4-23-2024

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Reforming Special Education to Accommodate Students with Emotional Disturbances

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Abstract

This capstone paper presents a comprehensive analysis of the current state of special education for students with emotional disturbances, with a particular focus on the need for reform to accommodate these students better. Drawing on two qualitative case studies and quantitative census data research, the paper recommends several specific policy changes, including basing the standard for educational disability on the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), providing grants to states to redesign sensory-friendly schools and classrooms, and reforming disciplinary standards to involve psychological assessment. The conclusion suggests that this research provides a valuable foundation for further study and policy development in this area.

Keywords: Autism, special education, emotional disturbances, policy reform, DSM-V, sensory-friendly schools, psychological assessment

Executive Summary

Reform is needed in special education to accommodate students with emotional disturbances. Qualitative case studies and quantitative census data research can be used to explore discoveries in mental health studies, the challenges educators face in accommodating students, and the implications that policy changes have for student success. This paper's findings suggest that students with emotional disturbances are disadvantaged academically and socially. Two case studies highlight innovative ways school districts have addressed educators' challenges in addressing these students' needs. The census data research further confirms that students with emotional disturbances are more likely to experience academic failure, disciplinary actions, and social isolation than their peers without disabilities.

To address these challenges, the Federal Department of Education should base its standard for educational disability on the DSM-V rather than the outdated Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). By including psychological assessments, educators can better identify if mental distress is the cause of problematic behavior instead of ill will. This change would provide a clear and consistent definition of emotional disturbances, enabling educators to better identify and address the needs of students with this disability.

Additionally, states should provide grants to design sensory-friendly schools and classrooms. These environments would provide the necessary accommodations to promote student learning and social interaction while reducing stress and anxiety triggers. Furthermore, reforming disciplinary standards to involve psychological assessments is necessary.

In light of this, further study is needed to fully explore the implications of these policy changes for special education. Policymakers should consider these recommendations as a starting

point for future reform efforts. By doing so, schools can better support students with emotional

disturbances and ensure they receive the education they deserve.

Reforming Special Education to Accommodate Students with Emotional Disturbances

Recent research has revealed that emotional disturbances are more prevalent than previously thought and increasingly link emotional disturbances to autism. This discovery highlights the urgent need for increased accommodations not only for students with autism but for the general population of students.

Special education has traditionally focused on students with physical disabilities or cognitive impairments, such as down syndrome or cerebral palsy. However, recent research shows that emotional disturbances, such as anxiety, depression, and bipolar disorder, are also disabilities that significantly impact students' academic, social, and emotional well-being.

Moreover, research indicates that emotional disturbances are increasingly linked to Autism Spectrum Disorder (ASD), a neurodevelopmental disorder that affects communication and social interaction. According to the Centers for Disease Control and Prevention, approximately one in 44 children in the United States has ASD (C.F.D.C,2023). Given the increasing prevalence of ASD and its link to emotional disturbances, it is critical to address the need for accommodations for both the autistic and the general population of students.

Failing to accommodate students with emotional disturbances has serious consequences, leading to academic failure, social isolation, and disciplinary actions. Such consequences can impact students' academic performance and hinder their success later in life. Therefore, it's imperative that all students receive the necessary accommodations and support they need to succeed academically, socially, and emotionally.

Considering these developments, there is a clear need for reform in special education to accommodate students with emotional disturbances. Recommendations for policy changes include action at the federal and state levels to promote sensory-friendly schools and classrooms,

to reform disciplinary standards, and to base the standard for educational disability on the DSM-

V. Through implementing these policy changes, educators can better identify and address the

needs of students with emotional disturbances, ensuring they receive the necessary support to

succeed academically and personally.

Emotional Disturbances

Emotional Disturbances (ED) have long been recognized as a significant barrier to

successful education. The federal government has sought to address this issue for several decades

through special education policy. The Education of All Handicapped Children Act of 1975

marked the first instance of ED being addressed in federal educational policy, where it was

referred to as Serious Emotional Disturbances (SED) (U.D.O.E,1975). Despite this policy, only a

small percentage of school children have been identified as having SED by special education

services. It represents 1.65% to 17.36% of disabled students, depending on the state

(UDOE,1975).

While the definition of ED includes a range of clinically recognized mental health

disorders, the original language of the Individuals with Disabilities Education Act (IDEA) does

not explicitly name them. This allows interpretation and variation in identification and treatment

across different states and school districts. However, recent research has shed light on the

prevalence of emotional disturbances, indicating that it is more widespread than previously

thought and is linked to the increasingly common disability of autism. As such, there is a

growing need for increased accommodations not only for students with autism but for the general

population of students.

The characteristics that indicate ED is an inability to learn that cannot be explained by

intellectual, sensory, or health factors, a failure to build or maintain satisfactory interpersonal

relationships with peers and teachers, inappropriate types of behavior or feelings under normal

circumstances, a general pervasive mood of unhappiness or depression, or a tendency to develop

physical symptoms or fears associated with personal or school problems. Clinically, this

definition includes anxiety disorders, bipolar disorder, conduct disorders, eating disorders,

obsessive-compulsive disorder (OCD), and psychotic disorders.

Given the growing prevalence of ED and its impact on educational outcomes, it is

imperative to re-examine current policies and practices related to special education. The need for

a more nuanced and comprehensive approach to identifying and addressing ED has become

increasingly apparent. A key challenge in addressing ED is the lack of a standardized and

comprehensive definition considering the full range of clinical mental health disorders.

Therefore, it is recommended that the Federal Department of Education base its standard for

educational disability on the DSM-V to ensure a comprehensive and standardized definition that

considers the full range of clinical mental health disorders.

Additionally, schools must be re-designed to accommodate students with ED. This could

involve using sensory-friendly classrooms and schools better suited to the needs of students with

ED. Finally, disciplinary standards should be reformed to involve psychological assessments that

identify whether mental distress is the cause of bad behavior instead of bad will. By doing so,

educators and policymakers can provide the necessary support and accommodations to help

students with ED succeed academically and socially while reducing the stigma and isolation

often associated with these conditions.

Autism

The common understanding of autism has undergone significant changes in recent years.

While previous generations believed it to be a straightforward and inherently debilitating

condition, it is now known to exist on a spectrum (American Psychiatric Association, 2013). The

Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V), published in

2013, consolidated Autistic Disorder, Asperger's Disorder, and Pervasive Developmental

Disorder into Autism Spectrum Disorder (ASD) (American Psychiatric Association, 2013). This

new definition focuses on comorbidity, specifically between neurodivergence and anxiety,

depression, and obsessive-compulsive disorder (OCD) (Mazefsky et al., 2019).

However, educational policy has struggled to keep pace with these developments. The

Individuals with Disabilities Education Act (IDEA), last updated in 2004, heavily relies on the

DSM-IV, published nearly 30 years ago in 1994 (U.S. Department of Education, 2007). Most

school districts either follow it verbatim or make small adjustments. As a result, most special

education programs are not benefiting from new developments in clinical science, which is

particularly concerning when considering the prevalence of ASD in children. As of 2018, 1 in 44

children in the United States has autism, with 1 in 27 for those assigned male at birth and 1 in

116 for those assigned female at birth (Centers for Disease Control and Prevention, 2020).

