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Preschool and Child Care Expulsion and Suspension

Rates and Predictors in One State

Walter S. Gilliam, PhD; Golan Shahar, PhD

Rates and predictors of preschool expulsion and suspension were examined in a randomly selected sample of Massachusetts preschool teachers ($N = 119$). During a 12-month period, 39% of teachers reported expelling at least one child, and 15% reported suspending. The preschool expulsion rate was 27.42 per 1000 enrollees, more than 34 times the Massachusetts K-12 rate and more than 13 times the national K-12 rate. Suspension rates for preschoolers were less than that for K-12. Larger classes, higher proportion of 3-year-olds in the class, and elevated teacher job stress predicted increased likelihood of expulsion. Location in a school or Head Start and teachers' positive feelings of job satisfaction predicted decreased likelihood of expulsion. Expulsion was relatively rare in classes where both class size and teacher job stress were low. A higher proportion of Latino children in the class and lower teacher job satisfaction predicted an increased likelihood of suspension. Implications are discussed regarding policy, prevention, and future research. **Key words:** *behavior problems*, *child care*, *expulsion*, *prekindergarten*, *preschool*

OVER the past few years, news articles about young children suspended or expelled from preschool or kindergarten have been rather common. A Web search yielded stories describing 33 kindergartners expelled from Philadelphia public schools in 1 year (Dale, 2002), 5 kindergartners expelled from Cincinnati schools (Mrozowski & Byczkowski, 2004), a 2-year-old toddler (along with his 5-month-old sister) being expelled from a North Carolina child care program after he bit another toddler (Little, 2003), statewide efforts to address the problem of preschool and child care expulsion in Michigan (Higgins, 2004) and Connecticut (Cuda, 2004), and a new effort by Family Communications, the Pittsburgh-based group that produced *Mr. Roger's Neighborhood*, to help teachers address behavioral problems in preschool and reduce the likelihood of expulsion (Kalson, 2004). Yet, there is virtually nothing in the peer-reviewed scientific literature on the topic of expulsion or suspension for young children.

Expulsion is the most severe disciplinary action that an educational institution can take in response to student behavior. Typically, *expulsion* is defined as the complete and permanent removal of a child from an entire educational system. In the case of school-aged children in public schools, expulsion is typically the last of a series of disciplinary actions that ultimately culminates in the student being barred from attending any educational programming in that school system. Transferring students with behavioral problems to other educational settings within the school

From Yale University Child Study Center, New Haven, Conn.

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Corresponding author: Walter S. Gilliam, PhD, Yale University Child Study Center, 230 S Frontage Rd, New Haven, CT 06520 (e-mail: walter.gilliam@yale.edu).

system or another program that is contracted by the school system (eg, self-contained special education programs and alternative schools) is not considered expulsion. Rather, expulsion represents a complete cessation of educational services without the benefit of alternative services provided by or through the educational program that has expelled the child. Suspension, however, is a temporary version of expulsion—one where the child may be allowed to return to the educational program after the child has been removed for a certain number of days. The US Department of Education (National Center for Educational Statistics, 2001) defines *suspension* as being either "in-school" or "out-of-school." Out-of-school suspension involves barring the student from attending any educational services at the school, whereas in-school suspension typically results in the student being educated in a special place at the school that is away from the other students. Throughout this article, suspension refers to out-of-school suspension only.

As early education opportunities continue to increase for preschoolers at risk for educational failure, the potential for preschool expulsion or suspension may also increase. Since the 1980s the number of children served in state-supported preschool programs has increased dramatically. In 1980, only 10 states provided publicly funded prekindergarten services, primarily targeting low-income children in the 3- through 4-year-old range. Today, there are at least 52 statewide prekindergarten systems operating in 40 states and serving nearly 1 million preschoolers each year, with an aggregated annual budget exceeding $2.4 billion (Barnett, Robin, Hustedt, & Schulman, 2003; Gilliam & Zigler, 2004). These programs are implemented across a variety of settings that include public schools, for-profit child care facilities, Head Start grantees, and a host of nonprofit settings, such as faith-based organizations and social service agencies. The stated goal of these state-supported systems is to provide children with experiences necessary to enter kindergarten as ready learners.

Most public-funded early education and child care in America (including Head Start, nearly all state-funded prekindergarten systems, and federally supported child care) target young children from low-income families in order to make sure that children who need the service most are able to receive it. It has been long known that children most at risk for educational failure are the ones least likely to attend preschool (West, Hausken, & Collins, 1993). Although public-funded early education and child care services target children from low-income families in order to improve their participation rates, many participation barriers exist (Gilliam & Ripple, 2004; Mitchell, 2001). Challenging behaviors in preschoolers may pose a significant participation barrier, if the behavioral problems are so great as to result in the child being excluded from services (McGoey, Eckert, & DuPaul, 2002).

