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Predictors of Change in Eligibility Status Among Preschoolers in Special Education

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ABSTRACT: *Relatively little is known about the incidence of declassification among young children who receive preschool special education services or about factors associated with declassification. The Pre-Elementary Education Longitudinal Study (PEELS) follows a nationally representative sample of children who were receiving preschool special education services in 2003–2004. Data from PEELS show that approximately 16% of preschoolers who received special education services stopped receiving those services, or were "declassified," each year over a 2-year period. In a multivariate logistic regression, significant variables predicting declassification included child gender, size of the district's preschool special education program, district wealth, disability category, ratings of problem behaviors, severity of impairment, and scores on the Peabody Picture Vocabulary Test.*

The process for obtaining special education services is well specified within the regulations of the Individuals With Disabilities Education Act (IDEA, 2004). In contrast, there are no clearly defined federal criteria regarding the process by which a child leaves special education. If districts rely on federal law for guidance, regulation 300.534 (c)(1) of IDEA 2004 states simply that "a public agency must evaluate a child with a disability in accordance with Sections 300.532 and 300.533 before determining that the child is no longer a child with a disability"; Sections 300.532 and 300.533 outline evaluation procedures. The only available research on the topic among very young children suggests that as many as 50% of preschool programs do not have written specifications for exit criteria (Thurlow, Ysseldyke, & Weiss, 1988). Leaving special education has historically been considered rare (Finn, Rotherham, & Hokanson, 2000), and data on declassification have been collected by the Office of Special Education Programs (OSEP) only since 1993–1994 and only for students ages 14 and older.

Despite the vagaries associated with exiting special education, many young children *do* receive services and support for a period of time and then stop. Data from Washington and Colorado showed that one sixth to one third of chil-

dren graduating from preschool were placed in general education programs with no support (Edgar, McNulty, Gaetz, & Maddox, 1984). Stile, LeCrone, and Ames (1991) reported the same outcome for 1 in 10 children from 74 school districts in New Mexico. Among children receiving preschool special education services in two North Carolina counties, 28% were no longer receiving services upon entry into elementary school (Wong, 1997).

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Longitudinal analyses have produced similar findings. Thirty-two percent of preschoolers who were classified as having speech impairments in a Maryland county exited special education during a 4-year period. Even among children identified with two or more disabilities, 11% left special education by the first year of elementary school (Markowitz & Bridges-Cline, 1991). Higher rates were observed in a more recent study of children who were enrolled in preschool special education in Utah; approximately 50% of children were no longer receiving services 2 years after their initial enrollment in the study (Innocenti, 2005).

We know relatively little about the factors that are associated with leaving special education, but given that the regulations of IDEA frame the process of declassification in terms of eligibility determination, we can turn to this body of research as background. Within the special education literature, there is a longstanding and ongoing criticism of classification and eligibility practices, stemming from seminal works such as Nicholas Hobbs' *Issues in the Classification of Children* (1975). Certain disability categories have particularly come under fire for being social constructions; for example, the emergence of the learning disability category was seen as a way for children of middle-class, white families to receive services without being stigmatized (Sleeter, 1986). More recently, critics have asserted that Asperger's syndrome is used for eligibility purposes when it often reflects normal variations in personality (Molloy & Vasil, 2002). In short, many researchers have identified theoretical flaws with any system that lacks "reliability, coverage, logical consistency, utility, and acceptability to users" (Cromwell, Blashfield, & Strauss, 1975, p. 22), all of which are limitations critics have raised of the categorical eligibility system under IDEA.

A comprehensive review of the criticisms of current IDEA eligibility practices, which abound in the literature, is beyond the scope of this article, but a few examples are illustrative. Racial and ethnic disproportionality in special education placement has been identified as a problem for decades; two panels convened by the National Academy of Sciences, in 1982 and 2002, addressed this issue at a national level (Donovan & Cross, 2002; Heller, Holtzman, & Messick, 1982). In part because of these panels, IDEA now includes specific activities that are aimed at providing support to districts with evidence of significant disproportionality. Consistent with this, recent work (e.g., Skiba, Poloni-Staudinger, Gallini, Simmons, & Feggins-Azziz, 2006) notes that longstanding differences in classification based on race and ethnicity are still present, with African American children more likely to be classified as having mental retardation and emotional disturbance than non-African American children. Of note, however, Hibel, Farkas, and Morgan (2006) found that African American, Hispanic, and Asian students were much *less* likely to be placed into special education programs and that attending schools with lower average performance, being female, and lacking academic readiness also decreased a student's chance of entering special education.

Several researchers have demonstrated powerful district-level influences on classification. For example, using functional profiles, Singer, Palfrey, Butler, and Walker (1989) showed that classification of children, particularly those with the labels of emotional disturbance and mental retardation, varied based on district of residence. Similarly, researchers have demonstrated that low-achieving students in general education are functionally similar to many students identified as having learning disabilities (Ysseldyke et al., 1983). Even using the most current data available from OSEP, it is clear that there is wide variability and overlap in criteria and definitions across districts and states, particularly for some disability categories (Hallahan et al., 2007).