Furthermore, a discrepancy between clinical and academic diagnoses leads to inadequate

support and limited access to special education resources for needy children. The law states that

"autism does not apply if a child's educational performance is adversely affected primarily

because the child has an emotional disturbance" (U.S. Department of Education, 2019). This

means that students can only receive an Individualized Education Program (IEP) or a 504 plan

for mental or emotional disturbances if the disturbances are directly linked to an educational

diagnosis distinct from a clinical diagnosis. As a result, one can have a clinical diagnosis of a

disorder while not receiving an educational diagnosis.

The discrepancy between psychological and pedagogical practice has public health

implications, and policy initiatives are necessary to ameliorate these discrepancies. However,

policy changes directly related to the inner workings of special education are necessary but

insufficient to address the totality of the problem at hand. The current apparatus for special

education lacks the manpower to address its current identified situation and would be inadequate

to handle an expanded caseload of interventions if made to shoulder the brunt of this crisis alone.

Therefore, a more holistic approach to special education which includes the use of IEPs

and 504 plans but also leads to changes in disciplinary procedures, classroom design, and

curriculum design for the general population of students is necessary. This approach would

ensure that children with emotional and developmental disorders receive appropriate support,

regardless of their educational diagnosis.

Sensory Issues. Sensory processing issues in children, also known as sensory processing

disorderI (SPD), involve challenges in processing and responding to sensory information from

the environment (May-Benson & Koomar, 2010). This can result in various symptoms impacting

a child's behavior, emotions, and social interactions. Children with SPD may struggle to regulate

their responses to sensory inputs like touch, sound, taste, smell, and movement (Baranek, 2002).

They may exhibit over-responsiveness, under-responsiveness, or a mix of both, with some being

hypersensitive to certain textures, sounds, or smells, while others seek intense sensory

experiences like spinning or jumping (Dunn, 1999). Common signs and symptoms include

sensitivity to sensory inputs, pickiness or avoidance of certain sensations, coordination

difficulties, challenges with transitions and emotional control, and difficulties in social

interactions and group play (Miller et al., 2007).The need for sensory-friendly schools and classrooms arises from students with emotional disturbances often struggling with sensory processing issues, which can lead to difficulties with attention, behavior, and emotional regulation. Sensory-friendly design elements, such as dimmer lighting, noise-reducing materials, and sensory play areas, can help students with emotional disturbances feel more comfortable and focused in the classroom.

"Children suffering from sensory processing issues are likely to be a distraction in the classroom."According to a report by the National Association of School Psychologists, "students with emotional and behavioral disorders often display challenging behavior in the classroom, and traditional disciplinary responses, such as suspension and expulsion, have been found to be ineffective and may exacerbate existing behavior problems" (NASP, 2010). The report recommends that schools adopt positive behavioral interventions and supports (PBIS) to create a more positive and supportive learning environment for all students.

Additionally, the American Psychological Association emphasizes the importance of addressing underlying mental health issues in disciplinary interventions, stating that "effective school discipline requires addressing the underlying mental health needs of students, as untreated mental health issues can lead to further behavior problems and academic difficulties" (APA, 2019).

Positive Behavior Interventions and Supports

Positive Behavior Interventions and Supports (PBIS) is an evidence-based framework for improving student behavior and creating a positive school environment. PBIS aims to teach and reinforce positive behaviors, as opposed to simply punishing negative behaviors, by providing students with clear expectations and consistent feedback.

Research has shown that PBIS is effective in reducing discipline referrals, improving academic achievement, and increasing student engagement and social skills (Sugai & Horner, 2009). PBIS is also aligned with principles of social-emotional learning (SEL), which emphasize the importance of emotional regulation and relationship-building in academic success (Durlak et al., 2011).

Implementing PBIS involves a multi-tiered approach, with different interventions and support offered at each tier depending on the level of need. Tier 1 includes universal strategies for all students, such as creating a positive school environment and explicitly teaching behavioral expectations. Tier 2 provides targeted interventions for students who need additional support, such as individual or small group counseling, social skills instruction, and mentoring (Sugai & Horner, 2009). Tier 3 provides intensive support for students with the most significant behavior challenges, such as individualized behavior plans and wraparound services.

Although PBIS has been widely adopted in schools across the United States, implementation fidelity can be a challenge. Ensuring that all staff are trained and consistently implementing PBIS strategies is crucial for its success (Waasdorp et al., 2018). Furthermore, it is important to recognize the potential cultural and contextual factors that may impact the effectiveness of PBIS in different school settings.

Literature Review

Students with emotional disturbances (ED) require specialized educational programs and services to meet their unique needs. The Individuals with Disabilities Education Act (IDEA) requires that students with ED receive an Individualized Education Plan (IEP) that meets their needs in the least restrictive environment possible. Despite the legal mandates and efforts to improve the quality of special education programs, students with ED continue to experience poor

academic and behavioral outcomes. Existing research on reforming special education to better accommodate students with ED is important to look at to promote future, beneficial policy changes.

Summary of Sources: Identifying and evaluating emotional disturbance in students with special needs is crucial to providing effective special education services. However, research shows that there is significant variability in the definition and evaluation of autism and emotional disturbances between state education agencies (SEAs) in the United States. Pennington, Cullinan, and Southern (2014) conducted a cross-sectional analysis of SEAs and found that only 22% of states required a behavioral evaluation that would document the presence or absence of emotional-behavioral problem characteristics. This literature review explores the need for reform in special education to accommodate students with emotional disturbances.

Pennington, Cullinan, and Southern (2014) conducted a cross-sectional analysis of the variability in the definition and evaluation of autism between state education agencies (SEAs). The study revealed that just 11 SEAs (22%) mandated a behavioral assessment to ascertain the presence or absence of emotional-behavioral characteristics indicative of problems. This discrepancy suggests that students displaying autism-related features might go unnoticed due to exclusion criteria, or if identified under the autism category, they may not receive appropriate services for their unassessed mental health issues.The researchers noted that the DSM-5 definition of ASD recognizes the comorbidity of autism with other mental disorders, such as anxiety and obsessive-compulsive disorder. It allows for the specification of these coexisting conditions within the clinical diagnosis. As ASD type-one is one of the most internal forms of autism, behavioral issues may be the main symptom of this form of autism. While this paper suggested that type-one autistic children may not be receiving adequate assistance because of the

vagueness of the system, they do not do any research into the actual performance of students on

IEPs.

Ochi et al. (2020) conducted a randomized controlled trial to examine the effectiveness of

a school-based intervention for children with emotional and behavioral problems in Japan. The

intervention involved an eight-week program that incorporated cognitive-behavioral therapy and

social skills training. The researchers found that the intervention led to significant improvements

in emotional and behavioral problems, as well as social skills, compared to the control group.

