

Educational Placement of Students with Autism:  
The Impact of State of Residence

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### Abstract

Typically, child characteristics such as IQ and severity of autism symptoms are thought to determine educational placement. The present study examines external factors, including state of residence and state funding formulas, to determine their potential influence on placement outcomes. Findings reveal that considerable variations exist among states in placing students with ASD in inclusive, mainstreaming, self-contained, and separate schools, suggesting that external to the child factors play a major role in educational placement decisions. Further, states in the Eastern US tend to have more restrictive placement rates than states in the Western US. State special education funding was found to have a minimal impact on placement outcomes.

## Introduction

Students with disabilities in the U.S. won the right to receive an appropriate education in the least restrictive environment in 1975, with passage of the *Education of All Handicapped Children Act* (P.L. 94-142), now known as the *Individuals with Disabilities Education Improvement Act* (IDEA, 2004). Prior to 1975, millions of children with disabilities were simply excluded from school; in fact, in some states, compulsory attendance laws did not apply to children with disabilities, with some states going so far as to prohibit children with disabilities from enrolling in public schools (Wright & Darr Wright, 2006). With P.L. 94-142, states were held accountable for providing an appropriate education in the least restrictive environment to all students for the first time. For purposes of this study, a setting is deemed less restrictive when students spend more time in general education settings with peers who do not have disabilities. As students enter placements with less access to typical peers, the general education curriculum and activities, the setting is considered more restrictive.

Today, the landscape of special education continues to shift, with a growing number of children with autism spectrum disorders (ASDs) being identified (Baio, 2012) and receiving special education services in U.S. schools (Data Accountability Center, 2008). As more students receive an autism diagnosis and enter school, educators and parents must determine the appropriate manner and placement for their education (IDEA, 2004).

Yet the issue of educational placement today is as fraught with tension as it ever has been. Placement decisions continue to be complicated by conflicting information and assumptions about special education that rest on the historical foundations of this

profession, including assumptions that special classes are more specialized and more individualized, while protecting the children enrolled in them from “demoralizing comparisons with more competent peers” (Heller, Holtzman, & Messick, p. 29, 1982). Research has, however, failed to support these historical assumptions. For example, Causton-Theoharis and colleagues (2011) found that self-contained special education classrooms failed to provide many of the elements of special education that many claim are important for students with disabilities and warrant their removal from general education, including specialized instruction, behavioral supports, and distraction-free environments. In fact research tends to support that students with ASDs experience greater success in less restrictive general education settings. For example, adolescents with ASDs in inclusive settings were more engaged in curricular activities than adolescents in self-contained settings (Kurth & Mastergeorge, 2012). Further, students with ASDs who were included in general education have higher levels of social engagement and social interaction than students in self-contained programs (Lyons, Cappadocia, & Weiss, 2011), although many students continue to struggle socially even in inclusive settings (Jones & Frederickson, 2010). While growth in social behavior has been associated with inclusive education, the development of positive behavioral skills, including a reduction in repetitive or stereotypic behavior, has not been associated with a specific placement. Lastly, academic skill development has been positively associated with inclusive education (Kurth & Mastergeorge, 2010a), including the presence of more rigorous Individualized Education Program (IEP) goals (Kurth & Mastergeorge, 2010b).

### **Factors Affecting Educational Placement**

When facing placement decisions, many parents and educators lack objective information about the advantages and disadvantages of different placements. Often, service decisions (including placement) are based on locally available resources, rather than family preference, child needs, or empirical evidence (Dymond, Gilson, & Myran, 2007). Furthermore, once a student receives placement in inclusive, self-contained, or separate settings, the child tends to stay in that setting, further compounding the importance of the decision (White, Scahill, Klin, Koenig, & Volkmar, 2007). The manner in which placement decisions are made for students with ASDs is largely unknown. A review of the literature reveals that placement decisions rest on child-specific factors, such as cognitive scores, and external factors, such as service provider expertise or local educational practices.

