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Disproportionate Representation in Placements of Preschoolers With Disabilities in Five Southern States

Michael J. Morrier[1,2] and Peggy A. Gallagher[2]

Abstract

Special education placements for more than 69,000 preschoolers with disabilities were examined within and across five southern states. Data were gathered from the 2007 December 1st Child Count reported to the U.S. Department of Education. All states examined offered state-funded prekindergarten programs. Analyses compared disproportionate representation in placements (three levels of inclusion) across child ethnicity and state of residence. Disproportionate representation indexes were calculated using risk index (RI) and risk ratio (RR). Results reveal that a full inclusion setting was used most frequently, followed by no known inclusion, and finally partial inclusion. Overall, although individual state variation was great, no disproportionate representation occurred in full or partial inclusion settings, whereas children classified as American Indian were underrepresented in the no known inclusion setting (RR = .22). Inspection of individual RI by state found significant differences (Wilks's $\Lambda = .001$, $F = 10.354$, $p = .001$, $\eta^2 = .902$) between states for full ($p < .05$, $\eta^2 = .902$), partial ($p < .001$, $\eta^2 = .873$), and no known inclusion ($p < .05$, $\eta^2 = .699$) settings. Policy implications of the data are discussed.

Keywords

preschoolers, inclusion, disproportionate representation, diversity

During the 1990s, programs for preschool-aged children with and without disabilities expanded to meet the needs of this population of children (Wolery et al., 1993). This expansion mirrored an increased focus on state-funded prekindergarten (pre-K) programs across the nation (Mitchell, 2001; Southern Educational Foundation, 2007; Trust for Early Education, 2004). The reauthorization of the Individuals with Disabilities Education Act (IDEA) in 2004 mandated a focus on the education of children with disabilities from ethnically diverse backgrounds and strengthened the mandate to educate children with disabilities in the least restrictive environment (LRE). The focus on placements with typical children is important for educators of young children because students from ethnically diverse backgrounds in grades kindergarten through 12 (K-12) have been disproportionately placed in more restrictive environments (i.e., less typical children present) than did their Caucasian counterparts (Chinn & Hughes, 1987; de Valenzuela, Copeland, Qi, & Park, 2006; Fierros & Conroy, 2002; Hosp & Reschly, 2001; National Research Council, 1982, 2002; O'Connor & Fernandez, 2006; Serwatka, Deering, & Grants, 1995; Skiba, Poloni-Staudinger, Gallini, Simmons, & Feggins-Azziz, 2006). The topic of disproportionate representation in identification and placement of ethnically diverse K-12 students has been prominent in special education for the past 40 years (Dunn, 1968).

Although there is no consensus on defining disproportionate representation, two formulas have been used previously: (a) when a specific racial or ethnic group is placed in special education at a level plus or minus 10% of the group's overall percentage in the general population (Chinn & Hughes, 1987) and (b) comparing the risk ratio of one specific ethnic group to the risk ratio of all other ethnic groups except the targeted group (Bollmer, Bethel, Garrison-Mogren, & Brauen, 2007). In IDEA 2004, *disproportionate representation* was defined to mean "determination of significant disproportionality with respect to the identification of children with disabilities, or the placement in particular educational settings of such children" (Wright & Wright, 2006, p. 126), leaving individual states to determine the

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amount of disproportionality that occurs within the state. This study used the risk ratio comparison suggested by Bollmer et al. (2007) to examine disproportionate representation in placements for preschool-aged children with disabilities.

Young Children With Disabilities in the LRE

Educating students in the LRE has been the hallmark of special education legislation since 1975 for children with disabilities ages 6 through 21 and, since 1986, for preschoolers. The LRE has become synonymous with placing children with disabilities in general education environments, although this is not specifically stated in the legislation. As state-funded pre-K programs have gained prominence over the past decade (Southern Educational Foundation, 2007), they have often become the LRE for 4-year-old children with disabilities. Currently 38 states provide some sort of publically funded pre-K program (Barnett, Epstein, Friedman, Boyd, & Hustedt, 2008). This study looks at placement in the LRE defined as the level of inclusion the preschool child with disability receives.