About 8% of all preschoolers (children aged 3–5 years) exhibit behavioral problems severe enough to warrant a psychiatric diagnosis (Keenan & Wakschlag, 2004). Behavioral problems in preschoolers have been associated with later behavioral problems and poorer peer social standings during kindergarten (Keane & Calkins, 2004). Furthermore, it has been demonstrated that behavioral problems during the preschool years are associated with decreased educational achievement test scores during kindergarten and that this relation is mediated by the continuance of behavioral difficulties during kindergarten (Howse, Calkins, Anastopoulos, Keane, & Shelton, 2003).

Only a few empirical studies have been conducted on expulsion or suspension at any grade level, and researchers have largely ignored expulsion and suspension during the preschool years. In one of the few empirical studies of predictors of expulsion, 58 potential predictors that described 33 secondary schools and their communities were analyzed in relation to expulsion rates in Sheffield, England (Galloway, Martin, & Wilcox, 1985). It was concluded that expulsion policies in Sheffield's secondary schools

were largely idiosyncratic and not predictable by community- and school-level risk factors.

Nonetheless, because behavioral problems are the definitional precipitants of expulsion and suspension, risk factors for severe behavioral problems during the preschool years may also be risk factors for preschool expulsion and suspension. Children from low-income families, such as those targeted by most public-supported preschool efforts, may be at increased risk of expulsion and suspension during the preschool years. In a systematic review of 30 studies of behavioral problems in preschoolers conducted between 1991 and 2002, it was found that low family income was associated with a significant increase in risk for behavioral problems (Qi & Kaiser, 2003).

Teacher mental health status may also be related to preschool expulsion and suspension. Maternal depression has been implicated as a significant risk factor for behavioral problems during the preschool years, and in many cases preschoolers may spend as many waking hours in the care of preschool teachers as they do with their mothers. Considerable research has documented the relation between maternal depression and compromised caregiving behaviors, which are then associated with increased behavioral problems in children and decreased cognitive functioning (Cicchetti, Rogosch, & Toth, 1998; Lyons-Ruth, Connell, Grunenbaum, & Botein, 1990; Weissman, Warner, Wickramaratne, Moreau, & Olfson, 1997). Maternal depression has been shown to be related to preschool behavioral problems as mediated by decreased frontal and parietal brain activation in children, and maternal depression may serve as a proxy for other familial risk factors, such as family discord and parental stress (Dawson et al., 2003).

Although these associations between behavioral problems and caregiver depression have been documented for mothers, it seems likely that depression among preschool teachers and child care providers may also have detrimental effects on adult-child relationships and children's development. In one of the few studies of mental health variables in child care providers (Hamre & Pianta, 2004), self-rated teacher depressive symptoms were found to be related significantly to caregiving that is less sensitive, more withdrawn from the children, and more intrusive and negative. Although all 3 relations were statistically significant, each was rather small in terms of effect—with depressive symptoms accounting for only 1% of the unique variance in each. The relation was more pronounced for teachers in family-based child care settings, in work settings where they have less contact with other adults, and for teachers with lower educational levels.

Structural characteristics of the preschool setting may also be related to the risk for expulsion and suspension. Data from the National Institute of Child Health and Human Development Study of Early Child Care suggest that the number of hours spent by a child in nonmaternal care during the years before kindergarten entry is related to behavioral problems during the elementary school years—with increased number of hours in such care being associated with increased aggressivity, assertiveness, and defiance as rated by preschool and kindergarten teachers (NICHD Early Child Care Research Network, 2003). Although children who spent a large amount of time in nonmaternal care exhibited increased behavioral problems relative to children who did not, the degree of behavioral problems for both groups was still within average normative limits.

Three reports not in the peer-reviewed literature provide some indication of the prevalence of expulsion and suspension in kindergarten and preschool. During the 1999–2000 academic year, 311 kindergartners in Connecticut were suspended for a variety of offenses (Connecticut State Department of Education, 2002).*

*The referenced document was generated by the Connecticut State Department of Education at the request of the Connecticut Commission on Children, which expressed considerable state legislative interest regarding the suspension or expulsion of kindergartners. The Connecticut Office of the State Child Advocate has recently taken interest in this issue as well.