**Child Specific Factors.** Frequently, child-specific factors are cited as the primary considerations for making educational placement decisions for students with ASDs. For example, students with Autistic Disorder are more likely to be educated in self-contained or separate school settings than students with Asperger syndrome or Pervasive Developmental Disorder, Not Otherwise Specified (PDD-NOS; White et al., 2007). These same authors also found that students with lower intelligence scores and greater communication deficits were also more likely to be educated in self-contained or separate settings (White et al., 2007). Similarly, students with higher IQ and younger age of intervention were more likely to be educated in inclusive settings (Harris & Handleman, 2000). Students with greater social skills ratings are more likely to be placed in less restrictive settings than those with lower social skills ratings (Lyons et al., 2011). Similarly, Lauderdale-Littin and Howell (2013) found that students placed in public (as

opposed to non-public schools, which are highly restrictive settings) were more likely to be younger, have fewer externalizing behavior problems, and lower family income.

While these child characteristics have been associated with placement, the direction of the impact is unclear. That is, it is unknown from the existing literature if those students with ASDs with lower skills are placed in more restrictive settings, or if students in more restrictive placements are less likely to develop the measured skills.

**External Factors.** While child specific factors are frequently cited as determinants in educational placement for students with ASDs, factors outside of the child must also be considered. For example, recent research suggests that local policy or philosophy related to educational placement, including the availability of inclusive, self-contained, and separate schools, play a role in placement decisions (Kurth & Mastergeorge, 2010b). Additional factors, such as teacher training (Moreno, Aguilera, & Saldana, 2008), and availability and expertise of service providers (Dymond et al., 2007) may also have an impact on educational placement decisions. Further, financial motivations may also play an important role in educational placement decisions (Tissot, 2011). In other words, it is possible that child-external factors influence placement as well. The purpose of this study is to examine the impact of state of residence (state in which a child lives) and state funding formulas for special education on placement decisions for children with ASDs.

### **Method**

The *Individuals with Disabilities Education Improvement Act* (IDEIA) includes monitoring and enforcement indicators for students receiving Part B services (school-age students), including Indicator 5. Part B Indicator 5 requires states to report the

percentage of children with disabilities who are removed from general education for less than 21% of the day, removed from general education more than 60% of the day, and the percentage of students served in separate public or private schools, residential placements, or home or hospital placements. For the purposes of this review, students will be considered educated in an inclusive setting if they are removed from general education for less than 21% of the school day. Students will be considered educated in a mainstreaming program if they spend between 40-60% of the school day outside of general education. Inclusive and mainstreaming settings are considered less restrictive settings, for purposes of this review, considering the greater access students in these settings have to the general education curriculum, peers, and activities. Students will be considered to be in a self-contained program if they are outside of general education more than 60% of the day, and to be in a separate setting if educated in a separate school, residential placement, or in a home/hospital setting. These settings (self-contained and separate) are more restrictive settings considering their limited access to the general education curriculum, peers, and activities.

Publicly available data sources were reviewed to examine the effect of state of residence on placement practices of children with autism in the United States. First, data available on the U.S. Department of Education Data Accountability Center website ([www.ideadata.org](http://www.ideadata.org)) was examined. This website includes data by disability category since 1998, and at the time of this report, the most recent data available for educational placement by disability category was Fall 2008. The data sets for students ages 6 to 21 were reviewed for this analysis. Additionally, special education funding formulas,

collected by Project Forum, National Association of State Directors of Special Education (Ahearn, 2010) were examined.

Data from these sources were gathered and compiled in a spreadsheet. The spreadsheet identified each of the 50 US states, as well as Washington, DC, which will be referred to as a 'state' for simplicity throughout this report. For each state, the following information was collected: percent of students with autism in IDEA Part B identified settings (ideadata.org); percent of IDEA eligible students receiving services under the autism category (ideadata.org), and; the extent to which the manner that special education money is allocated conveys funding incentives related to placement (Ahearn, 2010).

## **Results**

If child-specific factors were solely responsible for educational placement decisions, one would expect states to have similar rates of inclusive, self-contained, mainstreaming, and separate school placements for students with ASDs. In other words, it is very unlikely that populations of students in one state or local area vary greatly in their needs or skills profiles from students in another state or local area. Instead, as shown in Figures 1-4, results indicate that educational placement varies considerably by state.