Several researchers have demonstrated that children with disabilities, especially young children with mild and moderate disabilities (Rafferty & Griffin, 2005), achieve important developmental gains when they are included in programs with children without disabilities (Buysse & Bailey, 1993; Cole, Davis, Dale, & Jenkins, 1991; Holahan & Costenbader, 2000; Hundert, Mahoney, Mundy, & Vernon, 1998; McGee, Morrier, & Daly, 1999; Mills, Cole, Jenkins, & Dale, 1998; Rafferty, Piscitelli, & Boettcher, 2003). One factor related to positive developmental gains for children with disabilities is the classroom ecology of the inclusive setting (Buysse, Wesley, & Keyes, 1998; Odom & Bailey, 2001; Odom & Diamond, 1998), with children enrolled in higher quality classrooms gaining more positive developmental outcomes.

Despite legislation and research indicating that educating children with disabilities alongside their typically developing peers produces greater developmental gains for children with disabilities during the early childhood years (IDEA, 2004; La Paro, Sexton, & Synder, 1998; McGee et al., 1999), children from ethnically diverse backgrounds are often segregated from their age-appropriate peers upon entering special education during the elementary and secondary school years (Chinn & Hughes, 1987; de Valenzuela et al., 2006; Skiba et al., 2006).

Limited Prior Research During the Preschool Years

To date, research on disproportionate representation in special education placements has focused almost exclusively on students from diverse backgrounds during the elementary and secondary school years. To fully discuss the implications and ramifications of disproportionate representation in placements of children from ethnically diverse backgrounds, researchers should begin looking at the preschool years, when many children with disabilities are identified as needing special education services. Although there are many children identified and served in the preschool years, the body of literature on disproportionate representation is deficient on investigations of placement patterns that occur during these years. There may be elements of disproportionate representation in placements for children with disabilities prior to entering elementary school. For instance, recent data on expulsion and suspension rates for preschoolers may be related to disproportionate representation of ethnically diverse students aged 3 to 5 years (Gilliam, 2005; Gilliam & Shahar, 2006). These authors examined the expulsion rates for preschool-aged children and found that rates for preschoolers were nationally 3.2 times greater than rates for the national K-12 population, meaning that, on average, child care settings are expelling 6.67 per 1,000 preschoolers as compared to 2.09 per 1,000 K-12 students.

Purpose

Disproportionate representation in the identification of ethnically diverse students during the preschool years has just begun to be investigated (Delgado & Scott, 2006; Morrier, 2008; Morrier & Gallagher, 2008, 2009) but placements of this population have yet to be investigated. The preschool years are important to analyze because children can first be deemed eligible for special education services through the local public educational system beginning at age 3 (IDEA, 2004). The purpose of this study was to examine factors related to disproportionate representation in preschool special education placements (i.e., levels of inclusion). The following research questions guided this study: (a) Is there disproportionate representation in the level of inclusion preschool children with disabilities receive depending on their ethnicity? (b) Is there disproportionate representation in the level of inclusion preschool children with disabilities receive depending on their state of residence?

Method

This study was part of a larger investigation (Morrier, 2008) analyzing data provided to the U.S. Department of Education (USDOE) for 69,538 children between the ages of 3 and 5 with disabilities within and across the states of Alabama, Arkansas, Georgia, North Carolina, and Tennessee for the December 1, 2007, Child Count. These five states were chosen to be included in the analyses because all of them were located in the same geographical area of the United States for which there has historically been

Table 1. Educational Settings Comprising Level of Inclusion Categories

Level of Inclusion	Education Setting Used (Westat, 2008b)
Full inclusion	Regular early childhood program >80%
Partial inclusion	Regular early childhood program 40–79% or Regular early childhood program <40%
No known inclusion	Separate class Separate school Residential facility Home Service provider location

discrimination based on an individual's ethnicity (Eitle, 2002), and each offered state-funded, full-day prekindergarten services to 4-year-old children (Southern Educational Foundation, 2007).