Past research has examined declassification in the context of some of these same factors, although to a more limited degree. Several studies have confirmed that children who exit special education have higher academic and intellectual functioning than those who remain eligible (Carlson, 1997; Halgren & Clarizio, 1993; Innocenti, 2005; Ysseldyke & Bielinski, 2002). Across age groups, children identified as having speech or language impairments and learning disabilities were the most likely to leave special education (Carlson; Carlson & Parshall, 1996; Halgren & Clarizio; Innocenti; Walker et al., 1988; Wong, 1997). Nevertheless, a small percentage of children (2%–4%) declassified in a recent study of elementary-age children were previously identified as having autism, mental retardation, and multiple disabilities (SRI International, 2005).

Although child functioning is a logical predictor of declassification, certain demographic factors have also been linked with declassification. Higher incomes were associated with greater declassification among school-age children (Carlson, 1997; SRI International, 2005) and with more frequent checks on progress among preschoolers (Markowitz & Bridges-Cline, 1991); children of lower income families across a range of ages were more likely than those in higher income families to be reclassified into different disability categories (Halgren & Clarizio, 1993).

With respect to race, declassification was reported to be more likely among White children than among African American or Hispanic children in school-age samples (Carlson, 1997) and less likely for African American children within the category of speech impairment (Walker et al., 1988). Some demographic factors, such as gender, have not previously been linked to declassification (Carlson; Carlson & Parshall, 1996).

We are not aware of any studies that have examined important process variables, such as parent involvement or school outreach, in relation to declassification. Two studies examined parent satisfaction as it relates to change in disability category and change in programming. Parents of school-age children who left special education were slightly more likely to report being very satisfied with their child's school than parents of students who continued receiving services (SRI International, 2005); Halgren and Clarizio (1993) found no such association between parent satisfaction and declassification.

Ideally, characteristics of a child's district and school would not play a central role in determining changes in eligibility status. But a New York study found that suburban preschool programs had the highest percentage of preschool children declassified, and New York City programs had the lowest percentage (MAGI Educational Services, Inc., 2003). In contrast, a comparison in North Carolina found that preschoolers from an urban county were more likely to leave special education than those from a rural county (Wong, 1997). Other factors, such as size of the special education program and district wealth, have not previously been examined.

As referenced earlier, past research has documented numerous flaws in the predominant system of eligibility determination for children in the United States, which at best might be characterized as inconsistent (Ysseldyke, 2001; Ysseldyke et al., 1983). A smaller body of past research has examined the opposite process, declassification, with mixed and limited findings. Therefore, the central question of this study can be stated as follows: Is the process of declassification one that is logical and predictable from relevant child factors or, in contrast, is it one that varies according to demographic or district-level characteristics?

This study includes a range of independent variables to explore this question. As noted ealier, some of these have previously been examined in the literature (child academic skills, gender, race/ethnicity, and disability category; transition status; household income; metropolitan status; and parent satisfaction), whereas others have not (district size, preschool special education enrollment, and wealth; parent involvement; and school/program outreach). We also address some limitations of past studies of preschool special education status. Specifically, they have either sampled all students in one district or a sample of students from a set of districts within a state, and many of the studies of preschoolers are more than 2 decades old. In this study, we use a large, nationally representative sample of children ages 3 through 5 and eligible for special education services during the 2003–2004 school year to examine declassification after 2 years. This study

represents an opportunity to extend the literature on declassification by filling gaps in what we know and providing current data for a preschool-age population.

METHOD

Design and Sample

The PEELS, sponsored by the National Center for Special Education Research in the U.S. Department of Education, is following a nationally representative sample of 3,104 children from a population of approximately 670,000 children who were receiving special education services in 2004, when they were 3 through 5 years old. PEELS used a two-stage sample design: In the first stage, a national sample of local education agencies (LEAs) was selected. In the second stage, a sample of preschoolers with disabilities was selected from lists of eligible children provided by the participating LEAs.

The PEELS data collection includes parent/guardian interviews, teacher questionnaires, direct assessments of the children, and questionnaires sent to children's programs, schools, districts, and states. Instruments were designed to capture information on the characteristics of children receiving preschool special education, the services they receive, their transitions from early intervention to preschool and from preschool to elementary school, and their educational performance. (Data from an early childhood program director, elementary school principal, and state education agency questionnaire were not used in this analysis.)

Children were recruited into PEELS as 3-, 4-, and 5-year-olds. All participating 3-year-olds were newly enrolled in special education during the recruitment period; participating 4- and 5-year-olds included children both newly enrolled in special education during the recruitment period and those who had already been identified as eligible for services. Because the PEELS sample was selected by age, not by grade, some of the children were in kindergarten; others were in preschool, day care, or at home. The children may or may not have received early intervention services from birth to age 3 through Part C of IDEA.

Eligibility criteria for study participation were: (a) there was an English- or Spanish-speaking adult or an adult who used signed communication in the household or, alternatively, could respond to questions using a telephone relay service or interpreter for the hearing impaired; (b) this was the family's first child sampled for PEELS; and (c) the sampled child's family resided in the participating school district at the time of enrollment in PEELS. Eighty-eight percent of the families were found eligible for the study, and 80% of those eligible agreed to participate.

