (1)
   No (2)
   Yes, but not at school (3)
Q12 At school how much did the speech teacher or things that helped you to talk help you?

- It didn't help me at all (5)
- It didn't help me very much (4)
- It kind of helped me (3)
- It helped me some (2)
- It helped me a lot (1)

Q13 At school, did you use anything to help you with sensory sensitivities (this might have been something like a weighted vest, ear plugs or ear phones, chewing gum, having a squeeze ball, or something else you could touch)?

- Yes (1)
- No (2)
- Yes, but not at school (3)

Q14 How much do you think it helped you to use sensory helps like a weighted vest, ear plugs or ear phones, chewing gum, squeeze ball, or something else you could touch?
Q15 At school, did you ever learn a new skill by watching a video or seeing someone else do it (called video modeling or peer modeling)?

0 Yes (1)

0 No (2)

0 Yes, but not at school (3)

Q16 How much do you think it helped you to learn a new skill when you saw a video or see someone else doing a new skill?

0 It didn't help me at all (5)

0 I didn't help me very much (4)

0 It kind of helped me (3)

0 It helped me some (2)
Q17 At school, was there something else that teachers did that really helped you to learn?

- Yes (1)
- No (2)
- Yes, but not at school (3)

Q18 What was the thing that helped you to learn at school that we haven't asked you about yet?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Q19 How much did that thing help you to learn?
0 It didn't help me at all (5)
0 I didn't help me very much (4)
0 It kind of helped me (3)
0 It helped me some (2)
0 It helped me a lot (1)

Q20 What do you think has helped you to learn at school? This could be a thing or a person.
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

Q21 What have you had to do at school that did NOT help you to learn (something that you really didn't like)?
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

Q22 If you could change the way that teachers teach you at school, what would it be?
Q23 Thank you for answering these questions. Click on the arrow below to finish the survey. When you click, you will see some more questions that you don't have to answer if you don't want to.

End of Block: Default Question Block
APPENDIX F

Institutional Review Board Approval

Memorandum

To: Terisa Gabrielsen  
Department: BYU - EDUC - Counseling, Psychology, & Special Education  
From: Sandee Aina, MPA, HRPP Manager  
Wayne Larsen, MAcc. IRB Administrator  
Bob Ridge, PhD, IRB Chair  

Date: April 14, 2020  
IRB#: IRB2020-138  
Title: What Does a Rural School District Need to Effectively Educate Students with Autism Spectrum Disorder

Brigham Young University’s IRB has approved the research study referenced in the subject heading as expedited level, categories 6 and 7.

The approval period is from 04/14/2020 to 04/13/2021. Please reference your assigned IRB identification number in any correspondence with the IRB. Continued approval is conditional upon your compliance with the following requirements:

1. A copy of the approved informed consent statement and associated recruiting documents (if applicable) can be accessed in iRIS. No other consent statement should be used. Each research subject must be provided with a copy or a way to access the consent statement.

2. Any modifications to the approved protocol must be submitted, reviewed, and approved by the IRB before modifications are incorporated in the study.

3. All recruiting tools must be submitted and approved by the IRB prior to use.

4. In addition, serious adverse events must be reported to the IRB immediately, with a written report by the PI within 24 hours of the PI’s becoming aware of the event. Serious adverse events are (1) death of a research participant; or (2) serious injury to a research participant.

5. All other non-serious unanticipated problems should be reported to the IRB within 2 weeks of the first awareness of the problem by the PI. Prompt reporting is important, as unanticipated problems often require some modification of study procedures, protocols, and/or informed consent processes. Such modifications require the review and approval of the IRB.

6. A few months before the expiration date, you will receive a prompt from iRIS to renew this protocol. There will be two reminders. Please complete the form in a timely manner to ensure that there is no lapse in the study approval. Please refer to the IRB website for more information.

Instructions to access approved documents, submit modifications, report complaints and adverse events can be found on the IRB website under IRIS guidance:
http://orca.byu.edu/irb/IRIS/story_html5.html
APPENDIX G

Community Recruitment Ad

Got Autism?