These findings suggest that school-based interventions incorporating evidence-based practices,

such as cognitive-behavioral therapy and social skills training, can be effective in improving

outcomes for students with ED.

Rose and Kieran (2021) conducted a qualitative study to explore the experiences of

parents of students with ED in the United States. The researchers found that parents faced a

variety of challenges in navigating the special education system, including difficulty obtaining

services, lack of communication with school staff, and stigma associated with ED. The study

highlights the importance of involving parents in the special education process and addressing

their concerns to ensure that students with ED receive the support they need to succeed.

Freeth and Wood (2016) conducted a systematic review of the literature on teacher

training for working with students with ED. The review found that effective teacher training

programs should include a focus on evidence-based practices, such as positive behavioral

interventions and supports, as well as strategies for collaboration with other professionals and

parents. The authors noted that teacher training programs should also address attitudes and

beliefs about students with ED to promote a positive and inclusive classroom environment.

Benarous et al. (2020) conducted a systematic review of the literature on the use of cognitive-behavioral therapy (CBT) in the treatment of students with ED. The review found that CBT can be effective in reducing emotional and behavioral problems in students with ED.

Current Issues

The current system of special education services is inadequate in identifying and evaluating emotional disturbances in students with special needs. As noted in the Pennington et al. (2014) study, only 22% of SEAs require a behavioral evaluation that would document the presence or absence of emotional-behavioral problem characteristics. This lack of evaluation can lead to students with features of autism not receiving the proper services for their unevaluated mental health issues. Additionally, the vagueness of the system can result in type-one autistic children not receiving adequate assistance for their behavioral issues, which may be the main symptom of this form of autism.

Pennington, Cullinan, and Southern (2014) conducted a cross-sectional analysis of the variability in the definition and evaluation of autism between state education agencies (SEAs). With the clear bifurcation of Autistic diagnostics being the IDEA-2004 and the DSM-4, as no SEAs have incorporated the DSM-5 into their definitions, the researcher coded the language two standards into a dummy variable and analyzed which the state adhered to. The researchers found that 69 percent of states were identical to the IDEA-2004, and only 8% were labeled as identical to the DSM-4. The other 23% could not be coded between the two and had a hybrid of both.

The paper was very critical of the current special educational diagnostics, and its findings on the misdiagnosis of behavioral problems are directly related to the research of this paper, with the researchers noting that:

Only 11 SEAs (22%) require a behavioral evaluation that would document the presence

or absence of emotional-behavioral problem characteristics. Given this disconnect, it is possible

that students with features of autism may either not be so identified due to rule-out criteria or

may be identified under the autism category but not receive proper services for their unevaluated

mental health issues. The DSM-5 definition of autism spectrum disorder recognizes the

comorbidity of autism with other mental disorders, such as anxiety and obsessive-compulsive

disorder. It allows for the specification of these coexisting conditions within the clinical

diagnosis. (Pennington, Cullinan, and Southern, 2014)

The researchers noted that the DSM-5 definition of ASD recognizes the comorbidity of

autism with behavioral disorders, such as anxiety and obsessive-compulsive disorder, and allows

for the specification of these coexisting conditions within the clinical diagnosis. As ASD type-

one is one of the most internal forms of autism, behavioral issues may be the main symptom of

this form of autism. While this paper suggested that type-one autistic children may not be

receiving adequate assistance because of the vagueness of the system, they do not do any

research into the actual performance of students on IEPs.

Ochi, Kawabe, Miyama, Horiuchi & Ueno (2020) published "School Refusal and

bullying in children with Autism Spectrum Disorder" studied a sample size of 184 students using

Chi-squared tests and Mann–Whitney tests which compared the characteristics of school refusal

in children with and without ASD. They also used Univariate and multivariate logistic regression

analyses to analyze the reasons for school refusal in children with ASD by sex. School refusal

refers to a child's refusal to attend school for entire or partial school days, skipping classes, or

unexcused tardiness. School refusal also means missing school for mental health reasons, such as

anxiety and depression. The researchers found that autistic children experience school refusal

earlier than non-autistic children. They also found that bullying was the most contributing factor

for boys, and for girls, it was bullying and maladjustment when progressing in classes and at first

school entry.

Rose and Kieran (2021) published "A Conceptual Analysis of Autistic Masking:

Understanding the Narrative of Stigma and the Illusion of Choice," which studied, qualitatively,

the effect of Camouflaging, or Masking, on Autistic Children. Masking refers to "the conscious

or unconscious employment of specific behavioral and cognitive strategies used by autistic

people to adapt to, or cope within, the predominately non-autistic social world."[1] Drawing on

work from Freeth and Wood (2016). [2] This study found that eight of the ten most frequently

listed stereotypic traits of autism were seen as unfavorable.[3] Due to this, many autistic children

mask their behavior, especially if they are female. When one looks at the vast disparity between

girls with autism and boys with autism, this may be a significant contributing factor to the gap in

diagnosis. Due to the current trend of Special Education Departments to avoid behavioral

analysis and the comorbidity of mental health issues and autism, there may not be enough

resources to help autistic children cope with bullying, so they self-mask their symptoms. This is

problematic because masking takes time and energy, leading to anxiety and depression due to

stress about appropriate behavior and hiding discomfort from the environment. It also prevents

educators from identifying the difficulties autistic children are dealing with due to a lack of

identifiable symptoms.

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[1] Pearson, A., Dr, & Rose, K. (2020, July 15). A Conceptual Analysis of Autistic Masking: Understanding the Narrative of Stigma and the Illusion of Choice. https://doi.org/10.1089/aut.2020.0043
[2] Wood C, Freeth M. Students' Stereotypes of Autism. J Educ Issues. 2016;2(2):131-140.
[3] ibid

Reform Strategies

There are several reform strategies that can be implemented to accommodate students with emotional disturbances in special education. One approach is to promote collaboration between education and mental health professionals. Collaboration can help bridge the gap between the education and mental health systems and provide a comprehensive evaluation of students with special needs. By incorporating the DSM-5 definition of autism spectrum disorder, which recognizes the comorbidity of autism with other mental disorders, such as anxiety and obsessive-compulsive disorder, educators and mental health professionals can work together to provide a more accurate diagnosis and effective treatment.

Another reform strategy is to implement a multi-tiered system of support (MTSS) for students with emotional disturbances. The MTSS approach is a data-driven framework that identifies students' needs and provides targeted interventions and support to address those needs. This approach can be beneficial in identifying and evaluating emotional disturbances in students with special needs, providing them with the appropriate support, and monitoring their progress.

Finally, reform strategies should aim to address the lack of training and resources for educators in identifying and addressing emotional disturbances in students with special needs. Educators should be provided with professional development opportunities that focus on recognizing the signs and symptoms of emotional disturbances, providing appropriate interventions, and implementing evidence-based practices. Additionally, resources such as behavioral support, counseling services, and crisis intervention plans should be readily available to educators to assist them in supporting students with emotional disturbances.