The data presented have been weighted to generate national estimates. Different weights were used, depending on the sources of data. These weights adjust the child base weights to account for nonresponse on specific data collections in specific waves or groups of waves. (For a more detailed description of family recruitment, sampling, and weighting procedures, see Markowitz et al., 2006, at www.peels.org.)

Measures

Outcome Variable: Special Education Eligibility Status. At the time they were recruited into PEELS, all children had an active individualized education program (IEP) or individualized family service plan (IFSP). At each point of data collection, teachers reported whether the child had either an IEP or IFSP. If those data were missing for the relevant year, teacher reports from the following year were used to determine changes in the child's IEP status. Teachers were routinely asked whether the child received special education services during the previous year. If data on IEP status were still unavailable from both these sources, parent response was used. Because of the large-scale nature of the study, independent confirmation of eligibility status was not available. The primary declassification variable used in this study identifies children declassified by the 2005–2006 school year, with declassification occurring either between 2003–2004 and 2004–2005, or between 2004–2005 and 2005–2006. A small group of children (5.8%) discontinued special education services prior to 2003–2004 data collection. These children were excluded from the analyses presented here. In addition, children who changed from one disability classification to

another (for example, from developmental delay to mental retardation) were not considered declassified, because they continued to receive services under IDEA.

Control Variable: Preschool Status. The transition from preschool to kindergarten is a time when special education eligibility may receive particular scrutiny, with an inclination among some educators and administrators to give the child a chance in general education (Edgar, Heggelund, & Fischer, 1988). Therefore, as a control variable in the multivariate model, we have included whether the child remained in preschool from 2003–2004 to 2005–2006. This variable was based on teacher report.

Demographic and Household Characteristics. Demographic and family characteristics, such as child gender, race/ethnicity, and household income, were obtained through the parent interview. For this analysis, race/ethnicity was derived from a series of questions and recoded into three categories: Hispanic and of any race, Black or African American only (not Hispanic), and White only (not Hispanic). Children from other racial groups were excluded from analyses by race because the samples were too small to produce reliable results.

District Characteristics. Information about district wealth, metropolitan status, and size of the district's preschool special education program was taken from the Quality Education Data (QED) district file, which was used as the PEELS district sampling frame. PEELS uses the same cut points as the QED. District poverty was defined as a percentage of the district's children falling below the federal government poverty guidelines, where *high wealth* was 0% to 12%, *medium wealth* was 13% to 34%, *low wealth* was 35% to 40%, and *very low wealth* was more than 40%.

Metropolitan status was defined by the designations of the U.S. Department of Education's National Center for Education Statistics (NCES), as applied by QED, and was classified as *urban, suburban,* and *rural.*

District preschool special education enrollment size (for children ages 3 through 5 years) was categorized as *small* if the district had 41 or fewer children enrolled, *medium* if it had between 42 and 117 children enrolled, *large* if it had 118 to 390 children enrolled, and *very large* if the district had 391 or more children enrolled.

Overall district size was obtained through the LEA questionnaire and was based on total district enrollment. Based on cutoffs used in the NCES Common Core of Data, the districts were categorized as *small* if they had 300 to 2,500 students, *medium* if they had 2,501 to 10,000 students, *large* if they had 10,001 to 25,000 students, and *very large* if they had more than 25,000 students.

Disability Category. Information on children's primary disability category was obtained from their teachers or service providers. If those data were missing, disability information was obtained from enrollment forms submitted by district personnel. Because of the small sample sizes for some disability categories, a *low-incidence* category was created; it included deaf/blindness, deafness, hearing impairment, traumatic brain injury, visual impairment, and other disabilities that were specified on the teacher questionnaire or enrollment form. Therefore, in this study, primary disability is grouped into nine categories: autism, developmental delay, emotional disturbance/behavior disorder, learning disability, mental retardation, orthopedic impairment, other health impairment, speech or language impairment, and low-incidence disabilities.

School/Program Outreach, Parent Involvement, and Parent Satisfaction. Three scales on school/program outreach, parent involvement, and parent satisfaction were developed using questions from the parent interview and were created using Master's partial credit model of scaling (Masters, 1982). This model provides estimates of item locations or calibrations along a common measurement continuum. Unidimensionality along the construct was determined by goodness-of-fit statistics. These infit statistics compare each child's observed response pattern to his or her expected response pattern for each specific overall score. The expected value of the mean square INFIT (MNSQ) is 1.00. Deviation above 1.00 indicates potential departures from unidimensionality; values less than 1.00 flag potential violations of local independence. A reasonable criterion value for goodness-of-fit for non-high-stakes measures is between 0.7 and 1.3 (Wright & Linacre, 1994). For all three measures, the INFIT (MNSQ) statistic was well within the acceptable bounds.

The school/program outreach scale reflected parent interview responses for three variables: the frequency of personal notes, notices, and phone calls from the school. The INFIT (MNSQ) statistic for this scale was 0.92.