We are working with BYU on a research project to conduct a web-based survey specifically designed for our District/Community to assist in providing quality services for families and students with Autism (ASD).

To participate scan the QR code or access the District website at

All responses are confidential. If you have lived in District boundaries within the last 5 years, you are eligible.

Contact Danielle Katterman
For questions or concerns
APPENDIX H

Training Options

Early Childhood:

<table>
<thead>
<tr>
<th>Website</th>
<th>Cost</th>
<th>Modules</th>
<th>Audience</th>
<th>Certificate?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autism Navigator <a href="https://autismnavigator.com/">https://autismnavigator.com/</a></td>
<td>Free</td>
<td>ASD Video Glossary (explore symptoms and treatment options) Autism in Toddlers (3 hr. course) 16 by 16 Look Book See also Seamless Path for Families</td>
<td>Parents, Clinicians, Early Childhood Professionals</td>
<td>?</td>
</tr>
<tr>
<td>Autism Navigator</td>
<td>Fee-based</td>
<td>Professional Course for Primary Care (includes Early Intervention) (8 hours)</td>
<td>Parents, Clinicians, Early Childhood Professionals</td>
<td>?</td>
</tr>
<tr>
<td>CDC – Learn the Signs Act Early <a href="https://www.cdc.gov/ncbddd/watchmetraining/index.html">https://www.cdc.gov/ncbddd/watchmetraining/index.html</a></td>
<td>Free</td>
<td>Watch Me! Training 1 hour course, also available in Spanish</td>
<td>Early Care and education providers</td>
<td>Available</td>
</tr>
<tr>
<td>CDC Autism Case Training <a href="https://www.cdc.gov/ncbddd/actearly/act.html">https://www.cdc.gov/ncbddd/actearly/act.html</a></td>
<td>Free</td>
<td>Classroom version Web-Based CE version Case training video library</td>
<td>Health care, inc. school psychologists</td>
<td>Available</td>
</tr>
<tr>
<td>OCALI Autism Internet Modules <a href="https://autisminternetmodules.org/">https://autisminternetmodules.org/</a></td>
<td>Free</td>
<td>Recognizing Autism 1-15 hrs. (avg. 1.5 hrs.) Infants and Toddlers 2 – 4 hrs. (avg. 2 hr.) Autism at Home 1 – 56.5 hrs. (avg. 1.5 hrs.)</td>
<td>Clinicians (psychologist) and parents</td>
<td>PD, CE, and College avail for fee</td>
</tr>
<tr>
<td>Website</td>
<td>Cost</td>
<td>Modules</td>
<td>Audience</td>
<td>Certificate?</td>
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</tr>
<tr>
<td>Thompson Center for Autism &amp; Neurodevelopmental Disorders, Univ. of Missouri <a href="https://thompsoncenter.missouri.edu/autism-training/online-training-modules/">https://thompsoncenter.missouri.edu/autism-training/online-training-modules/</a></td>
<td>Free</td>
<td>Understanding Autism in Young Children Screening and Referral Family and Professional Partnerships</td>
<td>Parents, Clinicians, Early Childhood Professionals</td>
<td>Yes</td>
</tr>
<tr>
<td>TEACCH online training <a href="https://teacch.com/trainings/online-learning-opportunities/">https://teacch.com/trainings/online-learning-opportunities/</a></td>
<td>Free</td>
<td>Family Implemented TEACCH for Toddlers Study (FITT)</td>
<td>EI providers</td>
<td>??</td>
</tr>
<tr>
<td>TEACCH online training <a href="https://teacch.com/trainings/online-learning-opportunities/">https://teacch.com/trainings/online-learning-opportunities/</a></td>
<td>$500</td>
<td>Early Learners Foundations of Structured TEACHING 18 hours</td>
<td>Educators, Psychologists, SLPs who serve 3-5 year olds</td>
<td>1.8 CE hrs.</td>
</tr>
<tr>
<td>JFK Center, University of Colorado Contact <a href="mailto:dina.johnson@ucdenver.edu">dina.johnson@ucdenver.edu</a> or at 303-724-7673</td>
<td>Free</td>