Placement was defined as one of three levels of inclusion. Level of inclusion was defined by the amount of time children were served alongside typically developing children. These levels were categorized by the researchers using the eight educational placements provided to state Departments of Education (DOEs) by the Office of Special Education Programs for reporting consistency (Westat, 2008c). Levels of inclusion were defined as follows: (a) full inclusion, child is in regular early childhood program more than 80% of time; (b) partial inclusion, child receives special education services in regular early childhood placements but less than 80% of the time; and (c) no known inclusion, child is placed where typically developing children are not usually present. These placements include separate class, separate school, and residential facilities (Table 1). The eight educational placements referred to the educational setting in which the child was enrolled regardless of special education related services received. State of residence was defined as the state of educational placement location.

Although provided under different administrative umbrellas, all five targeted states provided full-day, school-year prekindergarten services to 4-year-old children with and without disabilities. Enrollment criteria for pre-K enrollment differed across the five states, with Alabama and Georgia providing free universal pre-K services to all 4-year-old children regardless of income level. Arkansas, North Carolina, and Tennessee provided targeted pre-K services; Arkansas provides income-eligible 4 year olds (i.e., family income cannot exceed 200% of federal poverty level) free pre-K services, whereas North Carolina provides free services to at-risk 4 year olds, defined as a child whose family is at or below 75% of the state median income (e.g., family of four making $42,375). At the time of this study, Tennessee provided pre-K services to 4 year olds at risk of school failure due to family income; eligibility was determined by qualifying for the free or reduced price lunch program.

Database

Data on children enrolled in special education were gathered through the Westat website (www.ideadata.org) and were reduced as an aggregate based on the specific subcategories used for individual analyses. These data were used to compare differences within and across targeted states for those children with disabilities who received services through the public school system.

Data Analysis

The relationship between children's ethnicity and placement was calculated using the risk index (RI) and risk ratio (RR) (Westat, 2003). To determine if there was a difference in the level of inclusion children with disabilities received depending upon the state in which they lived, one-way multivariate analyses of variance (MANOVA) were used. To determine disproportionate representation for the RR calculation in this study, a RR cutoff of equal to or greater than 1.50 was used to represent overrepresentation and a proportional RR cutoff of equal to or less than .67 was used to determine underrepresentation.

Results

Preschool Special Education Population in Five Targeted States

Table 2 provides the demographics for the 69,538 children with disabilities used in this study. Of the special education sample, 69.35% was male. This study used the categories of racial background as defined by Westat (2008a) as one of the variables under consideration; thus, from this point forward, preschoolers classified as Black, not of Hispanic origin, will be referred to as Black (27.97%); American Indian or Native Alaskan as American Indian (0.89%); Asian or Pacific Islander as Asian (1.38%); Hispanic or Latino as Hispanic (7.00%); and White, not of Hispanic origin, as White (62.75%). Percentages of children in the three levels of inclusion were 63.31% in full inclusion, 14.97% in partial inclusion, and 21.72% in no known inclusion. It should be noted that individual states were able to suppress data when they had low numbers of children in specific categories to protect child privacy (M. Brauen, personal communication, October 18, 2007).

Table 2. Demographics of 3- to 5-Year-Old Children With Disabilities Across Five Targeted States

	Overall	Alabama	Arkansas	Georgia	North Carolina	Tennessee
n	69,538	7,111	11,795	18,454	19,914	12,264
Gender						
Male	48,225	4,983	7,599	12,978	14,152	8,513
Female	21,313	2,128	4,196	5,476	5,762	3,751
Ethnicity[a]						
American Indian	606	21	37	19	509	20
Asian	940	67	84	368	265	156
Black	19,004	2,242	3,285	5,897	5,361	2,219
Hispanic	4,760	183	735	1,473	1,831	538
White	42,642	4,598	7,654	9,962	11,097	9,331
Placement[a]						
Full inclusion	43,052	5,371	8,121	9,632	12,996	6,932
Partial inclusion	9,916	792	1,006	4,659	884	2,575
No known inclusion	14,280	876	2,550	3,094	5,093	2,667

[a]Numbers do not add to 100% because of discrepancy reported to the Office of Special Education Programs by least restrictive environment (Westat, 2008a, 2008b).