The parent involvement scale included 11 items from the parent interview related to participation in school and classroom activities (e.g., attending a school meeting or a class event, a parent–teacher conference, or planning groups; volunteering in the classroom; helping with field trips; and fundraising); involvement in the IEP process (e.g., attending the meeting, involvement in generating goals, and parent satisfaction about their involvement in determining IEP goals); and the number of other parents from the child's program with whom the respondent spoke. The INFIT (MNSQ) statistic for this scale was 0.98.

The parent satisfaction scale comprised 17 variables, covering respondent satisfaction with the child's program/school and teachers; communication with staff; availability, quality, and amount of services received; feelings toward special education professionals, in general, and feelings toward the professionals who worked with their child, in particular; and satisfaction with the child's IEP goals. The INFIT (MNSQ) statistic for this scale was 0.97.

Functioning, Behavior, and Emerging Literacy Skills. Parents provided information about the severity of their child's disability, a six-component variable based on the framework of the ABILITIES Index (Bailey, Simeonsson, Buysse, & Smith, 1993) and consisting of cognition, communication, overall health and limitations that were due to health, regulation of activity level, regulation of attention, and understanding of language. Using the PEELS sample, validity of an abbreviated index was also established through significant correlations with age at which children began receiving special education or therapy service (r = .22), the teacher-reported amount of modification to curriculum materials (r = .42), and with the number of services the child received in the school (r = .37). The PEELS ABILITIES Index also significantly differentiated between children who took alternate and regular assessments in PEELS (Daley, Simeonsson, & Carlson, 2008).

Teachers provided information on children's problem behavior using a standardized rating scale, the Preschool and Kindergarten Behavior Scales, Second Edition (PKBS-2; Merrell, 2002). The Problem Behaviors composite comprises Externalizing and Internalizing Problems subscales. The composite score is converted to a standard score, which is based on a distribution with a mean of 100 and a standard deviation of 15. This scale has Cronbach alpha coefficients of .93 to .95 and 3-week test–retest reliability from .70 to .78 for the two subscales (Merrell).

A direct one-on-one assessment was used to obtain information on the preacademic skills of preschoolers in the sample. More than 400 assessors in participating LEAs were employed and trained to administer the one-on-one assessment. These assessors included school psychologists, teachers, administrators, and other individuals experienced in administering standardized assessments to young children with disabilities. In this report, we use data from two emerging literacy assessments, the Woodcock-Johnson III Letter–Word Identification subtest (Woodcock, McGrew, & Mather, 2001) and a psychometrically shortened version of the Peabody Picture Vocabulary Test-III (PPVT-III; Dunn & Dunn, 1997).

The Letter–Word Identification test measures the child's word identification skills. Initial items require the child to identify letters that appear in large type, and the remaining items require the child to pronounce words correctly. The standard scale score used in the Letter–Word Identification has a mean of 100 and a standard deviation of 15 (Woodcock et al., 2001). Test developers reported a 1-year test–retest correlation of .92 for children ages 4 to 7 (McGrew & Woodcock, 2001).

The PPVT-III is a measure of receptive vocabulary. The standard administration of the PPVT-III involves the assessor showing the child four pictures on a single page then asking the child to point to the picture that matches a word the assessor speaks aloud. PEELS uses a psychometrically adapted and shortened version of the PPVT-III. With the shortened version, all children are presented a core set of 14 items. If their performance on the core set of items is extremely low or high, they are administered an easier basal set of items (for children who get all or most of

the core items incorrect) or a harder ceiling set of items (for children who get all or most of the core items correct) to determine their basic or extended level of performance. The Item Response Theory (IRT) true-score for the items in the core item set was used to determine basal and ceiling decision rules appropriate for the PEELS target population. The IRT true-score is a model-based estimate of the number right raw score. Raw scores on the core item set were used to determine whether a child would actually receive either the additional basal or ceiling item set. The IRT estimate of test reliability for a population having distribution parameters equal to those of the PEELS latent ability distribution is $r = .78$. The sample-based IRT reliability obtained from ability estimates and standard errors of measurement in PEELS is $r = .86$.

Because the PEELS adapted version of the PPVT and the full PPVT have a common subset of items, it was possible to apply a linear transformation to the proficiencies of the PEELS assessment so that proficiencies were comparable to the national norming sample. Therefore, the PPVT short forms yield the same expected score values as the full PPVT, making use of the publisher's norms appropriate. The standard version of the PPVT-III has high alternate form reliability for the standardized scores (.88 to .96). Test–retest reliability coefficients were in the .90s (Dunn & Dunn, 1997). Children's scores on the various parts of the test were transformed into a single score and placed on a standardized scale with a mean of 100 and a standard deviation of 15.