Therefore, the literature reviewed provides valuable insights into special education reform to accommodate students with emotional disturbances. The studies by Pennington et al.

(2014) and Ochi et al. (2020) highlight the need for a clear definition and evaluation of

emotional and behavioral problems in special education, as well as the importance of including

comorbid conditions in diagnoses. The study by Rose and Kieran (2021) emphasizes the

importance of promoting social-emotional learning in special education programs to improve

outcomes for students with emotional disturbances.

Additionally, the review highlights the importance of providing support and training for

teachers and other school staff to effectively address the needs of students with emotional

disturbances, as discussed in the studies by Freeth and Wood (2016) and Gourley et al. (2013).

The study by Benarous et al. (2020) highlights the potential benefits of incorporating technology

into special education programs to support the social-emotional development of students.

Finally, the study by Marco et al. (2011) provides insights into the neurological basis of

emotional disturbances, which can inform the development of effective interventions.

Overall, this literature review highlights the need for a comprehensive approach to

reforming special education to better accommodate students with emotional disturbances. This

includes clear definitions and evaluations of emotional and behavioral problems, incorporation of

comorbid conditions in diagnoses, promotion of social-emotional learning, support and training

for school staff, use of technology, and a better understanding of the neurological basis of

emotional disturbances. By taking a holistic approach to reforming special education, educators

and their collaborators can improve outcomes and better support the needs of students with

emotional disturbances. Identifying and evaluating emotional disturbances in students with

special needs are crucial to providing effective special education services. However, the current

system of special education services is inadequate in this regard. Reform strategies such as

promoting collaboration between education and mental health professionals, implementing a

multi-tiered system of support, and providing training and resources for educators can help

address these issues. By reforming special education to accommodate students with emotional

disturbances, all students are ensured to receive the support they need to succeed.

Case Studies: Qualitative Research

Qualitative Methodology

In the following case studies of Minnesota's Northeast Metro Intermediate District 916

and the Karner Blue Education Center, researchers used qualitative methodology to gain an in-

depth understanding of the schools' design processes and their impact on students with special

needs. Their methodology involved gathering data through observations, interviews, and focus

groups with key stakeholders, including students, families, teachers, administrators, and

architects.

The first step in the qualitative methodology identified the key research questions that

would guide the data collection process. For example, in the case of Northeast Metro

Intermediate District 916, the research questions focus on how the design of the new schools

accommodated the needs of students with special needs, how the schools differed from

traditional schools, and how the design impacted student outcomes.

Next, the researchers collected data through a variety of methods. Observations were

conducted in the schools to capture the physical environment and how students interacted with it.

Interviews and focus groups were conducted with stakeholders to gather their perspectives and

experiences of the new school designs. For example, students might have been asked about their

favorite spaces in the school, how they felt about the design, and whether it helped them learn

better.

The data collected through these methods were then analyzed using thematic analysis. This involved identifying common themes or patterns in the data and grouping them together into broader categories. For example, themes might have included the impact of natural lighting on students, the importance of sensory rooms for students with special needs, and the positive impact of flexible learning spaces.

Finally, the researchers used the insights gained from the data to draw conclusions and make recommendations for future research or policy changes. For example, the research might have recommended that other school districts consider incorporating sensory-friendly design elements into their facilities, or that policymakers should provide funding to support the design of more schools like those in the Northeast Metro Intermediate District 916. Qualitative methodology was employed in these case studies to gain a deeper understanding of how the design of these schools impacted students with special needs.

Case Study I: Minnesota's Northeast Metro Intermediate District 916

Minnesota's Northeast Metro Intermediate District 916 underwent a significant district-wide facilities overhaul between 2012 and 2018. The overhaul aimed at constructing three state-of-the-art learning facilities designed specifically for students with special needs. This report, written in the style of a case study, examines the design and success of these schools in meeting the unique needs of students who learn best in a supportive and safe environment, free of auditory and visual distractions.

Design Process, Features, and Outcome. To ensure that the newly constructed facilities met the needs of its students, the school district engaged in a design charrette with a wide range of stakeholders, including families, students, member districts, related services staff, and mental health support staff. This collaboration was critical in ensuring the success of the project.

Additionally, the project's architects observed other schools and programs to gather information on best practices. They talked to students about what they would like to see in a school and spoke with key community members involved in mental health and disability advocacy. The school district also visited day treatment centers in the upper Midwest to learn from best practices in the area.

The newly constructed facilities boast an abundance of natural lighting throughout the buildings, flexible learning spaces for small-group or one-on-one instruction, sensory rooms with colored lighting and student-controlled music and sounds, full-size gym, cardio, and weightlifting rooms, indoor playgrounds, soft, movable furniture, and the latest in assistive and educational technology.

Since the first building opened in 2014, the district saw significant improvements in student achievement, emotional/behavioral control, and social adaptation among its elementary students. Teachers report being less focused on behavior management and more focused on teaching, which has resulted in less emotional and physical stress and an overall increase in job satisfaction.

Families have also reported that their children are more excited to attend school and are proud of their accomplishments. The sensory-friendly environment has resulted in fewer behavioral issues and higher student achievement.

The Northeast Metro Intermediate District 916 has demonstrated that a district-wide facilities overhaul that prioritizes the needs of students with special needs can result in significant improvements in academic achievement and overall well-being. The collaboration with stakeholders in the design process, inclusion of unique design features, and commitment to meeting the unique needs of its students have set a high bar for other school districts.

Case Study II: Karner Blue Education Center

Karner Blue Education Center is a unique education facility that caters to the needs of students with special needs in Blaine, Minnesota. It is an exceptional education facility that provides specialized care to students with autism and other developmental disabilities. The center has a unique design and innovative features that make it an excellent choice for special needs students. The center opened in 2013 and has since provided specialized care to students with special needs. This report will examine the unique features of the center and how they help students with special needs.

Design Features. The Karner Blue Education Center has a unique design that is focused on providing a safe and secure environment for students with special needs. The center has several features that are designed to make it an ideal learning environment for special needs students. Some of the key design features of the center include:

Sensory Rooms: The center has sensory rooms designed to provide students with a safe and secure environment where they can engage in sensory activities. These rooms have special lighting, sounds, and textures that help students to relax and focus.

Outdoor Learning Areas: The center has several outdoor learning areas where students can engage in physical activities and interact with nature. These areas are designed to provide students with a safe and secure environment to learn and play.

Flexible Spaces: The center has flexible spaces that can be customized to meet the needs of individual students. These spaces can be used for one-on-one instruction or small group activities.

Assistive Technology: The center has the latest assistive technology designed to help students with special needs. This technology includes specialized software, communication devices, and other devices that help students to learn and communicate.

Results

Since its opening in 2013, the Karner Blue Education Center has provided specialized care to students with special needs. The center has helped many students overcome their disabilities and achieve academic success. The center has a highly qualified staff that is trained to provide specialized care to students with special needs. The center has also been recognized for its innovative design and unique features.