Levels of Inclusion: Ethnicity

The level of inclusion varied considerably across the five targeted states. To determine if ethnicity was a factor for the level of inclusion received, RI and RR calculations for disproportionate representation were conducted for the five states as an aggregate as well as individually. Results for these calculations are presented in Tables 3 and 4.

Full inclusion. Calculations of the RI (Table 3) indicate that overall 89.11% of American Indian preschoolers with disabilities received special education services in a full-inclusion setting. More than half of the children with disabilities from Black (RI = 62.42%), Hispanic (RI = 54.33%), and White (RI = 64.75%) backgrounds likewise received special education services in a full-inclusion setting. However, less than half of the preschoolers from Asian backgrounds (RI = 48.09%) received services in a full-inclusion setting. Inspection of individual state data indicated great variability in these percentages. North Carolina had the highest percentage of preschoolers from American Indian backgrounds (RI = 93.91%) in full-inclusion settings, and Alabama had the lowest percentage (RI = 66.67%) for this ethnicity. There was a high percentage of full-inclusion placements for preschoolers classified as Asian in Alabama (RI = 70.15%), and Georgia had the lowest percentage (RI = 42.12%). Black preschoolers ranged from a low of 49.72% in Georgia to a high of 80.24% in Alabama. Arkansas fully included the highest percentage of Hispanic preschoolers (RI = 62.72%), and Georgia had the lowest percentage (RI = 45.15%) of children from this ethnicity fully included. For White preschoolers, the least full inclusion was in Tennessee (RI = 58%), and Alabama fully included the most (RI = 74.05%).

When compared to children from all other ethnicities, preschoolers from American Indian backgrounds with disabilities were 1.41 times more likely than all other preschoolers with disabilities to receive services in a full-inclusion setting (Table 4), and White preschoolers were 1.06 times more likely to be in this setting. Asian (RR = 0.76), Black (RR = 0.98), and Hispanic (RR = 0.95) preschoolers with disabilities were less likely to be fully included, although these numbers are not considered disproportionate. Individual state data indicate that no ethnicity was disproportionately represented in full inclusion, although the range varied greatly between each state.

Partial inclusion. Data for American Indian and Asian preschoolers were suppressed for all five states for these placement types. Calculations of the RI indicated that children with disabilities from Black (RI = 17.94%), Hispanic (RI = 17.42%), and White (RI = 13.32%) backgrounds received special education services in partial-inclusion settings at approximately 20% (see Table 3). State variability for this level of inclusion was great as well. For example, preschoolers classified as Black ranged from a low of 6.51% in North Carolina to a high of 31.76% in Georgia. Hispanic preschoolers ranged from a low of 4.04% in North Carolina to a high of 31.60% in Tennessee. Preschoolers from White backgrounds had a range of 4.15% in North Carolina to a high of 23.45% in Georgia.

When compared to children from all other ethnicities (see Table 4), preschoolers from White backgrounds with disabilities were 0.20 times less likely (RR = 0.80) than were all other preschoolers with disabilities to receive

Table 3. Risk Index for Levels of Inclusion for Five Targeted States

Ethnicity	All States Combined	Alabama	Arkansas	Georgia	North Carolina	Tennessee
Full inclusion						
American Indian	89.11	66.67	67.57	—[a]	93.91	70.00
Asian	48.09	70.15	65.48	42.12	48.68	42.31
Black	62.42	80.24	69.41	49.72	68.27	53.67
Hispanic	54.33	57.92	62.72	45.15	60.40	46.28
White	64.75	74.05	69.24	58.93	68.70	58.00
Partial inclusion						
American Indian	—	—	—	—	—	—
Asian	—	—	—	—	—	—
Black	17.94	10.17	10.05	31.76	6.51	28.35
Hispanic	17.42	18.03	13.88	30.55	4.04	31.60
White	13.32	11.55	7.50	23.45	4.15	19.03
No known inclusion						
American Indian	4.62	—	—	—	4.52	—
Asian	15.11	—	—	—	33.96	28.85
Black	19.20	9.59	20.27	17.74	25.22	16.67
Hispanic	26.13	20.22	20.54	22.47	33.64	20.26
White	21.61	13.57	22.48	17.24	27.14	22.97

[a]Index not calculated because number of children was <10 (Bollmer, Bethel, Garrison-Mogren, & Brauen, 2007).