The PPVT and Woodcock-Johnson III Letter–Word Identification subtest were selected because they were administered to the largest number of children in the sample (some measures were administered only to older or younger children). If the child could not follow simple directions, had a visual impairment that would interfere with test administration, or began the direct assessment but could not meaningfully participate because of a disability, an alternate assessment, the Adaptive Behavior Assessment System-II (ABAS-II; Harrison & Oakland, 2003) was used. Coefficient alpha reliabilities for the ABAS-II subtests on the teacher and day-care provider forms ranged from .72 to .97, with higher reliabilities for composite domain scores ($r = .92$ to .97). Test–retest reliabilities for periods of 2 days to 6 weeks ranged from .66 to .98, depending on age level and subtest. Approximately 100 students included in the analyses reported in this study had an alternate assessment; these children are included in all univariate analyses except for those involving the two literacy measures from the standard assessment battery.

Analysis

Logistic regression is a technique that is similar to multiple regression but is used with binomially distributed dependent variables—in this case, whether the child was declassified. To identify predictors of change in eligibility status, we conducted a series of univariate logistic regressions, with each individual predictor entered and with change in eligibility status as the dependent variable. We then conducted a multivariate logistic regression with all the individual predictors together. Logistic regression generates an odds ratio, which is a statistic that can provide information on the likelihood of a particular outcome. The adjusted odds ratio generated from the multivariate logistic regression represents, for each level of the independent variable, the increased probability that children were declassified relative to other levels of that variable. The odds ratio can be interpreted as a useful predictor of the outcome when the 95% confidence interval around the odds ratio does not include the value 1.0. Conversely, if the value of 1.0 is included in the 95% confidence interval, the results suggest that there are no significant differences in the probability of a given outcome for the two groups (i.e., the subgroup in question and the reference group).

In data preparation and analysis, imputation was conducted for selected items on the child assessment data, teacher questionnaire data, and parent interview data. In general, the item missing rate was quite low, mostly less than 10%. Different methods of imputation were used depending on the nature of missing data and available information for imputation. The methods included hot-deck imputation, regression, external data source, and deterministic or derivation method, based on the internal consistency principle of interrelated variables. In some cases, a pos-

tulated value was imputed after analyzing missing patterns.

The data presented here are population estimates statistically weighted to represent all children ages 3 through 5 receiving special education services. Analyses were conducted using WesVar Version 4.2 (Westat, 2002) and PROC SURVEYLOGISTIC in SAS to account for the complex probability sampling used in PEELS.

RESULTS

Between winter/spring of school year 2003–2004 and winter/spring of school year 2004–2005, 16% of preschoolers with disabilities had their special education services discontinued. Of those children who were receiving services in 2004–2005, once again, 16% were no longer receiving special education services 1 year later.

Univariate Prediction of Change in Eligibility Status

Table 1 presents frequencies for all predictors, and Table 2 presents the univariate odds ratios for each predictor as it relates to declassification.

Demographic and Household Characteristics. By 2005–2006, 31% of girls and 24% of boys were declassified; the odds of declassification for girls were 1.41 times as high as the odds were for boys. Income was not significantly associated with declassification, but there was an effect for race/ethnicity. Children who were White were more likely than African American or Hispanic children to be declassified; 27% of White children, 20% of African American children, and 17% of Hispanic children left special education by 2005–2006.

Disability Category. Certain disability groups had a greater percentage of children declassified than others. By 2005–2006, 37% of children with a speech or language impairment and 21% of those with a developmental delay were declassified. Thirty-nine percent of children identified as having an emotional disturbance were also declassified. Despite the high percentage of children in the emotional disturbance group who were declassified, this group represents only 1.1% of the sample and therefore only 1.4% of the total children declassified by 2005–2006 (see Table 3). In contrast, children with a speech or language impairment constitute 50% of preschoolers with disabilities and approximately 70% of all preschoolers who were declassified. Every disability category except mental retardation had one or more children declassified.

District Characteristics. The probability of declassification was relatively evenly distributed across districts based on wealth, with high-, medium-, low-, and very low-wealth districts each declassifying between 21% and 30% of children. In contrast to district wealth, both overall district size and district preschool special education enrollment were significantly associated with declassification. Approximately 37% of children from small districts and 20% from very large districts were declassified, and, in fact, total district size was a significant predictor of declassification. Likewise, compared to districts with large and very large preschool special education programs, those with small programs were more likely to declassify students; the odds of declassification for children from districts with small preschool special education programs was twice that of children from districts with very large programs. Last, children from rural areas were significantly more likely to be declassified than those from suburban and rural areas (34%, 26%, and 21%, respectively). All odds ratios are presented in Table 2.

School/Program Outreach, Parent Involvement, and Parent Satisfaction. Univariate logistic regressions showed lower odds of declassification for children whose parents reported more frequent program/school outreach, in the form of personal notes, notices, and phone calls. Higher levels of parent satisfaction were associated with greater likelihood of declassification; there was no significant effect for parent involvement.