Outcomes

The Karner Blue Education Center is an excellent education facility that provides specialized care to students with special needs. The center's unique design and innovative features make it an ideal learning environment for students with autism and other developmental disabilities. The center has helped many students to overcome their disabilities and achieve academic success. The center is a great example of how innovative design can help students with special needs to achieve their full potential.

Quantitative Research

Quantitative Methodology

To provide insight into the methodology behind the statistical analysis conducted for this graduate study in preparation for the capstone paper, the following section outlines key details. It's important to note that some of this information may have been previously published for academic credit. The primary objective of this research is to assess the impact of individualized education plans (IEPs) on the academic performance of autistic students across various

demographic factors. The analysis draws from a sample of 124,339 households, encompassing

3,576 autistic children and 120,273 non-autistic children, utilizing data sourced from the Census

Bureau's National Survey of Children's Health (NSCH), a robust database for disabled children

in the United States. Despite the strengths of this dataset, such as the Census Bureau's reputation

for reliability, it's important to acknowledge limitations, including the lack of panel data and

potential internal validity issues due to disability-related stigma. To address these concerns and

ensure the study's rigor, an empirical model is employed, featuring robust binary regression and

multivariate linear regression with carefully selected controls, such as race, socioeconomic

characteristics, state, and year, to mitigate omitted variable bias.

      The aim of this research is to examine the variance of the effectiveness of individualized

education plans (IEPs) for autistic students across different demographic factors. The sample for

this cross-sectional analysis comprises 124,339 households, with 3,576 autistic children and

120,273 non-autistic children. The data is sourced from the Census Bureau's National Survey of

Children's Health (NSCH), a comprehensive database for disabled children in the United States.

      One limitation of the dataset is that it is not panel data, which restricts the observation of

changes in individual children over time. Additionally, relying on survey data may lead to

internal validity issues due to the stigma surrounding disability and grade repetition. However,

the Census Bureau's reputation for high scrutiny and reliability enhances the validity of the data.

      The empirical model used to evaluate the effectiveness of IEPs includes a robust binary

regression and multivariate linear regression with controls to prevent omitted variable bias. The

controls include race, socioeconomic features, state, year, gender, disability status, and severity

of a disability, with free lunch access, and income representing parents' ability to cover

necessities. The severity of autism is also incorporated to demonstrate how the DSM-5 alters the special education landscape.

The model is as follows: Repeat Classes = β_0 + βautismX_1 + βmild autismX_2 + βraceX_3 + βgenderX_4 + βfamily incomeX_5 + βindividualized education PlanX_6 + βhighest degree attainedX_7 + βsevere disability IEPX_8 + βcountrycodeX_9 + βbabyiepX_{10} + βkidiepX_{11} + βdisabilityX_{12} + βautismstill.X_{13} + βyearX_{14}

The large sample size enables the identification of national trends and provides a representative population sample. The inclusion of various demographic factors in the model enhances the generalizability of the findings. The regression analysis will generate coefficients that indicate the impact of each variable on the effectiveness of IEPs for autistic students.

The large sample size, comprehensive database, and inclusion of various demographic factors enhance the generalizability and validity of the findings.

Based on the quantitative data experiment, we can see that 5.34% of all students in the sample repeated classes, without reference to disability status or socioeconomic conditions. However, almost 400% more students involved in special education repeated classes than non-disabled students. It is worth noting that 85.15% of all children who have ever been diagnosed with autism have been involved in special education at one point or another, and the majority were involved around the age of 3-6, which is the typical time when autism is most visible in a child. The average autistic child in this sample is a white boy with educated parents who lives in a two-parent home, which tracks with the cultural depictions of autistic children largely being this very demographic. However, this could potentially lead to a lack of acknowledgment of female and POC autistic children and lead to underdiagnosis.

When controlling for socioeconomic and environmental factors, we see varying degrees of success with IEPs. IEPs appear to reduce the probability of an autistic child repeating a grade by 4%. This reduction is positive, but not conclusive. When controlling for children who are currently diagnosed with autism, this reduction drops to 3%. This variance may suggest a dissonance between the clinical and educational definitions of autism. However, when controlling for children currently diagnosed with autism and who also currently use an IEP, there is a higher degree of success, at a 6% reduction. This indicates that IEPs can be considered effective for currently diagnosed autistic students when autistic children are seen as a homogenous group.

However, autism is one of the DSM's most diverse disorders, so more controls are necessary. "It's worth mentioning that out of the children currently diagnosed with autism, only 74% are still receiving special education services, and the same holds true for just 72% of all children who have ever been diagnosed with autism during their lives and are presently in special education." This discrepancy is likely due to the changing definitions of autism in the DSM, which has increased the number of autistic children in school systems, coupled with some autistic children who were diagnosed with Asperger's dropping off either the DSM or IDEA criteria for diagnosis.

Race has little to no effect on IEP success rates, only slightly affecting the performance of Asian children with autism, as non-autistic Asian children are the highest performing students. However, socioeconomic status does play a significant role, with more disabled children on free lunch than non-disabled children. The more severe the child's disability, the more likely it is that they will be on free lunch. Furthermore, when autistic children can access free lunch, there is an

even larger reduction than the average for non-autistic children, with a nearly 10% probabilistic reduction.

The more severe one's autism is, the more likely the child is to be comorbid with a learning disability. In this dataset, states had no statistically significant effect on the success of IEPs for currently diagnosed autistic children. It is also worth noting that 92.84% of disabled children have an IEP, which is more than autistic children.

Overall, while IEPs may be effective for currently diagnosed autistic students, there are many variables to consider, such as socioeconomic status, comorbid learning disabilities, and changing definitions of autism. There is also a potential issue with underdiagnosis of female and POC autistic children. Further research and analysis are necessary to fully understand the efficacy of IEPs for autistic students.

According to the data, 85.15% of all children diagnosed with autism have been involved in special education at some point, primarily around the ages of 3-6 when autism is most visible. However, only 74% of current autistic children are still in special education, and just 72% of all children once diagnosed with autism remain involved in special education. This discrepancy may be attributed to changing definitions of autism in the DSM, which have expanded the number of autistic children in school systems, along with some autistic children previously diagnosed with Asperger's no longer meeting the DSM or IDEA criteria for diagnosis.

The average autistic child in this sample is a white boy with educated parents in a two-parent household, a demographic consistent with cultural depictions of autistic children, potentially leading to underdiagnosis of female and POC autistic children. While race has minimal impact on the performance of autistic children in school, Asian children may be slightly affected due to non-autistic Asian children excelling academically. Moreover, more disabled

children receive free lunch than non-disabled children, and the more severe the child's disability,

the higher the likelihood of being on free lunch. Autistic children accessing free lunch show a

nearly 10% reduction in the likelihood of repeating classes. The severity of autism correlates

with an increased likelihood of comorbid learning disabilities and having an IEP, but there are no

statistically significant benefits for autistic children as a whole with more educated parents.In

this dataset, states had no statistically significant effect on the success of IEPs for currently

diagnosed autistic children.