### **Inclusive Settings**

States vary considerably in placement of students with ASDs in inclusive settings, as seen in Figure 1. States range in the percentage of students who are educated in general education settings for 80% or more of the school day from 8% (Washington, DC) to 62% (Iowa). The average percent of students with ASDs in the 51 states (50 US states and Washington, DC) was 36.6%, with a standard deviation of 10.8. Inspection of Figure



1 further reveals that seven of the ten most inclusive states are West of the Mississippi River (Western US). Of the ten least inclusive states, seven of those states are in the Eastern US (East of the Mississippi River).

<<Insert Figure 1 here>>

### **Mainstream Settings**

Similarly, rates of educating students with ASDs in mainstreaming settings (40-60% of the day in general education) vary considerably. As depicted in Figure 2, mainstream settings range from 8% (Washington, DC) to 39% (Hawaii). The mean in the 51 states was 20.4% of students with ASDs educated in mainstream settings, with a standard deviation of 6.4. Inspection of Figure 2 reveals that, of the ten states that employ mainstreaming settings most frequently, all ten are in the Western US. Of the ten states that educate students in mainstreaming settings the least, eight of the ten are in the Eastern US.

<<Insert Figure 2 here>>

### **Self-Contained Settings**

Considerable variation exists across states by the frequency of placing students with ASDs in self-contained special education settings. Nearly 8% of students with ASDs in Iowa are educated in these special classes, whereas over 58% of students in South Carolina are taught in these settings. The mean for the 51 states was 34.8% with a standard deviation of 10.9. Figure 3 reveals that of the ten states where self-contained settings are most common, seven are in the Eastern US and three in the Western US. Of the ten states that use self-contained settings the least, nine are in the Western US and only one in the Eastern US.

<<Insert Figure 3 here>>

### **Separate Settings**

While broadly speaking separate schools, residential settings, and home/hospital settings are the most infrequent placement settings for students with ASDs, states vary in the frequency of these settings as well. Three states reported that no children with ASDs were educated in these settings in 2008 (Montana, New Mexico, and West Virginia), while almost 31% of students with ASDs were taught in these separate settings in New Jersey that same year. On average in the 51 states, 7.4% of students with ASDs were educated in separate settings, with a standard deviation of 7.3. A review of Figure 4 further reveals that separate settings are most common in the Eastern US (9 of the top 10 most separate setting states), whereas nine of the ten states that have the least separate settings are in the Western US.

<<Insert Figure 4 here>>

### **Funding of Special Education**

State funding formulas were examined to determine if any state has a clear funding incentive to educate students with disabilities, including ASDs, in a specific type of setting. Only one state (Iowa) had a clear financial benefit for educational placement; in this case, Iowa was inclusive but has a state special education funding formula that clearly favors self-contained and separate school placements. Florida and Alaska, both states with high levels of self-contained placements, appear to favor more restrictive settings (self-contained or separate schools), but the funding incentives were not clear from publicly available data. Two states with high levels of separate schools, New Jersey and Delaware, had clear funding incentives for separate and segregated schooling, but

were undergoing major funding changes aimed at increasing access to the least restrictive environment for their students and compliance with IDEA. Because data from both Ahearn (2010) and the US Department of Education (2008) were collected before these changes were fully implemented, it is possible that funding changes in place now have affected placement data. In sum, however, analysis of state funding formulas does not reveal that funding formulas have a clear impact on educational placement of students with ASDs.

## **Discussion**

### **Factors Effecting Placement**

The present findings suggest that factors that are external to child characteristics (IQ, severity of ASDs symptoms) influence educational placement decisions for students with ASDs. Specifically, states vary substantially in the percentage of students with ASDs educated in each setting, with some states trending consistently towards less restrictive settings (Colorado, Connecticut, Idaho, Iowa, Minnesota, Nebraska, North Dakota, West Virginia, and Wisconsin). Other states, however, are consistently representative of more restrictive settings (Alaska, Delaware, Florida, Hawaii, Louisiana, New Hampshire, New Jersey, New York, South Carolina, and Washington, DC). This suggests that factors other than child characteristics are significant in influencing placement decisions for students with ASDs. Previous research has also noted state variations in placement patterns when examining other disability categories. For example, McLeskey, Landers, Hoppey and Williamson (2011) found that some states placed students with learning disabilities in more restrictive placements than others. Similarly, Katsiyannis, Zhang, and Archwamety (2002) found that U.S. regions varied in