Table 4. Risk Ratio for Levels of Inclusion for Five Targeted States

Ethnicity	All States Combined	Alabama	Arkansas	Georgia	North Carolina	Tennessee
Full inclusion						
American Indian	1.41	0.88	0.98	—[a]	1.39	1.24
Asian	0.76	0.93	0.95	0.77	0.71	0.75
Black	0.98	1.09	1.01	0.88	1.00	0.94
Hispanic	0.85	0.76	0.91	0.82	0.87	0.81
White	1.06	0.95	1.02	1.22	1.02	1.12
Partial inclusion						
American Indian	—	—	—	—	—	—
Asian	—	—	—	—	—	—
Black	1.35	0.88	1.26	1.35	**1.67**	1.46
Hispanic	1.21	**1.65**	**1.70**	1.18	0.86	**1.54**
White	0.80	1.11	0.72	0.78	0.78	0.70
No known inclusion						
American Indian	*0.22*	—	—	—	*0.17*	—
Asian	0.72	—	—	—	1.28	1.33
Black	0.88	0.71	0.92	1.02	0.92	0.73
Hispanic	1.27	**1.67**	0.95	1.32	1.29	0.93
White	1.08	1.35	1.12	0.97	1.04	1.29

Bold = overrepresentation (≥1.50); italics = underrepresentation (≤.67).
[a]Index not calculated because number of children was <10 (Bollmer, Bethel, Garrison-Mogren, & Brauen, 2007).

services in partial-inclusion settings, and Black preschoolers (RR = 1.35) and Hispanic preschoolers (RR = 1.20) were more likely to be in these settings. Although overall children with disabilities from ethnically diverse backgrounds were represented at expected proportions, individual state data indicate that preschoolers classified as Black in the state of North Carolina (RR = 1.67) were overrepresented in partial-inclusion settings. Preschoolers with disabilities from Hispanic backgrounds were overrepresented in Alabama (RR = 1.65), Arkansas (RI = 1.70), and Tennessee (RI = 1.54) but placed in expected proportions in Georgia (RR = 1.18) and North Carolina (RR = .86). Preschoolers from White backgrounds were at expected proportions across all five targeted states.

No known inclusion. RI calculations (see Table 3) indicate that children from ethnically diverse backgrounds were placed in settings with no known inclusion less than 30% of the time (range: RI = 4.62% to 26.13%). Only North Carolina (RI = 4.52%) reported enough preschoolers from American Indian backgrounds to calculate an individual-state RI; North Carolina (RI = 33.96%) and Tennessee (RI = 28.85%) provided meaningful numbers for preschoolers classified as Asian to complete these individual calculations. Again, state variability was great among reported placements for Black, Hispanic, and White preschoolers.

Variability between states was great for RR calculations (see Table 4). Only North Carolina reported data for American Indian preschoolers, and the RR calculation (RR = 0.22) indicates that overall this ethnic group is underrepresented in settings with no known inclusion. Only preschoolers classified as Hispanic in the state of Alabama (RR = 1.67) were considered to be overrepresented.

Level of Inclusion: State of Residence

Because of the between-state variability found for RI and RR calculations, a one-way MANOVA was conducted to determine the effect of the state of residence on the three levels of inclusion. Means and standard deviations by state and inclusion levels are presented in Table 5. Statistically significant differences were found among the states on level of inclusion received, Wilks's $\Lambda = .001$, $F(19, 24) = 10.354$, $p = .001$, $\eta^2 = .902$). ANOVAs on each dependent variable were conducted as follow-up tests to the MANOVA. Using the Bonferroni method, each ANOVA was tested at the .01 level to control for Type I error. The ANOVAs for RI calculations on full inclusion was statistically significant, $F(4, 10) = 4.702$, $p = .021$, $\eta^2 = .653$, and partial inclusion, $F(4, 10) = 17.167$, $p = .001$, $\eta^2 = .873$, and for no known inclusion, $F(4, 10) = 5.813$, $p = .011$, $\eta^2 = .6990$.