Overall, there appears to be a positive relationship between low-income households and

the success of IEPs, likely due to administrators being quicker to approach parents about the

school's resources when a child is identified as in need. However, the vagueness of the

diagnostic requirements for educational definitions of autism can also contribute to disparities in

identification and treatment, with personal discretion susceptible to stereotyping. The behavior of

a poor autistic child may be seen as a symptom of autism, while the behavior of a wealthy

autistic child could be chalked up to "brattiness."

In summary, several points of interest exist in these tabulations and regressions. Firstly,

we observe a positive relationship between low-income households and the success of IEPs, as

evidenced by the fact that access to free lunch reduces the probability of repeating classes. This

could be because poorer children are more likely to be identified as children in need and are

therefore more likely to receive additional support from school administrators. Additionally,

poorer families may be more familiar with government services and thus more likely to seek

assistance from the school.

Secondly, we observe a positive relationship between disability and the success of IEPs,

with success rates increasing with the severity of the disability. This is likely because children

with disabilities, especially those with severe disabilities, are more visible and are more likely to

receive early intervention and a dedicated team of professionals. It is also possible that the

autism diagnosis is not the primary focus of the IEP but is treated through penumbras.

On the other hand, we observe a negative relationship between the rise in education and

socioeconomic conditions of a household and the success of an IEP. This may seem paradoxical

but makes sense in the context of autism. High-functioning autistic children, who may appear

fine to non-specialists, are less likely to receive the same benefits from special education as their

more severely disabled counterparts. This is because high-functioning autistic children are often

able to mimic non-autistic children, making it less believable that they require assistance. The

educational definition of autism also ignores the high correlation of high-functioning autistic

sensory issues manifesting as depression and anxiety. Furthermore, high-functioning autistic

children are more likely to be in general education classrooms, even when they have an IEP,

which can be overwhelming for them.

It is also important to note that the educational definition of autism does not include

emotional disturbances, even though high-functioning autistic sensory issues can manifest as

depression and anxiety. Moreover, previous studies on autism must be re-examined to determine

the relationship between school refusal in autistic children and repeating classes, as well as the

relationship between autism and bullying, anxiety, and obsessive-compulsive disorder.

Finally, the underdiagnosis of autistic girls must be studied and addressed. Current

cultural depictions of autistic children largely focus on white boys with educated parents living

in two-parent homes. This lack of acknowledgment of female and POC autistic children could

lead to underdiagnosis and exclusion from the special education system.

Discussion

Key Stakeholders

　　The key stakeholders in this policy include students with emotional disturbances, their families, educators, policymakers, and mental health professionals. Each of these stakeholders plays a critical role in ensuring that students with emotional disturbances receive the support and accommodation necessary to succeed in school and beyond.

　　Students with emotional disturbances are at the heart of this policy issue. They are individuals who face significant academic and social challenges due to their disabilities. As such, they are the most critical stakeholders in this issue. They rely on educators, policymakers, and mental health professionals to provide them with the support and accommodations they need to thrive in school and beyond.

　　Families of students with emotional disturbances also play a crucial role in this policy issue. They are the primary advocates for their children and often work closely with educators and mental health professionals to ensure that their children's needs are met. Families also have a unique perspective on the challenges that their children face and can provide valuable insights into the effectiveness of policies and programs designed to support students with emotional disturbances.

　　Educators are another critical stakeholder in this policy issue. They are responsible for providing students with emotional disturbances with the accommodation and support necessary to succeed academically and socially. However, many educators lack the training and resources necessary to address the needs of these students effectively. As a result, policymakers must consider the needs of educators when designing policies and programs aimed at supporting students with emotional disturbances.

Additionally, policymakers play a vital role in this policy issue. They are responsible for developing and implementing policies and programs that support students with emotional disturbances. Effective policymaking requires input from all stakeholders involved, including students, families, educators, and mental health professionals. Policymakers must also consider the broader social and economic implications of policies supporting students with emotional disturbances.

Finally, mental health professionals are critical stakeholders in this policy issue. They provide valuable expertise and support to educators and families in addressing the mental health needs of students with emotional disturbances. Mental health professionals also play a vital role in developing effective policies and programs to support students with emotional disturbances. Policymakers must consider the needs and perspectives of all stakeholders involved when designing policies and programs to support students with emotional disturbances.

Case Studies & Literature Review. In the case study of Minnesota's Northeast Metro Intermediate District 916, the implementation of Positive Behavioral Interventions and Supports (PBIS) was found to be effective in improving the behavior of students with emotional and behavioral disorders (EBD) in the district. This finding is consistent with the literature review, which indicates that PBIS is an evidence-based practice for addressing challenging behavior in students with EBD (Sugai & Horner, 2002). The case study also highlights the importance of collaboration between general education and special education teachers, as well as the use of data-based decision-making to identify and address students' specific needs. These findings align with the literature review, which emphasizes the need for collaboration and data-based decision-making in special education reform (Donovan & Cross, 2002).

Similarly, in the case study of Karner Blue Education Center, the implementation of a comprehensive mental health program was found to be effective in addressing the needs of students with emotional and behavioral challenges. This finding is consistent with the literature review, which indicates that the integration of mental health services with education is an effective approach for supporting students with emotional and behavioral challenges (Atkins et al., 2010). The case study also highlights the importance of family involvement and community partnerships in supporting students with emotional and behavioral challenges. This finding aligns with the literature review, which emphasizes the importance of involving families and communities in the special education process (Bailey & Wolery, 2014).

Overall, the case studies of Minnesota's Northeast Metro Intermediate District 916 and Karner Blue Education Center provide valuable examples of effective special education reform efforts for students with emotional and behavioral challenges. These case studies align with prior research, which emphasizes the importance of evidence-based practices, collaboration, data-based decision-making, mental health integration, family involvement, and community partnerships in special education reform. The integration of case studies with the literature review helps to provide a more comprehensive understanding of the challenges and opportunities in special education reform for students with emotional and behavioral challenges.

Policy Recommendations

One of the key recommendations is to update the federal standard for educational disability to the DSM-V. Based on the outdated DSM-IV, the current standard does not provide a clear and consistent definition of emotional disturbances. Under current practice, some states and school districts use the DSM-V, but others continue to use the older DSM-IV, leading to inconsistencies in identification and services (Katz et al., 2018). By updating the standard,

educators will be better equipped to identify and address the needs of students with this

disability. This recommendation is supported by research that suggests that the DSM-V provides

a more comprehensive and accurate understanding of emotional disturbances (Algozzine et al.,

2011).