restrictive placement patterns for students with intellectual disability. Landrum, Katsiyannis, and Archwamety (2004) found similar variation amongst state regions when examining placement patterns for students with emotional behavioral disorders. Together, these findings support that there are enduring educational placement variations among states for students across disability categories, including, as discussed here, students with ASDs. This further suggests that there are issues beyond child characteristics that impact educational placements.

Generally speaking, this analysis found that states in the Eastern U.S. are more likely to utilize more restrictive placements for students with ASDs than Western states. Given this, geography may play a role in predicting where a student with ASDs will be placed along the continuum of restrictive settings. Perhaps this is unsurprising, given that education, mental institutions, and special education arose in the Eastern U.S. during the late 19<sup>th</sup> and early 20<sup>th</sup> centuries (Winzer, 2007). On the other hand, the Western U.S. was characterized by fewer formal institutions of learning and education during that same time period. As a result, Western families may have had a lesser expectation of specialized instruction or care for children with disabilities. It is possible that these historical roots continue to influence present-day placement decisions, as well as family and school expectations about placement.

Similarly, family preferences concerning placement may play a pivotal role in placement decisions for students with ASDs. In an analysis of why parents of children with visual impairments or blindness placed their child either in a public school or residential setting, Ajuwon and Oyinlade (2008) found that two variables had the greatest predictive value on this decision making: preferred classroom size (smaller size preferred

when parents selected a residential setting) and attending school with a sibling (preferred when parents selected a public school). Similar factors related to family priorities may play an important role in ASDs placement decisions.

### **Limitations and Directions for Research**

Much of the existing literature on placement decisions for students with ASDs has focused on child characteristics (skills and profiles) and parent preferences. While these are arguably important factors, particularly on case-by-case bases, the present study examined child-external factors that influence educational placement decisions for students with autism spectrum disorders. This study found that state of residence is an important factor in determining placement, whereas state funding incentives play a lesser role. However, the publicly available data analyzed for this study took a rather macro-level approach. That is, local community, school district, and school characteristics may have a profound impact on educational placement decisions. Specifically, individual school district practices and policies may greatly influence what programs and placements are available to families and students. Furthermore, the beliefs, practices, and preferences of local school administrators often have a great impact on educational programming and services available in local schools (Sindelar, Shearer, Yendol-Hoppey, & Liebert, 2006). Characteristics of the states themselves, including racial and ethnic demographics, socioeconomic status rates, urbanicity, state policies, and IDEA definitions of ASD, may prove very useful factors in determining placement practices within and between states. A detailed analysis of state practices, with these characteristics as co-variates, is needed. Lastly, family preferences and priorities, parent groups, support groups, and other community resources may influence parents to

advocate for specific educational placements. By meeting, discussing, and problem-solving local issues and concerns, these grassroots organizations may have a great influence on what types of placements are available for their children. These potential factors influencing placement decisions warrant further investigation with a more micro-level approach.

Educational approaches to ASDs tend to focus on treating core symptoms of autism (Wilczynski, Menousek, Hunter, & Mugdal, 2007), rather than quality of life and academic development (Kurth & Mastergeorge, 2010b). Educational placement decisions may be a result of family and/or professional priority. Those who seek to treat autism's core symptoms of impairments in social communication and stereotypic behavior may opt for a specialized autism placement (e.g., a special class or school), whereas those who favor more holistic education (e.g., academic and social development) may choose an inclusive placement. Certainly, these priorities are unlikely to be static; rather, they are likely to change over the course of a child's life and educational experience. A sense of success and contentment with a placement may encourage a family to keep their child in that placement, whereas conflict with school personnel, lack of developmental progress, or changes in family beliefs or priorities may motivate the family to seek a new placement for their child. Interviewing parents and school professionals to fully understand why a placement decision was made, along with retrospective discussions of placement decisions and placement change decisions, and understanding of priorities would help more fully understand placement decisions.