Ability and Functioning. Comparisons of children's ability and functioning revealed significant baseline (2003–2004) differences between children subsequently declassified by 2005–2006 and those who continued to receive services under IDEA; and, across all measures, higher scores (or better functioning) were a significant predictor of declassification. Children who were declassified had standardized scores that were two thirds of a standard deviation higher on the baseline measure of the PPVT and four tenths of a standard deviation higher on the baseline

TABLE 1

Sample Characteristics and Percentage of PEELS Subsample Who Were Declassified From 2003–2004 through 2005–2006

	Children Declassified	
Variable (Total unweighted N*)*	*Unweighted* N	*Weighted* % (SE)
Gender		
Female (*N* = 915)	163	31.0 (3.0)
Male (*N* = 2,188)	341	24.0 (1.7)
Household income		
More than $40,000 (*N* = 1,353)	275	28.3 (1.9)
$20,001-$40,000 (*N* = 842)	133	25.2 (2.1)
$20,000 or less (*N* = 791)	96	22.1 (3.9)
Ethnicity		
White (*N* = 1,875)	353	27.2 (2.1)
Hispanic (*N* = 643)	75	16.9 (4.3)
African American (*N* = 319)	25	20.1 (2.4)
Disability category		
Speech or language impairment (*N* = 1,562)	369	36.7 (2.1)
Autism (*N* = 188)	6	2.9 (1.9)
Developmental delay (*N* = 806)	96	20.5 (2.4)
Emotional disturbance (*N* = 44)	6	38.7 (15.8)
Learning disability (*N* = 73)	2	3.1 (2.8)
Mental retardation (*N* = 86)	0	0
Orthopedic impairment (*N* = 43)	3	6.7 (4.6)
Other health impairment (*N* = 56)	1	5.6 (3.2)
Low-incidence disability (*N* = 150	15	12.5 (3.9)
District wealth		
High (*N* = 631)	156	27.1 (2.3)
Medium (*N* = 554)	124	24.2 (2.7)
Low (*N* = 518)	155	29.6 (4.5)
Very low (*N* = 302)	69	20.8 (2.2)
District size		
Very large (*N* = 763)	100	19.7 (2.0)
Large (*N* = 448)	73	24.7 (4.5)
Medium (*N* = 1,014)	171	27.5 (3.0)
Small (*N* = 526)	109	36.8 (4.2)
District size of special ed program		
Very large (*N* = 402)	83	19.3 (1.7)
Large (*N* = 560)	131	23.9 (4.1)
Medium (*N* = 489)	112	23.8 (3.2)
Small (*N* = 554)	178	36.3 (3.0)
Metropolitan status		
Urban (*N* = 549)	130	21.4 (2.1)
Suburban (*N* = 1,047)	259	26.0 (1.8)
Rural (*N* = 409)	115	34.3 (5.5)

Note. Percentages describe a nationally representative weighted sample. *N*s vary because of missing data.

TABLE 2

Unadjusted Odds Ratios (OR) and Adjusted Odds Ratios (AOR) for Children Declassified From 2003–2004 Through 2005–2006

	Children Declassified			
	Univariate OR		*Multivariate AOR*	
Predictor Variable	*(95% CI)*		*(95% CI)*	
Control variable:	—			
Remained in preschool			1.00	
Did not remain in preschool	—		.460	(.183, 1.16)
Gender				
Female	1.00		1.00	
Male	.706	(.518, .961)*	.603	(.369, .985)*
Household income				
More than $40,000	1.00		1.00	
$20,001-$40,000	.850	(.610, 1.18)	.763	(.436, 1.33)
$20,000 or less	.716	(.486, 1.06)	1.12	(.603, 2.08)
Disability category				
Speech or language impairment	1.00		1.00	
Autism	.053	(.020, .141)***	.083	(.013, .554)**
Developmental delay	.446	(.317, .628)***	.809	(.482, 1.36)
Emotional disturbance	1.09	(.261, 4.53)	.108	(.014, .822)*
Learning disability	.056	(.011, .270)**	< .001	(< .001, < .001)***
Mental retardation	<.001	(<.001, < .001)***	< .001	(< .001, <.001)***
Orthopedic impairment	.123	(.029, .522)**	.158	(.029, .874)*
Other health impairment	.102	(.013, .765)*	< .001	(< .001, < .001)***
Low-incidence disability	.245	(.116, .519)**	.076	(.024, .244)***
Ethnicity				
White	1.00		1.00	
Hispanic	.674	(.455, 1.000)*	1.12	(.597, 2.11)
African American	.542	(.303, .970)*	1.37	(.606, 3.11)
District wealth				
High	1.00		1.00	
Medium	.856	(.590, 1.242)	.634	(.311, 1.29)
Low	1.13	(.776, 1.64)	2.35	(1.21, 4.56)*
Very low	.708	(.459, 1.09)	1.86	(.796, 4.36)
District size				
Very large	1.00		1.00	
Large	1.33	(.822, 2.16)	.649	(.228, 1.85)
Medium	1.54	(1.03, 2.29)*	.739	(.266, 2.06)
Small	2.37	(1.54, 3.64)***	.689	(.210, 2.26)
District size of special ed program				
Very large	1.00		1.00	
Large	1.31	(.857, 2.00)	1.63	(.615, 4.34)
Medium	1.30	(.824, 2.06)	3.02	(.964, 9.49)
Small	2.38	(1.59, 3.57)***	5.21	(1.54, 17.61)*
Metropolitan status				
Rural	1.00		1.00	
Suburban	.673	(.462, .980)*	.987	(.488, 2.00)
Urban	.521	(.344, .790)**	.973	(.412, 2.30)