<td>Colorado Parent Mentoring Systems Navigations Modules</td>
<td>Parents and EI providers</td>
<td>N/A</td>
</tr>
<tr>
<td>Website</td>
<td>Cost</td>
<td>Modules</td>
<td>Audience</td>
<td>Certificate?</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------</td>
<td>-----------------------------------------------------------</td>
<td>-------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>OCALI Autism Internet Modules <a href="https://autisminternetmodules.org/">https://autisminternetmodules.org/</a></td>
<td>Free</td>
<td><em>Autism in the Classroom</em> 3 – 60 hours, topics avg. 1.5 hours</td>
<td>Educators</td>
<td>PD, CE, and College avail for fee</td>
</tr>
<tr>
<td>National Professional Development Center, Autism Focused Intervention Resources &amp; Modules <a href="https://afirm.fpg.unc.edu/">https://afirm.fpg.unc.edu/</a></td>
<td>Free</td>
<td><em>Introduction to ASD</em> 2-3 hrs. CONT</td>
<td>Everyone</td>
<td>Available for fee</td>
</tr>
<tr>
<td>NPDC AFIRM <a href="https://afirm.fpg.unc.edu/">https://afirm.fpg.unc.edu/</a></td>
<td></td>
<td><em>Selecting an Evidence Based Practice</em> (COVID-19 toolkit also available in 10 languages)</td>
<td>Website, not a formal course</td>
<td>No</td>
</tr>
<tr>
<td>NPDC AFIRM for paraprofessionals <a href="https://afirm.fpg.unc.edu/">https://afirm.fpg.unc.edu/</a></td>
<td>Free</td>
<td>Simulated E-Learning (3 courses) 4.5 – 6 hrs. total</td>
<td>Paras</td>
<td>Available for fee</td>
</tr>
<tr>
<td>NPDC AFIRM Evidence-Based Practice Modules <a href="https://afirm.fpg.unc.edu/">https://afirm.fpg.unc.edu/</a></td>
<td>Free</td>
<td>27 modules by topic 1.5 – 2 hrs. each</td>
<td>Educators</td>
<td>Available for fee</td>
</tr>
<tr>
<td>May Institute training events (zoom) <a href="https://www.mayinstitute.org/events/calendar.html">https://www.mayinstitute.org/events/calendar.html</a></td>
<td>Free</td>
<td>Various, targeted topics</td>
<td>Various</td>
<td>??</td>
</tr>
<tr>
<td>Thompson Center for Autism &amp; Neurodevelopmental Disorders, Univ. of Missouri <a href="https://thompsoncenter.missouri.edu/autism-training/online-training-modules/">https://thompsoncenter.missouri.edu/autism-training/online-training-modules/</a></td>
<td>Free</td>
<td><em>Evidence-Based Practice and Interventions</em></td>
<td>Clinicians Parents Educators</td>
<td>Yes</td>
</tr>
<tr>
<td>Website</td>
<td>Cost</td>
<td>Modules</td>
<td>Audience</td>
<td>Certificate?</td>
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| **TEACCH Online Training**  
[https://teacch.com/trainings/online-learning-opportunities/](https://teacch.com/trainings/online-learning-opportunities/) | Free | *Dual Diagnosis and Other Complex Issues in Autism Identification and Treatment*  
7 webinars | Clinician Educators | No |
| TEACCH online training  
[https://teacch.com/trainings/online-learning-opportunities/](https://teacch.com/trainings/online-learning-opportunities/) | Free | *Supporting Individuals with Autism during COVID-19* | Everyone | No |
| TEACCH online training  
[https://teacch.com/trainings/online-learning-opportunities/](https://teacch.com/trainings/online-learning-opportunities/) | $10 | *Structured TEACCHing: Individualized Schedules*  
1 hour | Everyone | 1.25 Contact hours |
| TEACCH online training  
[https://teacch.com/trainings/online-learning-opportunities/](https://teacch.com/trainings/online-learning-opportunities/) | $500 (non-North Carolina Resident) | *Fundamentals of Structured TEACCHing*  
18 hours | Educators, psychologists, speech language pathologists | 1.8 CE |
| ECHO for autism in schools  
Adolescent:

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</thead>
</table>
| OCALI Autism Internet Modules  
https://autisminternetmodules.org/  
Many modules overlap across sections | Free    | *Autism in the Classroom*  
3 – 60 hours, topics avg. 1.5 hours | Educators      | PD, CE, and College avail for fee |
| Center on Secondary Education for Students with Autism  
(CSESA)http://cesa.fpg.unc.edu/high-school-case-studies  
*Frank Porter Graham Center, University of North Carolina* | Free    | High School Case Studies  
IEP friendly case examples of supports for skill development, including technical briefs | Educators      | N/A                          |
| CSESA Professional Supports  
https://cesa.fpg.unc.edu/professionals | Free    | Wide range of support resources and curriculum helps | Educators      | N/A                          |
| CSESA Family Supports  
https://cesa.fpg.unc.edu/families | Free    | Wide range of support resources and handouts  | Parents        | N/A                          |
| Puberty and Adolescence Toolkits  
*Autism Speaks*  
Self-care and hygiene Public vs. private rules Staying safe: Strangers, secrets and touch  
Elopement Safety planning for increased aggression Internet safety | Parents        | N/A                          |
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<tr>
<td>Be Safe Curriculum <a href="https://besafethemovie.com/curriculum/">https://besafethemovie.com/curriculum/</a></td>
<td>$74.95 full curriculum $24.95 DVD and cards only. Free sample video available</td>
<td>Video Modeling, Instruction &amp; Curriculum for safe interactions with emergency personnel, emphasis on police.</td>
<td>Educators</td>
<td>N/A</td>
</tr>
<tr>
<td>Organization for Autism Research (OAR)</td>
<td>Free</td>
<td>Video introduction to education of adolescents with ASD in the classroom.</td>
<td>Educators</td>
<td>N/A</td>
</tr>
<tr>
<td>JFK Center, University of Colorado</td>
<td>Free</td>
<td>Developmental Disability Training for First Responders</td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>
Contact dina.johnson@ucdenver.edu or at 303-724-7673

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<tr>
<td>Webinar: Managing the Anxious Behaviors of Children and Adolescents with Autism Spectrum Disorder Association of University Centers on Disabilities (AUCD)</td>
<td>Free</td>
<td>90 min. webinar by Judy Reaven and Audrey Blakely-Smith, Univ of Colorado</td>
<td>Educators, Parents</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Transition Age:

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<th>Certificate?</th>
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</thead>
<tbody>
<tr>
<td>OCALI Autism Internet Modules</td>
<td>Free</td>
<td><em>Autism in the Workplace</em> 1 – 44 hrs. (avg. 1.5)</td>
<td>Educators Employment Coaches Employers</td>
<td>Avail. for a fee</td>
</tr>
<tr>
<td><a href="https://autisminternetmodules.org/">https://autisminternetmodules.org/</a> Many modules overlap across sections</td>
<td>Free</td>
<td><em>COVID-19 Toolkit</em> Supporting Adults</td>
<td>Family Educators Employment Coaches Employers</td>
<td>No</td>
</tr>
<tr>
<td>NPDC AFIRM Evidence-Based Practice Modules</td>
<td>Free</td>
<td><em>COVID-19 Toolkit</em> Supporting Adults</td>
<td>Family Educators Employment Coaches Employers</td>
<td>No</td>
</tr>
<tr>
<td><a href="https://afirm.fpg.unc.edu/">https://afirm.fpg.unc.edu/</a></td>
<td>Free</td>
<td><em>Transition to adulthood</em></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Thompson Center for Autism &amp; Neurodevelopmental Disorders, Univ. of Missouri</td>
<td>Free</td>
<td><em>Transition to adulthood</em></td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Special Topics:

<table>
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<th>Certificate?</th>
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<tbody>
<tr>
<td>COVID-19 resource listing by topic <a href="https://researchautism.org/COVID-19/">https://researchautism.org/COVID-19/</a></td>
<td>Free</td>
<td>Curated list of social stories, webinars, resources, plans, and coping strategies for individuals with ASD</td>
<td>Educators and Parents</td>
<td>N/A</td>
</tr>
</tbody>
</table>