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Disability Categories: Relation of State Terms & Eligibility Criteria to the Proportion of Children Receiving Special Education Services

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Background and Overview

In 2004, Project Forum at the National Association of State Directors of Special Education (NASDSE) conducted a comprehensive analysis of states' terms, definitions and eligibility criteria for the 13 required federal disability categories included in the Individuals with Disabilities Education Act (IDEA): autism, deaf-blindness, deafness, emotional disturbance, hearing impairment, mental retardation, multiple disabilities, orthopedic impairment, other health impairment, specific learning disability, speech or language impairment, traumatic brain injury and visual impairment including blindness, as well as one optional disability category: developmental delay (Müller & Markowitz, 2004). The data collection process included searching the National State Policy Database (NSPD), checking state education agency websites and sending letters to states requesting that they supply any additional or missing information.

The authors found that terms frequently vary from state to state for disability categories such as mental retardation and emotional disturbance and definitions vary from state to state for categories such as hearing impairment and speech or language impairment. Also, not all states have specific eligibility criteria for each of the federal disability categories and eligibility criteria often differ from state to state, particularly for newer categories such as autism and traumatic brain injury.

In order to determine if state variations in terms, definitions and eligibility criteria are related to the proportion of children served with a disability across states, Project Forum worked collaboratively with Westat to conduct additional analyses using the proportion of children ages 6-21 served under IDEA, Part B in 2003.¹ For these analyses, only the 50 states were used. The

¹ The proportion is calculated by dividing the number of children receiving special education with a particular disability by the resident population for the same age group based on estimates from the U.S. Census Bureau. The data are available at www.ideadata.org.

purpose of this document is to report on those analyses. Project Forum carried out this work as part of its cooperative agreement with the U.S. Department of Education's Office of Special Education Programs (OSEP).

Data Analysis

Five federal disability categories were selected for further analysis: autism, emotional disturbance, mental retardation, specific learning disability and speech or language impairment. These five were selected because according to our analysis these were the only cases in which there were a sufficient number of states represented to produce statistically reliable results. In addition, disability categories were selected based on the following reasons: (1) a high level of variability across states in eligibility criteria for autism; (2) significant concerns regarding disproportionality vis-à-vis both emotional disturbance and mental retardation; and (3) high numbers of students identified with specific learning disabilities.

For these five disability categories, states were sorted into two groups based on terms and/or eligibility criteria.² To determine whether specific terms and/or any of the eligibility criteria that states use for a disability category are related to the proportions of children served for that disability, the authors calculated independent t-tests. The t-test assesses whether the means of two groups, in this case the mean proportions of children served, are statistically different from one another.³

Findings are reported below and organized by disability category. Appendix A, located at the end of this document, includes more detailed statistical information for each of the five disability categories.

Findings

Autism⁴

For autism, a t-test was conducted to determine if use of the federal term *autism* is related to the proportion of children served under this disability category. Results indicated no difference in the proportion of children served between states that do and those that do not use the federal term.

To determine if they are related to the proportion of children served under IDEA, T-tests were also conducted for four of the autism eligibility criteria examined in Project Forum's previous study: (1) required diagnosis by an outside professional; (2) required use of autism-specific instruments; (3) required use of a communication assessment; and (4) required use of qualitative

² These two groups were created based on the (1) use or nonuse of the federal disability term; (2) absence or presence of one or more eligibility criteria; and/or (3) absence or presence of a specific eligibility criterion.

³ One assumption of the t-test is homogeneity of variances, or, in other words, that the variances of the two groups are equal. When this assumption was violated, an approximate t-test was conducted instead of a regular t-test.

⁴ Connecticut and Colorado were not included in this analysis because they did not make eligibility criteria available to Project Forum. However, these states do report to OSEP for the category of autism.

data. Results indicate that, on average, states that require a diagnosis or assessment by an outside professional have a significantly *lower* proportion of children receiving special education services for autism than do states that do not require a diagnosis or assessment by an outside professional. For the purposes of this analysis, outside professionals included physicians, licensed psychologists, psychiatrists and school psychologists among others. Analyses of the other autism eligibility criteria did not identify any relationship to the proportion of children served with autism.

Emotional Disturbance

For emotional disturbance (ED), a t-test was conducted to determine if use of the federal term *emotional disturbance* is related to the proportion of children served. Results indicated no difference in child count among states that do and those that do not use the federal terms.

The authors also determined if the use of one or more eligibility criteria by states is related to child count data for ED. Results indicated no difference in the proportion of children served by states that do and those that do not include one or more eligibility criteria.