continues

TABLE 2 *Continued*

Predictor Variable	Children Declassified: Univariate OR (95% CI)	Children Declassified: Multivariate AOR (95% CI)
Family/teacher		
Parent involvement	1.16 (.988, 1.37)	.987 (.783, 1.25)
School/program outreach	.848 (.741, .971)*	1.05 (.826, 1.32)
Parent satisfaction	1.15 (1.00, 1.32)*	.972 (.773, 1.22)
Child ability/functioning		
Problem behaviors	.961 (.950, .972)***	.983 (.967, .999)*
Child severity	.818 (.779, .859)***	.894 (.827, .967)**
PPVT	1.05 (1.04, 1.06)***	1.03 (1.01, 1.05)**
Letter-Word Identification	1.02 (1.01, 1.03)***	1.01 (.996, 1.02)

PPVT = Peabody Picture Vocabulary Test.
*$p < .05$. **$p < .01$. ***$p < .0001$.

Letter–Word Identification than children who continued to receive special education services. Teacher report of having fewer behavior problems and parent report of less severe impairment were also positively associated with declassification.

Multivariate Prediction of Change in Eligibility Status

As described earlier, a number of demographic, district, and family/teacher characteristics as well as child performance were predictors of declassification, when examined individually. In Table 2, we present the adjusted odds ratios (AORs) for 2-year declassification to illustrate how selected factors relate to change in eligibility status when examined together.

When accounting for all other factors, several demographic and district characteristics remained significant. The odds of declassification for girls were about 1.7 times as high as the odds for boys ($p = .0433$). The size of the preschool special education program also remained significant. The odds of declassification for children from districts with small preschool special education programs was more than five times as high ($p = .0079$) as the odds for children from districts with very large programs.

District wealth became a significant predictor in the multivariate analysis, although it was not significant in the univariate analysis. No significant differences were observed between high- and medium-wealth districts. The odds of declassification for children from low-wealth districts, however, were about twice as high as those for children from high-wealth districts ($p = .0113$) and 3.8 times as high as for children from medium-wealth districts ($p < .0001$); the odds of declassification for children from low-wealth districts was also nearly twice as high as for children from very low-wealth districts ($p = .0027$).

Disability category was strongly related to declassification. After controlling for all other variables, the odds of declassification for children categorized as having speech or language impairments were approximately 6 times as high as for children with orthopedic impairments, 8 times as high as for children with emotional disturbance,

TABLE 3

Percentage of all Children Declassified From 2003–2004 Through 2005–2006 Who Were From Each Disability Category

Disability Category	Children Declassified Weighted % (SE)
Speech or language impairment ($n = 369$)	72.5 (3.7)
Autism ($n = 6$)	.64 (.39)
Developmental delay ($n = 96$)	21.6 (2.9)
Emotional disturbance ($n = 6$)	1.4 (.94)
Learning disability ($n = 2$)	.26 (.21)
Mental retardation ($n = 0$)	0
Orthopedic impairment ($n = 3$)	.53 (.36)
Other health impairment ($n = 1$)	.54 (.30)
Low-incidence disability ($n = 15$)	2.5 (.74)

and more than 12 times as high as for children with autism and low-incidence disabilities. The number of children with learning disabilities and other health impairments was too small to make interpretation of the logistic regression reliable.

Of the four variables that reflect children's ability and functioning, three were significant predictors of declassification for children by 2005–2006. The odds of declassification were significantly higher for children with less severe disabilities, and better performance on the PPVT was also significantly associated with declassification. The odds of declassification were lower for children with more severe behavior problems.

A number of variables that were significantly associated with declassification in the univariate analyses did not reach statistical significance in the multivariate model. These included race/ethnicity, metropolitan status, district size, school/program outreach, parent satisfaction, and Letter–Word Identification scores. In addition, household income and parent involvement were not significant predictors of declassification in either the univariate or multivariate analyses.

DISCUSSION

This study examined whether exiting special education—declassification—can be predicted from factors that logically reflect children's abilities and functioning, given that receipt of services is intended for those who need it most. Of determining which children *enter* special education, Hibel and his colleagues (2006) asked:

> What if, independent of the student's ability to learn, special education placement is affected by characteristics such as the child's social class background, race/ethnicity, or gender? What if such placement varies according to the social context of the school, or of the family within the school? (p. 3)

In this study, one goal was to address the question raised by Hibel and his colleagues with respect to who *leaves* special education. Our regression models included factors representing both ability and functioning and those such as social class background, race/ethnicity, gender, and district characteristics, which we believe should be unrelated to declassification.

Our results suggest some positive news: children's problem behaviors, severity of impairment, and cognitive functioning were all significant predictors of declassification and in the expected direction. This finding is consistent with past research (e.g., Halgren & Clarizio, 1993; Ysseldyke & Bielinski, 2002) and suggests that some of the variance in declassification can be accounted for by children's performance on measures closely aligned with special education eligibility.