Post hoc analyses to the ANOVA on the RI for full inclusion consisted of conducting pairwise comparisons to find which state affected these levels of inclusion most strongly. No significant differences were found between state comparisons for full inclusion. Post hoc analyses on partial inclusion indicated that Georgia ($M = 28.59$) provided significantly more partial inclusion for preschoolers with disabilities in comparison to Arkansas ($M = 10.47$; $p = .004$) and North Carolina ($M = 4.90$; $p = .001$). Tennessee ($M = 26.33$) provided significantly more inclusion than North Carolina did ($p = .001$). The remaining states were not significantly different from each other. For children with disabilities in settings with no known inclusion, pairwise comparisons found that Alabama ($M = 14.46$) provided significantly less services in these settings than North Carolina ($M = 28.67$; $p = .008$). No other comparisons were significantly different from each other. Post hoc analyses for the RR calculations found no statistically significant differences between states for any of the levels of inclusion.

Discussion

The purpose of this study was to examine factors related to disproportionate representation in preschool special education placements (levels of inclusion) in five Southern states with a history of de jour segregation (Eitle, 2002). Variables examined that might influence this phenomenon were child ethnicity and state of residency. The data provide preliminary results of placement patterns for ethnically diverse preschoolers with disabilities.

Federal legislation mandates inclusion of children with disabilities with typically developing students to the maximum extent possible (IDEA, 2004). For preschoolers with disabilities, this mandate appears to be met in these five states, although this varied considerably across specific ethnic groups and individual states. When compared to all other ethnicities (i.e., RR), children from American Indian backgrounds tend to be underrepresented in settings with no known inclusion; the large percentage of preschoolers from this ethnicity in full-inclusion settings is promising.

Placement patterns indicate that ethnically diverse preschoolers are disproportionately represented in settings other than full inclusion, with preschoolers classified as Hispanic showing the greatest disproportionate representation. It was surprising to find that ethnically diverse preschoolers were not overrepresented in settings with no known inclusion, with the exception of children classified as Hispanic in one state even though this state reported the smallest percentage of the population as being Hispanic (5.35%). The underrepresentation of children from American Indian backgrounds should be interpreted with caution because only one state (North Carolina) reported a large enough population to be analyzed individually.

Limitations

There are several limitations to this study. One limitation is the availability of federal and state databases related for pre-K programs, including a lack of a database for the organization and delivery of services in inclusive settings for children with disabilities. This study used data reported by individual states to the USDOE during the annual child count, and federal guidelines allow states to suppress data categories that contain four or fewer children to protect child and family privacy. The lack of data available on preschoolers classified as American Indian and Asian in partial-inclusion settings and in settings with no known inclusion, for example, did not allow the same level of analysis as the data reported for full inclusion settings, which reduces the ability to generalize these data to states outside

Table 5. Means and Standard Deviations for Level of Inclusion by State

	Alabama	Arkansas	Georgia	North Carolina	Tennessee
Risk index					
Full inclusion					
M	70.74	67.12	51.27	65.77	52.65
SD	11.52	3.81	7.02	4.70	5.93
Partial inclusion					
M	13.25	10.47[a]	28.58[a]	4.90[a,b]	26.33[b]
SD	4.20	3.21	4.49	1.39	6.52
No known inclusion					
M	14.46[c]	21.10	19.15	28.67[c]	19.97
SD	5.37	1.21	2.89	4.41	3.16
Risk ratio					
Full inclusion					
M	0.93	0.98	0.97	0.97	0.96
SD	0.17	0.06	0.21	0.07	0.15
Partial inclusion					
M	1.21	1.23	1.10	1.10	1.23
SD	0.39	0.49	0.29	0.49	0.47
No known inclusion					
M	1.24	1.00	1.11	1.09	0.98
SD	0.49	0.11	0.19	0.19	0.28

Superscript letters refer to post hoc Bonferroni tests; when two groups in the same row are marked with the same letters, they are significantly different ($p < .01$); groups without subscripts are not significantly different.

of the five targeted states analyzed. Although some categories were suppressed, the large sample size ($n = 69,538$) provides enough power to reduce Type I and Type II errors, making results interpretable and reliable. Because states report special education data as an aggregate, it was impossible to investigate how the variables examined interplayed for specific children. For example, determination of the level of inclusion received by a Black, 4-year-old boy from Alabama, was not possible.