The authors also analyzed three of the specific ED eligibility criteria examined in Project Forum's previous study to determine if they are related to the proportion of children served with ED: (1) required diagnosis by an outside professional; (2) required use of behavioral observation; (3) behavioral and emotional assessment; and (4) required use of an educational assessment. Analyses did not identify a relationship between any of these criteria and the proportion of children served by states with ED.

Mental Retardation

For mental retardation (MR), a t-test was conducted to determine if use of the federal term *mental retardation* is related to the proportion of children served by states with ED. Results indicate that, on average, states that use the federal term for mental retardation have a significantly *lower* proportion of children receiving special education services for MR than states that use alternate terms. Examples of alternate terms used by states include cognitive delay, cognitive impairment, developmental cognitive disability, educational disability, intellectual disability, intellectual impairment, learning impairment, mental disability, mentally handicapped, mentally impaired and significant limited intellectual capacity. It is important to note that although 25 states have adopted *terms* other than mental retardation for the category of MR, 43 states use the exact federal *definition* of MR or a slight variation thereof.

The authors also investigated whether: (1) the use of one or more eligibility criteria by states and (2) the use of subcategories by states is related to the proportion of children served with MR. Results indicated no difference in the proportion of children served between states that do and do not include one or more eligibility criteria, or between those that do and do not use subcategories.

The authors also examined two of the specific MR eligibility criteria examined in Project Forum's previous study to determine if they are related to the proportion of children served with MR: (1) required use of an educational assessment and (2) required use of qualitative data. Analyses of these MR eligibility criteria did not identify any relationship to the proportion of children served by states.

Specific Learning Disability

For specific learning disability (SLD), a t-test was conducted to determine if the use of one or more eligibility criteria by states beyond those in the federal regulations is related to the proportion of children with SLD. Results indicated no difference in the proportion of children served with SLD by states that do and do not include one or more eligibility criteria.

The authors also analyzed three of the specific SLD eligibility criteria examined in Project Forum's previous study to determine if they are related to the proportion of children served: (1) required use of an intellectual assessment; (2) required use of an educational assessment; and (3) required use of qualitative data. Analyses of these SLD eligibility criteria did not identify any relationship to the proportion of children served with SLD by states.

Speech or Language Impairment

For speech or language impairment (SLI), a statistical test was conducted to determine if the use of subcategories (e.g., language impairment, articulation impairment, fluency impairment and voice impairment) is related to the proportion of children served and results indicated no relationship between the use of subcategories by states and the proportion of children they serve with SLI.

Concluding Remarks

Based on the results of this analysis, it appears that the proportion of children served with specific disabilities is not related to the use of terms, definitions or eligibility criteria. Because of the considerable cross-state variation in eligibility criteria for each of the federal disability categories, these are interesting findings.

Explanations for the lack of significant differences in the proportions of children served may have to do with the fact that written policies upon which these analyses were based do not always reflect actual practices. In other words, it is possible that even if one state does not specifically require an educational assessment as one of its eligibility criteria for ED or SLD, in most cases assessments are conducted as a matter of practice. Future research addressing the relationship between policy and practice would shed light on this phenomenon.

Based on the finding that those states where outside professionals are required to diagnose children with autism have a significantly *lower* proportion of children receiving special education services for autism, it appears that the expertise of the persons involved in the

diagnostic process may have an impact on the proportion of children served, although further research is necessary to confirm this. There is no immediate explanation for the finding that states that use the federal term for MR have significantly *lower* proportions of children receiving special education for MR. Again, further research would be necessary to explain this finding.

Reference

Müller, E., & Markowitz, J. (2004). *Disability categories: State terminology, definitions and eligibility criteria*. Alexandria, VA: Project Forum at the National Association of State Directors of Special Education.

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APPENDIX A

Autism Eligibility Criteria	Distributional Statistics		Equality of Variances		T-Tests			
	Mean	Standard Deviation	F Value	Pr>F	Variance	DF	T statistic	Probability > T
Include 1+ eligibility criteria Does not include any eligibility criteria	0.202 0.2029	0.0905 0.053	2.92	0.0210	Cochran (Unequal)		0.05	0.9629
Requires diagnosis by outside professional Does not require diagnosis by outside professional	0.1689 0.2147	0.0455 0.0831	3.34	0.0297	Cochran (Unequal)		2.43	0.0258*
Requires use of autism-specific instruments Does not require use of autism-specific instruments	0.2163 0.1999	0.1401 0.0633	4.90	0.0015	Cochran (Unequal)		-0.30	0.7713
Requires use of communication assessment Does not require use of communication assessment	0.2079 0.1998	0.1167 0.0526	4.92	<0.0001	Cochran (Unequal)		-0.26	0.7998
Requires use of qualitative data Does not require use of qualitative data	0.2176 0.196	0.1173 0.054	4.72	0.0003	Cochran (Unequal)		-0.66	0.5202

*p < .05 This result reflects a statistically significant difference between the two groups of states.