Finally, publicly available data was analyzed in the present study. A major limitation of this analysis is that factors within states could not be analyzed. Along with

interviews of families and school professionals about placement decisions, an in-depth evaluation of local resources, practices, and policies should be investigated for their role in placement decisions.

## **Recommendations**

### **Least Dangerous Assumptions**

As outlined earlier, educational placement decisions for students with ASDs are not without risk. Different placements result in greater or lesser access to typical environments, peers, activities, learning, as well as differences in student learning outcomes. Further, students rarely transition from one placement to another; all too often, placement decisions have a long-lasting impact. Due to these factors, parents and schools must engage in a careful and informed risk-benefits analysis when entering special education and prior to making a placement decision, which will frequently occur when a student is quite young and families are unfamiliar with special education services. The least dangerous assumption is a useful guideline in assisting in this decision-making.

As first articulated by Donnelan, this standard simply states, “in the absence of conclusive data educational decisions should be based on assumptions which, if incorrect, will have the least dangerous effect on the student” (p. 142, 1984). Jorgensen (2005) has expanded on this criterion by finding that restrictive placements are often associated with lowered expectations and narrowed visions of the future for students with disabilities, and thus there is a critical need for families and educators to consider the long-term impact of placement decisions on students.

When operating on this assumption, then, it is arguably safest to assume that the first placement for a student with ASDs would be an inclusive setting. Analysis of the

public data presented here suggests that many states are still falling short of including students with ASDs in general education settings for significant portions of the day. This indicates the critical importance of shifting the argument from *should we* include students with ASDs in general education to understanding *how to* include students with ASDs meaningfully and successfully in inclusive settings.

### **Specialness of Autism**

While the least dangerous assumption (Donnellan, 1984) and urgings to set high expectations (Jorgensen, 2005) provide us with useful guidelines when making educational placement decisions for students with ASDs, we must also be mindful of the “specialness” of ASDs. That is, it is not unusual to believe that students with ASDs require something that is qualitatively different from other students with disabilities, and certainly different from students without disabilities. However, when acted upon, this assumption favors more restrictive settings for students with ASDs. It is critical to identify how those practices that benefit students with ASDs, including structure (visual supports, communication supports, and social supports), positive behavior supports, and systematic instruction, can be implemented meaningfully and seamlessly in general education settings (Dunlap, Kern, & Worcester, 2001; Marks & Shrader, 1999; Quill, 1997). It is recommended that those who place students with ASDs in educational settings determine the unique needs of the individual, and match those needs to specific supports and services that will be provided in general education settings. Together with the least dangerous assumption, these actions will be critical in promoting the best outcomes for students with ASDs in the least restrictive environment.