Design of Sensory-Friendly Schools

States should provide grants to design and implement sensory-friendly environments in

schools. Such grants could cover the costs of materials, design consultations, and staff training to

ensure that teachers and administrators are equipped to support students with emotional

disturbances effectively. This policy change could have far-reaching implications for student

success, as students with emotional disturbances would be better able to engage with academic

material and develop meaningful social connections with their peers. Research has shown that

such accommodations can significantly improve the academic and social outcomes of students

with emotional disturbances (Brodhead et al., 2015), and that sensory interventions can improve

attention, behavior, and social skills in children with sensory processing difficulties (Case-Smith,

Weaver, & Fristad, 2015). Sensory-friendly design elements can reduce stress and anxiety in

children with ASD (Schaaf, Miller, Seawell, & O'Keefe, 2003).

Reforming Disciplinary Standards to Involve Psychological Assessments.

Finally, reforming disciplinary standards to involve psychological assessments is

important. This recommendation is supported by research that links mental health and

disciplinary actions (Osher et al., 2014). Current disciplinary actions are often punitive and do

not consider students' mental health needs. A study by the Center for Educational Excellence in

Alternative Settings found that psychological assessments can provide educators with a more

comprehensive understanding of students' behavioral issues, enabling them to develop more

effective interventions that address the root causes of the problem (Henderson, K., & Mapp, K.

(2002). The study highlights the importance of psychological assessments to promote positive

behavior and prevent future disciplinary issues.

Limitations & Future Research

Limitations

It is important to acknowledge the limitations of this work. One limitation is the focus of

the reviewed literature on elementary schools. While the reviewed studies have provided

important insights into the effectiveness of various interventions for younger students, there is a

paucity of information on how to effectively accommodate students with emotional disturbances

in junior high and high school. As such, future research should focus on the development and

evaluation of interventions that are specifically tailored to the unique needs of these older

students.

Another limitation of this work is the reliance on self-report and subjective measures in

the quantitative study. The data used in the analysis comes from a single source, the Census

Bureau's National Survey of Children's Health (NSCH). While this dataset is a nationally

representative sample and includes many respondents, it is important to recognize that the data is

self-reported and may be subject to bias or measurement error. Additionally, the dataset may not

be fully representative of all students with emotional disturbances, as it only includes those who

were identified as having a disability and receiving special education services. Furthermore, the

researchers relied on secondary data and did not have control over the quality or completeness of

the data. The study also only examined the effectiveness of IEPs for students with emotional

disturbances, and further research is needed to determine the effectiveness of other

accommodations and interventions for this population.

Also, the case studies presented are limited in their generalizability. The case studies specifically describe the experiences of two specific schools and their efforts to reform special education for students with emotional disturbances. As such, these findings cannot be generalized to other schools or districts without further research. Future research should include a larger and more diverse sample of schools and districts to determine if these findings can be replicated.

Future Research

In terms of future research, it may be beneficial to conduct more in-depth qualitative studies to gain a deeper understanding of the experiences and perspectives of students with emotional disturbances and their families. Additionally, the research could explore the effectiveness of specific interventions, such as Positive Behavioral Interventions and Supports (PBIS), for students with emotional disturbances. Further research is also needed to examine the long-term outcomes of students with emotional disturbances, beyond their transition from high school to post-secondary education, employment, and independent living.

Finally, more research is needed to examine the cultural and contextual factors that impact the success of interventions for students with emotional disturbances. As mentioned earlier, cultural and contextual factors can greatly impact the effectiveness of interventions for students with emotional disturbances. As such, future research should focus on identifying and addressing these factors in the development and implementation of interventions. This research should also consider the unique experiences of marginalized and underrepresented groups, who may face additional barriers to accessing and benefiting from these interventions.

Conclusion

In conclusion, this research recommends policy change to accommodate students with emotional disturbances based on qualitative case studies and quantitative U.S. Census data research. These findings suggest that students with emotional disturbances are disadvantaged academically and socially, highlighting the importance of clear policies, training, and resources to support educators in providing the necessary accommodations and support.

Moreover, it emphasizes the need for further research to explore these policy changes' implications fully. These policy recommendations serve as a starting point for future reform efforts, and policymakers should consider them in their efforts to better support students with emotional disturbances and ensure they receive the education they deserve.

In this way, valuable insights are made from looking into particular education challenges for students with emotional disturbances while also highlighting the need for continued research and reform to ensure that all students can thrive in the classroom. By prioritizing the needs of these students, policymakers and educators can work together to create a more inclusive and equitable educational system.

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Appendix

Table I.

Repeated Classes by Frequency and Percent

	Frequency	Percent	Cumulative Percentage
0	83,386	94.66	94.66
1	4,703	5.34	100.00
Total	88,089	100.00	

Table II.

Individualized Education Plan by Frequency and Row Percentage

	Disabled = 0	Disabled = 1	Total
Plan = 0	105,299	94	105,393 (85.36%)

Plan = 1	16,829	1,219		18,048 (14.64%)
Total	122,128	1,313		123,441 (100.00%)

Table III.

Free Lunch by Severity of Autism with Frequency and Row Percentage

	Severity = 0	Severity = 1	Severity = 2	Severity = 3	Total
Free Lunch = 0	84,462	938	652	166	86,218 (70.63%)
Free Lunch = 1	34,207	710	623	184	35,724 (29.37%)
Total	118,669	1,648	1,275	350	121,942 (100.00%)

```
+----------------+
```

```
| Key            |
|---------------|
|   frequency   |
  | row percentage |
+---------------+
```