N=48. Although both states report children in the autism disability category, autism eligibility criteria were not available to Project Forum for Colorado or Connecticut. They were excluded from the analysis.

Emotional Disturbance Eligibility Criteria	Distributional Statistics		Equality of Variances		T-Tests			
	Mean	Standard Deviation	F Value	Pr>F	Variance	DF	T statistic	Probability > T
Uses federal term Uses other term	0.682 0.807	0.316 0.344	1.19	.666	Pooled (Equal)	48	1.33	0.188
Include 1+ eligibility criteria Does not include any eligibility criteria	0.736 0.740	0.371 0.246	2.28	0.083	Pooled (Equal)	48	0.04	0.969
Requires diagnosis by outside professional Does not require diagnosis by outside professional	0.600 0.767	0.438 0.301	2.11	0.115	Pooled (Equal)	48	1.39	0.171
Requires behavioral observation Does not require behavioral observation	0.68 0.790	0.333 0.327	1.04	0.915	Pooled (Equal)	48	1.18	0.244

Emotional Disturbance Eligibility Criteria	Distributional Statistics		Equality of Variances		T-Tests			
	Mean	Standard Deviation	F Value	Pr>F	Variance	DF	T statistic	Probability > T
Requires behavioral/emotional assessment	0.619	0.347	1.24	0.581	Pooled (Equal)	48	1.86	0.068
Does not require behavioral/emotional assessment	0.798	0.311						
Requires educational assessment	0.672	0.344	1.13	0.738	Pooled (Equal)	48	1.05	0.300
Does not require educational assessment	0.774	0.323						

N=50

Mental Retardation Eligibility Criteria	Distributional Statistics		Equality of Variances		T-Tests			
	Mean	Standard Deviation	F Value	Pr>F	Variance	DF	T statistic	Probability > T
Uses federal term	0.697	0.35	2.60	0.022	Cochran (Unequal)		3.19	0.004*
Uses other term	1.125	0.565						
Include 1+ eligibility criteria	0.954	0.524	1.44	0.528	Pooled (Equal)	48	-1.28	0.206
Does not include any eligibility criteria	0.739	0.436						
Uses subcategories	1.060	0.469	1.21	0.704	Pooled (Equal)	48	-1.60	0.117
Does not use subcategories	0.821	0.516						
Requires educational assessment	1.003	0.491	1.11	0.839	Pooled (Equal)	48	-1.05	0.299
Does not require educational assessment	0.846	0.517						
Requires qualitative data	0.929	0.396	1.86	0.294	Pooled (Equal)	48	-0.19	0.859
Does not require qualitative data	0.895	0.540						

*p < .05 This result reflects a statistically significant difference between the two groups of states.

N=50

Specific Learning Disability Eligibility Criteria	Distributional Statistics		Equality of Variances		T-Tests			
	Mean	Standard Deviation	F Value	Pr>F	Variance	DF	T statistic	Probability > T
Includes eligibility criteria beyond those in the Federal Regulations	4.1373	0.7725	1.68	0.2261	Pooled (Equal)	48	1.82	0.0751
Does not include eligibility criteria beyond those in the federal regulations	4.6275	1.0013						
Requires intellectual assessment	4.1386	0.8039	1.29	0.5296	Pooled (Equal)	48	1.23	0.2237
Does not require intellectual assessment	4.439	0.9118						
Requires educational assessment	4.1386	0.8039	1.29	0.5296	Pooled (Equal)	48	1.23	0.2237
Does not require educational assessment	4.439	0.9118						
Requires use of qualitative data	4.1437	0.8224	1.13	0.8348	Pooled (Equal)	48	0.65	0.5176
Does not require use of qualitative data	4.3167	0.8752						

N=50

Speech or Language Impairment Eligibility Criteria	Distributional Statistics		Equality of Variances		T-Tests			
	Mean	Standard Deviation	F Value	Pr>F	Variance	DF	T statistic	Probability > T
Uses subcategories	1.7955	0.5407	1.71	0.2198	Pooled (Equal)	48	-0.68	0.5013
Does not use subcategories	1.7	0.4141						

N=50