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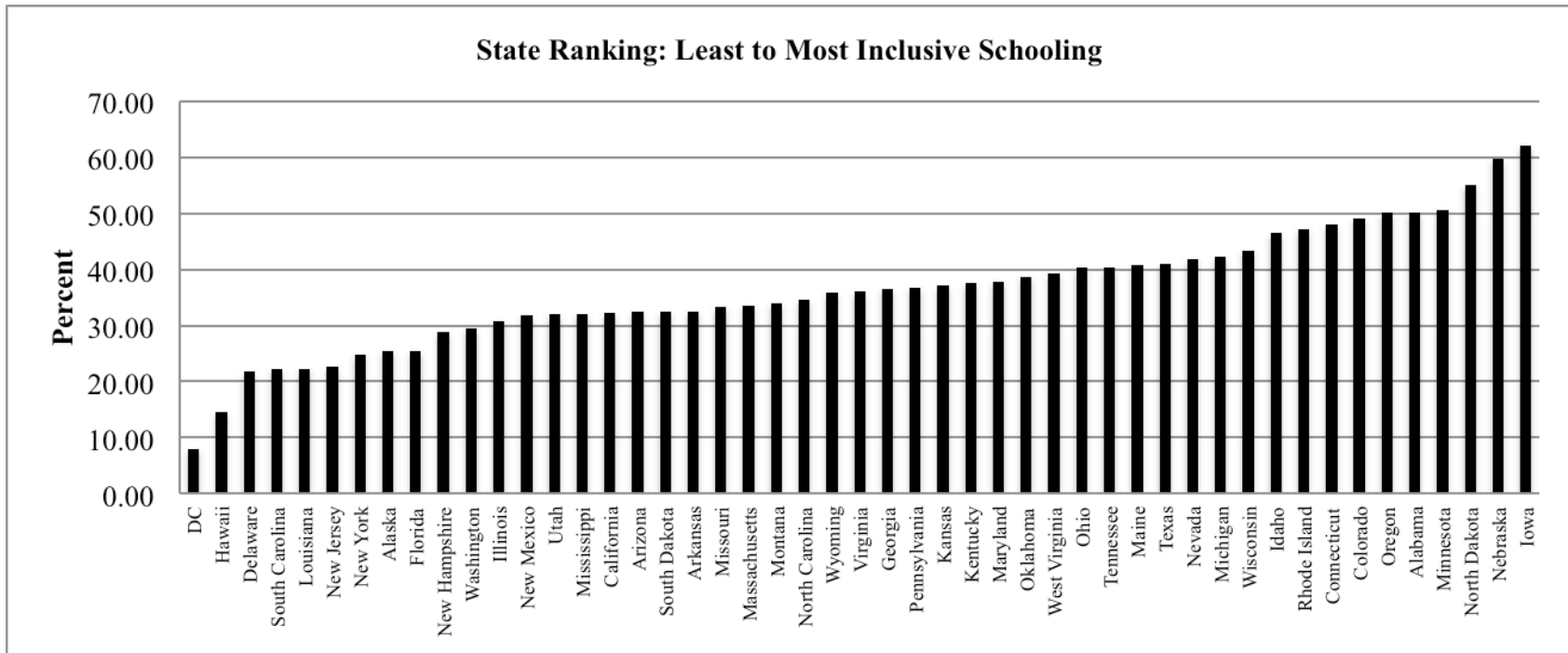


Figure 1. State Rankings, Least to Most Inclusive Settings for Students with ASDs