Another limitation was the limited ethnic categories reported by DOEs. This study used the ethnic categories allowed by USDOE because ethnic background of the children was one of the primary variables under consideration. USDOE data were reported for five ethnic categories, which reduced the ability to analyze those children whose families consider the child of "two or more" ethnic categories as reported by the U.S. Census Bureau (2001). Reliability checks of state-reported ethnic categories and the categories in which parents or legal guardians actually self-reported their children were impossible.

Suggestions for Future Research

The data reported in this investigation should be viewed as a first look at disproportionate representation of placement during the preschool years. Future research must substantiate the results found in this study. It would be important to replicate a similar study using a greater number of states to determine how systemic this issue is across the United States. Program arrangements for inclusion should also be investigated because many programs rely on a readiness model for both children (Strain, McGee, & Kohler, 2001) and programs to serve children with disabilities. A program's readiness to and experience in including children with disabilities may assist parents on choices within their communities. Programs with a history of inclusion (i.e., Early Head Start and Head Start) may have teachers with more experience with children with disabilities and provide more supported inclusion than other community providers.

Variables that would be important to include in future analyses include age of child, effects of socioeconomic status, and level of severity of the disability. Previous research indicates that socioeconomic status may be a more important factor with the amount of inclusion received than the ethnicity of the child (Skiba, Poloni-Staudinger, Simmons, Feggins-Azziz, & Chung, 2005) and may interface with the resources available for the school district to provide inclusive opportunities. The type and amount of support and related services a school district can offer a child with a disability within a pre-K setting may also influence the amount of inclusion received by children within that state. Likewise, the level of severity of the disability may be a factor in the level of inclusion placement. For instance, a child with autism and concurrent challenging behaviors may not be placed as quickly into a typical preschool setting as would a young child with Down syndrome and no behavioral issues.

Another important area of study to investigate would be the relationship between reported Office of Special Education Programs indicators at entry into and exit from special education, such as expulsion and suspension, and the amount of inclusion received. For example, following up children that are suspended or expelled during preschool to investigate discipline practices on future special education identification and placement would be an important area of study. These analyses would allow for additional investigation into possible precursors of disproportionate representation during the K-12 years. Areas needing further study also include trends of placement over time, especially pre-IDEA and post-IDEA (2004) and No Child Left Behind (2001) mandates as well as the placement decision-making process itself.

Implications for Policy

The data presented here should assist policy makers with demonstrating that some IDEA (2004) mandates are being met, namely, the higher proportion of preschoolers with disabilities being served in a full-inclusion placement. Although this is commendable, policy makers should be aware that the second-highest placement was no known inclusion. Allowing children to access the general education classroom varied by ethnicity (48% for Asian preschoolers to 89% for American Indian preschoolers). This disparity in full-inclusion placement should be reviewed. Inspection of how these indexes differ across school districts also needs to be investigated.

The finding that there were statistically significant differences between states indicates that policy makers should investigate how IDEA mandates are implemented at the state level. Inspection of data at this level might lead to re-examination at the district level as well. Policy makers should ensure that legislative mandates are implemented consistently within and across states. Policy makers might also want to inspect how individual pre-K programs handle children with special needs. The type of levels of support received by children with special needs in general education pre-K programs should likewise be reviewed. Previous guidelines (i.e., National Research Council, 2001) and legislative mandates (i.e., IDEA, 2004) strongly recommend that children with disabilities be provided with the supports necessary to make them a meaningful member of the classroom.

Summary

Disproportionate representation of preschool children with disabilities needs further investigation to determine how it might affect future disproportionate representation in grades K-12. Because previous research demonstrates that the preschool years have a great impact on later developmental outcomes (Buysse & Bailey, 1993; Cole et al., 1991; McGee et al., 1999) and potential placements (Hanson et al., 2001) for children with disabilities, it is important to focus on patterns of any early disproportionate representation. The implications of these data suggest that disproportionate representation in placement is present in the preschool years and that further in-depth investigations should continue.

Authors' Note

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