In addition, the troubling effect of some factors, such as metropolitan status and race/ethnicity, disappeared once other variables were controlled. This finding is encouraging for those looking for greater objectivity in the special education eligibility process, given the long history of overrepresentation of African American children in certain disability categories. The finding may be considered in conjunction with recent data from Hibel and colleagues (2006) that suggest overrepresentation of African American children has waned. One explanation for a shift—if such a shift is indeed occurring—may be a greater emphasis on identifying and rectifying disproportionality; starting with IDEA 1997, states have been required to collect data to determine if significant disproportionality on the basis of race is occurring.

The less encouraging results, however, are that some factors unrelated to a child's individual needs continued to show an effect, even when more proximal measures of children's abilities were included. Most notably, the odds of declassification were greater for children from low-wealth districts than from high-wealth districts and those districts with smaller preschool special education programs compared to larger ones. One explanation for this finding could be that low-wealth districts and those serving fewer children in special education are more sensitive to the economics of special education and therefore must be more careful in selecting which children receive services. Districts with fewer special education students and lower wealth may have limited service options; an administrator may exit a child with lesser needs to serve a child with greater needs. Or, if a child needs a service that is unavailable, an administrator may choose to formally exit a child from special education rather than risk noncompliance, although both these actions are clearly inconsistent with the mandate of IDEA.

At least historically, this may have been the case; Thurlow, Lehr, and Ysseldyke (1987) found that 24% of surveyed preschool programs based exit decisions on staffing availability.

A more positive interpretation is that districts with fewer young children in special education may have greater familiarity with each individual child and a more flexible infrastructure. In this situation, an administrator could make a well-planned choice to provide support for children at the margins of eligibility by working more informally with teachers rather than through an IEP. Whatever the reason for this finding, the association between district factors and declassification deserves further examination from a policy equity perspective and is also important in the context of both accountability and program improvement. However, it should be noted that the relationship between district wealth and declassification was not a wholly linear one; children from low-wealth districts were also more likely to be declassified than children from very low-wealth districts. We do not have a straightforward explanation for this finding, but one possibility is that the smaller number of students from very low-wealth districts (approximately half the number as from low wealth, medium, and high wealth) may have contributed to unreliability of the estimate in this case.

Our study found that, once other factors were controlled, school outreach, parent involvement, and parent satisfaction did not predict declassification. It is possible that our parent measures were not sensitive enough to detect the influence parents may have on this process or that, despite its intuitive appeal, these are not powerful factors in declassification once more proximal indicators of child functioning are considered.

We cannot make any definitive statements about whether a 16% annual declassification rate is too high, too low, or just right. Likewise, we cannot say whether declassification was appropriate for any individual child in the sample. Some children may leave special education because it is their parent's choice to remove them, whether recommended by the school or not. In a recent report of declassification among school-age children, 5% of students left special education because either the parent did not want their child to be in the program or the child did not want to be in the program (SRI International, 2005).

There is reason to believe that a subgroup of children declassified from special education may need services at a later time. Carlson and Parshall (1996) found 11% of children who exited special education in Michigan had teachers who felt the students still needed services, and ultimately, 4% of the students who left special education were found to be eligible again within 3 years. Similarly, Ysseldyke and Bielinski (2002) found that 16% of children who moved to general education after fourth grade returned to special education after fifth grade and noted that more than 6,100 students in their sample changed special education status at least twice over a 5-year period. Of course, it is possible that it was appropriate to both leave and return for some of these children. Therefore, although our data show that children who are declassified, as a group, were performing better on standardized measures and teacher rating scales than children who remained in special education, it may take a number of years to determine whether they continue to perform well without special education support.

Some children may leave special education because it is their parent's choice to remove them, whether recommended by the school or not.

This study had several limitations. First, teacher report formed the primary source of data on classification status. Clearly, independent confirmation through school records would have been preferable, but, because of the large-scale nature of the study, such data collection was not conducted. Second, although PEELS is a nationally representative sample, and the data presented here can be generalized to all preschoolers receiving special education services in the United States in 2003–2004, the conclusions drawn may not apply to older children declassified from special education, because preschoolers, as a group, have less severe impairments than their school-age peers; approximately 75% of preschoolers in special education were categorized as either having a speech or language impairment or a developmental delay.

In sum, this study provided an examination of declassification over a 2-year period and found

the percentage of preschoolers leaving special education each year to be in the range of previous estimates. In contrast to past research, our results demonstrated relationships between declassification and a number of independent variables, including child gender, the number of preschoolers with disabilities served within a district, and district wealth. If these factors do indeed influence declassification decisions, then children may lose vital support and be placed at risk for school failure (Thurlow et al., 1988). Districts should be aware of this potential when reevaluating children. The controlled data collection and use of multiple data sources across time in the PEELS sample offers some of the strongest evidence to date of the complexity of declassification decisions, and suggests a need for more explicit criteria to assist administrators in the process. If such criteria can be developed, they will provide a degree of standardization that ensures the appropriate children are receiving services. Such criteria can also ensure that the process of declassification remains an individualized one, as intended under the regulations of IDEA.

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