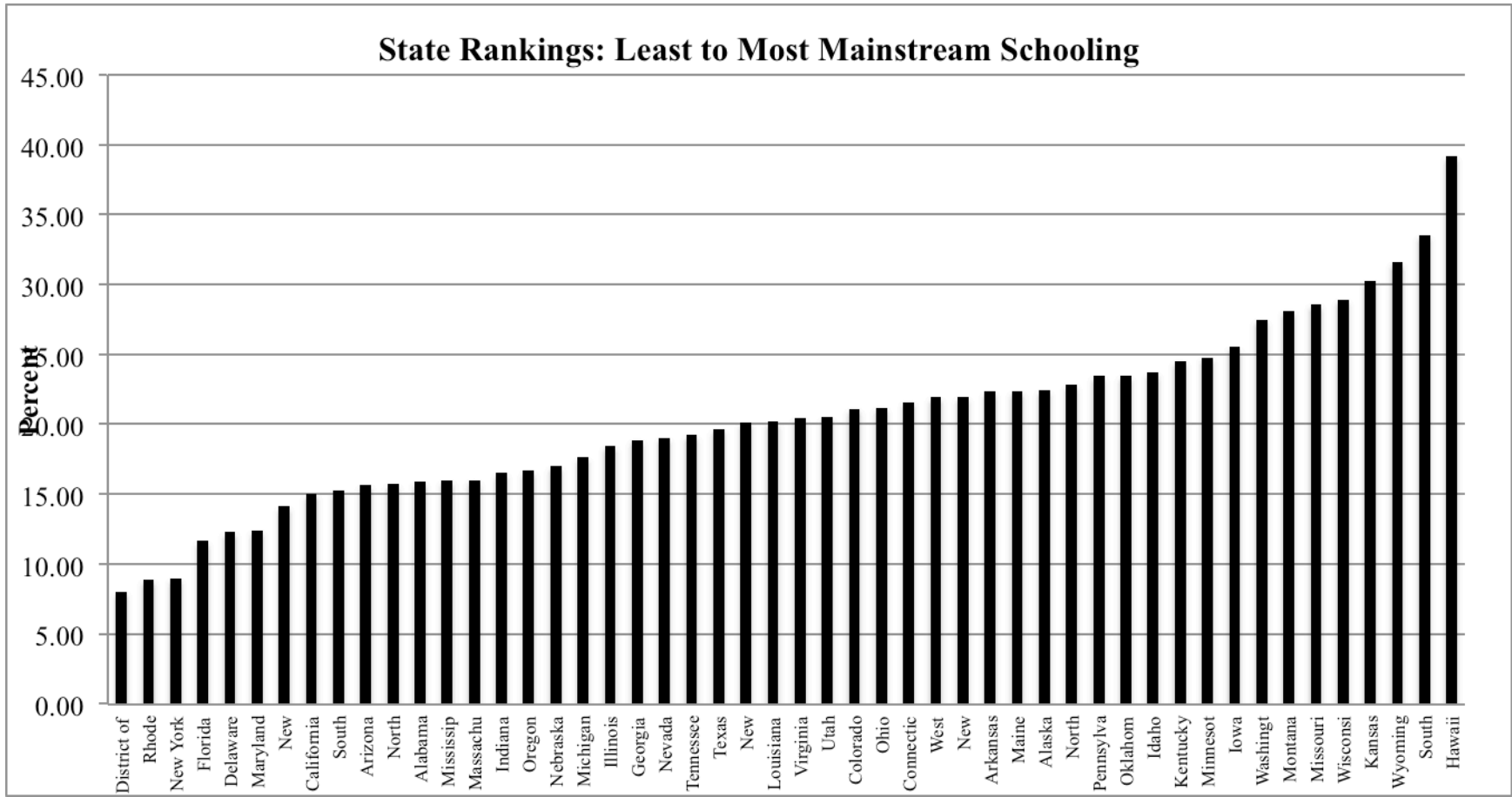


Figure 2. State Rankings, Least to Most Mainstreaming for Students with ASDs

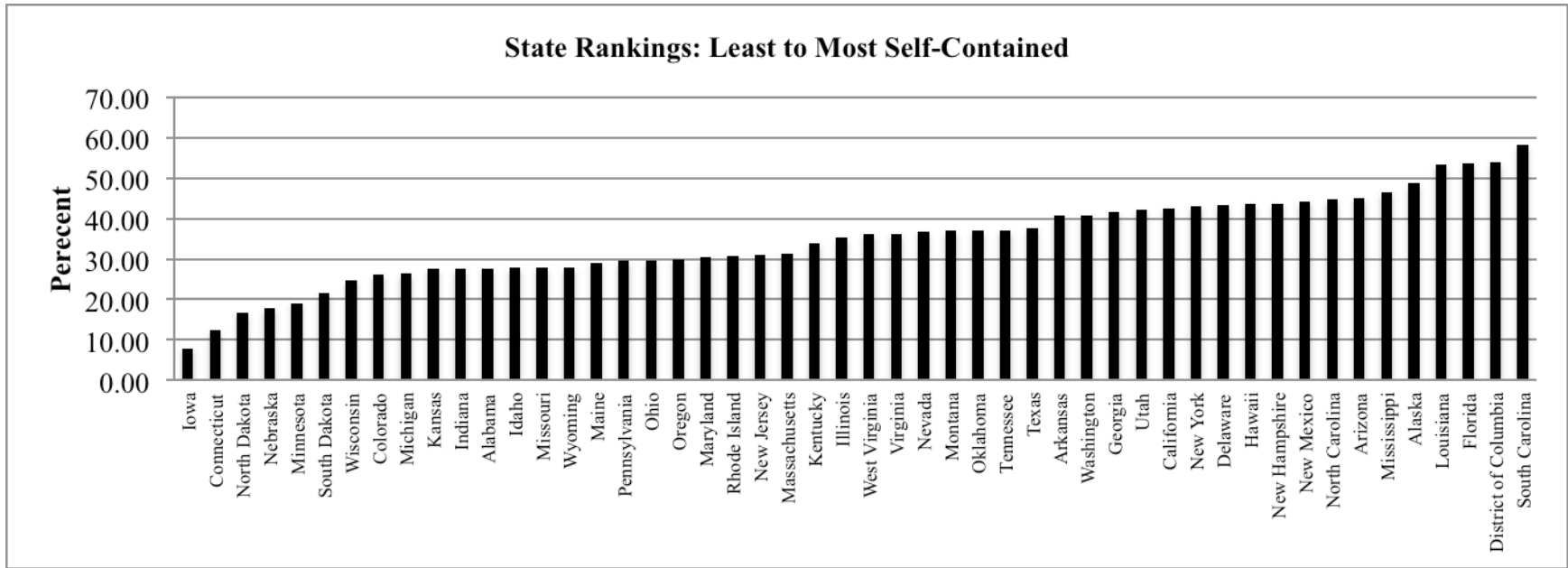