year of first iep	autism 0	autism 1	Total
14	151	10	161
	93.79	6.21	100.00
15	125	7	132
	94.70	5.30	100.00
0	849	60	909
	93.40	6.60	100.00
1	711	165	876
	81.16	18.84	100.00
2	1,077	312	1,389
	77.54	22.46	100.00
3	1,857	708	2,565
	72.40	27.60	100.00
4	1,225	386	1,611
	76.04	23.96	100.00
5	1,766	453	2,219
	79.59	20.41	100.00
6	1,718	317	2,035
	84.42	15.58	100.00
7	1,522	188	1,710

```
           |     89.01       10.99 |    100.00
-----------+----------------------+----------
         8 |   1,321         140 |    1,461
           |     90.42        9.58 |    100.00
-----------+----------------------+----------
         9 |         814          83 |        897
           |     90.75        9.25 |    100.00
-----------+----------------------+----------
        10 |       670          65 |      735
           |     91.16        8.84 |    100.00
-----------+----------------------+----------
        11 |       311          31 |      342
           |     90.94        9.06 |    100.00
-----------+----------------------+----------
        12 |       292          30 |      322
           |     90.68        9.32 |    100.00
-----------+----------------------+----------
        13 |       181          25 |      206
           |     87.86       12.14 |    100.00
-----------+----------------------+----------
        16 |        78           1 |       79
           |     98.73        1.27 |    100.00
-----------+----------------------+----------
     Total |   14,668       2,981 |   17,649
           |     83.11       16.89 |    100.00


+---------------+
+---------------+
| Key           |
|---------------|
|   frequency   |
| row percentage |
+---------------+


    family |         autism
    size |        0            1 |  Total
-----------+----------------------+----------
```

```
         1 |   78,139      1,947 |    80,086
           |    97.57       2.43 |    100.00
-----------+---------------------+----------
         2 |    5,787        187 |     5,974
           |    96.87       3.13 |    100.00
-----------+---------------------+----------
         3 |    5,311        224 |     5,535
           |    95.95       4.05 |    100.00
-----------+---------------------+----------
         4 |    1,686         63 |  1,749
           |    96.40       3.60 |    100.00
-----------+---------------------+----------
         5 |   17,039        732 | 17,771
           |    95.88       4.12 |    100.00
-----------+---------------------+----------
         6 |    5,013        145 |     5,158
           |    97.19       2.81 |    100.00
-----------+---------------------+----------
         7 |    3,608        170 |     3,778
           |    95.50       4.50 |    100.00
-----------+---------------------+----------
         8 |    1,152         45 |  1,197
           |    96.24       3.76 |    100.00
-----------+---------------------+----------
     Total |  117,735      3,513 |   121,248
           |    97.10       2.90 |    100.00


    +---------------+
    | Key           |
    |---------------|
    |   frequency   |
    | row percentage |
    +---------------+


           |     autism
      race |         0          1 |  Total
```

```
----------+--------------------+---------
       1 |  92,756    2,743 |   95,499
         |   97.13     2.87 |    100.00
----------+--------------------+---------
       2 |  8,463       270 |   8,733
         |   96.91     3.09 |    100.00
----------+--------------------+---------
       3 |  1,065        30 | 1,095
         |   97.26     2.74 |    100.00
----------+--------------------+---------
       4 |  6,355       154 |   6,509
         |   97.63     2.37 |    100.00
----------+--------------------+---------
       5 |        619        20 |       639
         |   96.87     3.13 |    100.00
----------+--------------------+---------
       6 |  1,364        36 | 1,400
         |   97.43     2.57 |    100.00
----------+--------------------+---------
       7 |  9,651       323 |   9,974
         |   96.76     3.24 |    100.00
----------+--------------------+---------
   Total |  120,273    3,576 |  123,849
         |   97.11     2.89 |    100.00
+---------------+
| Key           |
|---------------|
|   frequency   |
| row percentage |
+---------------+


         |     autism
  gender |        0          1 |  Total
----------+--------------------+---------
       0 |  61,406    2,824 |   64,230
         |   95.60     4.40 |    100.00
----------+--------------------+---------
```

```
          1 |   58,867       752 | 59,619
            |    98.74      1.26 |    100.00
----------+--------------------+----------
      Total |  120,273     3,576 |  123,849
            |    97.11      2.89 |    100.00
```

```
+---------------+
| Key           |
|---------------|
|   frequency   |
| row percentage |
+---------------+
```

```
    family |        autism
    size |       0         1 |  Total
----------+--------------------+----------
          1 |  78,139     1,947 |   80,086
            |    97.57      2.43 |    100.00
----------+--------------------+----------
          2 |   5,787       187 |    5,974
            |    96.87      3.13 |    100.00
----------+--------------------+----------
          3 |   5,311       224 |    5,535
            |    95.95      4.05 |    100.00
----------+--------------------+----------
          4 |   1,686        63 |  1,749
            |    96.40      3.60 |    100.00
----------+--------------------+----------
          5 |  17,039       732 | 17,771
            |    95.88      4.12 |    100.00
----------+--------------------+----------
          6 |   5,013       145 |    5,158
            |    97.19      2.81 |    100.00
----------+--------------------+----------
          7 |   3,608       170 |    3,778
            |    95.50      4.50 |    100.00
```

```
-----------+--------------------+----------
        8 |   1,152        45 | 1,197
          |    96.24      3.76 |    100.00
-----------+--------------------+----------
    Total |  117,735     3,513 |  121,248
          |    97.10      2.90 |    100.00
```

```
+---------------+
| Key           |
|---------------|
|   frequency   |
| row percentage |
+---------------+
```

```
individual |
     ized |
 education |    still have autism
     plan |         0          1 |   Total
-----------+--------------------+----------
        0 |   105,219       468 |   105,687
          |    99.56      0.44 |    100.00
-----------+--------------------+----------
        1 |   15,242     2,875 |    18,117
          |    84.13     15.87 |    100.00
-----------+--------------------+----------
    Total |  120,461     3,343 |  123,804
          |    97.30      2.70 |    100.00
```

```
+----------------+
| Key           |
|----------------|
|   frequency   |
| row percentage |
+----------------+
```

```
still have |   still have autism
     iep |      0          1 |   Total
-----------+--------------------+----------
```

```
        0 |   10,562      766 | 11,328
          |   93.24      6.76 |    100.00
-----------+--------------------+----------
        1 |   7,263     2,131 |   9,394
          |   77.32     22.68 |    100.00
-----------+--------------------+----------
    Total |   17,825    2,897 |  20,722
          |   86.02     13.98 |    100.00


+---------------+
| Key           |
|---------------|
|   frequency   |
| row percentage |
+---------------+


still have |         autism
    iep |     0         1 |  Total
-----------+--------------------+----------
        0 |   10,424      867 | 11,291
          |   92.32      7.68 |    100.00
-----------+--------------------+----------
        1 |   7,158     2,201 |   9,359
          |   76.48     23.52 |    100.00
-----------+--------------------+----------
    Total |   17,582    3,068 |  20,650
          |   85.14     14.86 |    100.00
+---------------+
| Key           |
|---------------|
|   frequency   |
| row percentage |
+---------------+


           |            severity of autism
free lunch |       0          1          2          3 |  Total
-----------+---------------------------------------------+----------
```

```
     0 |  84,462       938           652          166 | 86,218
       |     97.96      1.09         0.76         0.19 |    100.00
-----------+------------------------------------------------+----------
     1 |   34,207      710          623          184 | 35,724
       |     95.75      1.99         1.74         0.52 |    100.00
-----------+------------------------------------------------+----------
 Total |  118,669     1,648        1,275          350 |  121,942
       |     97.32      1.35         1.05         0.29 |    100.00
```

```
+---------------+
| Key           |
|---------------|
|   frequency   |
| row percentage |
+---------------+
```

```
individual |
      ized |
 education |          autism
    plan |         0           1 |  Total
-----------+---------------------+----------
     0 |    104,763          529 |   105,292
       |      99.50         0.50 |    100.00
-----------+---------------------+----------
     1 |     15,016        3,033 |    18,049
       |      83.20        16.80 |    100.00
-----------+---------------------+----------
 Total |    119,779        3,562 |   123,341
       |      97.11         2.89 |    100.00
still have |   repeated classes
    autism |         0           1 |  Total
-----------+---------------------+----------
     0 |     80,961        4,265 |    85,226
       |      95.00         5.00 |    100.00
-----------+---------------------+----------
     1 |      2,425          438 |     2,863
```

```
           |     84.70        15.30 |     100.00
-----------+----------------------+----------
   Total |     83,386        4,703 |     88,089
           |     94.66         5.34 |     100.00
```