Figure 3. State Rankings, Least to Most Self-Contained Settings for Students with ASDs

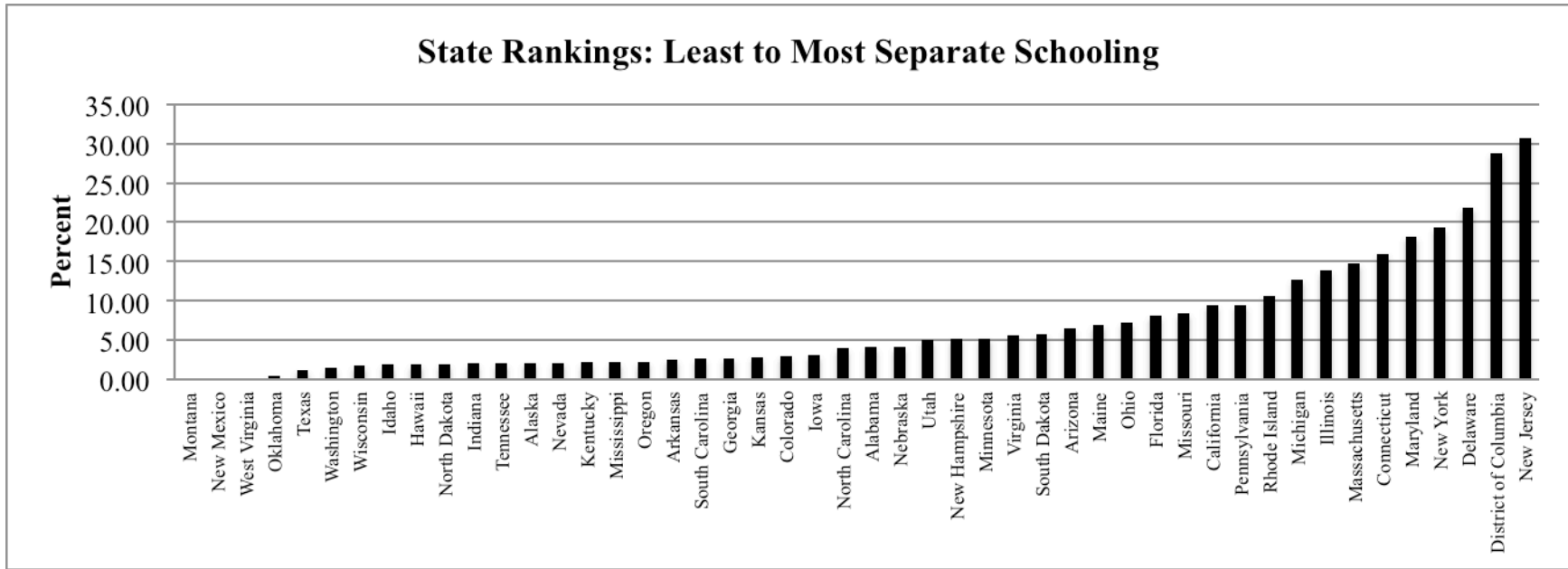


Figure 4. State Rankings, Least to Most Separate Settings for Students with ASD