Nearly all (92%) of these suspensions involved the child being barred from school attendance for up to 10 consecutive days, with the rest of the suspensions being served on school grounds. About 47% of offenses were the result of violent behavior (eg, hitting, kicking, biting, and throwing objects). During that same school year, there were 42,193 kindergartners enrolled, indicating a suspension rate of 7.37 kindergartners per 1000 enrolled. Suspended kindergartners were overwhelmingly male (79%) and either African American (52%) or Latino (35%). Most of the suspended kindergartners (77%) lived in one of Connecticut's most impoverished cities. Behavioral problems often persisted after the suspension, as 58.1% of all kindergartners with disciplinary offenses were multiple offenders. No kindergartner was expelled during the 1999–2000 school year.

In Massachusetts, the rate of expulsions during K-12 increased from 1.7 per 1000 students enrolled during 2000–2001 to 2.0 per 1000 during 2002–2003 (Massachusetts Department of Education, 2004). During these 3 years, the rate of expulsion did not exceed 1 per 1000 until students reached sixth grade, where the rates increased steadily until ninth grade (where the rates ranged across the years between 5.3 and 6.7 per 1000 students) and then decreased until 12th. Across the 3 years, kindergartners were expelled at a rate of only 0.1 to 0.3 per 1000. Across the K-12 grade range, the rate of expulsions for males was more than 3 times that for females, African American and Latino students had a 4 to 5 times higher rate relative to White non-Latino students, and the expulsion rate for students in special education was more than twice that for students in regular education. Zero tolerance rules regarding possession of weapons (usually knives) or illegal substances accounted for 47% to 48% of the offences, and assaults accounted for 20% to 28%. Demographic and offense data were not presented by grade level.

The only known survey of expulsion practices in preschool programs was conducted in the Detroit, Mich, area during the 1998 academic year, as part of a statewide effort to learn more about expulsion practices in child care programs (Grannan, Carlier, & Cole, 1999). Surveys were mailed to directors of 127 "preschools and daycare facilities" in Wayne County, Mich. Directors were asked to answer a series of questions about expulsion and behavioral problems regarding children in their programs between the ages of $2\frac{1}{2}$ and 5 years. Respondents indicated that 41 preschoolers "had to leave [their] program due to behavioral problems." These data were used to report an expulsion rate of 2.75 expulsions per 100 children enrolled. Unfortunately, the report does not indicate how this rate was computed. Also, the response rate for this survey was only 27.5%, and no analyses for potential response bias were reported.

The purpose of the current article was to report the rate of expulsion and suspension in Massachusetts' preschool programs and explore potential predictors of risk for expulsion and suspension. The following questions guided the design and analyses. What is the rate of preschool expulsion and out-of-school suspension? How does this rate compare to rates obtainable for K-12 students? Staff at what types of early education and child care programs (eg, school-based, for-profit child care) is most likely to expel or suspend preschoolers? What factors (at the levels of program, teacher, and classroom characteristics) predict preschool expulsion and suspension? Are preschool teachers who report greater degrees of psychological distress more likely to expel or suspend?

METHODS

Participants

A sample of 185 preschool classrooms* serving children aged 3–4 years were

*For simplicity, the terms *class* and *classroom* are used to refer to a group of children provided care or education predominantly in one room ofa child care or early education setting. Also, the term *teacher* is used throughout this article torefer to the staff person most responsible for the daily operations in this classroom, regardless of thelocation of the program.

selected randomly from a list of 542 licensed child care providers and public school–based prekindergarten programs in Massachusetts during the 2000–2001 school year, obtained from the Massachusetts Department of Education and the Massachusetts Office of Child Care Services. These programs included a mix of public and private schools, Head Start, and for-profit and nonprofit child care programs in a variety of settings. Family-based child care programs were excluded from this study. The sample was stratified across the state's 6 geographical regions (West, Central, Northeast, Southeast, Metro-West, and Metro-Boston), randomly selecting 10 programs from each region for a total of 60 program sites. In these 60 sites, a total of 185 classrooms served children in the 3- to 4-year-old range ($M = 3.08$ classrooms; SD = 1.51).

In each selected classroom, the teacher most responsible for daily care and education completed all measures. Surveys were obtained from 119 teachers, indicating an overall response rate of 64.32%. In order to evaluate potential response bias, all sampled classrooms were coded for geographic region of the state (1–6) and program setting (public or private school, Head Start, for-profit child care center, faith-affiliated program, or other nonprofit child care program). Teacher response rates did not differ significantly across geographic region or program setting. Across the 6 geographic regions, response rates ranged from 58.14% to 88.89% ($F_{5,179} = 1.25$; $P = .29$). Response rates across the 5 types of provider settings ranged from a low of 61.54% in for-profit child care settings to a high of 85.71% in other nonprofit child care centers ($F_{4,180} = 1.00$; $P = .39$).

As shown in Table 1, most of these teachers were employed by child care programs located in either for-profit centers (39.50%) or nonprofit agencies (27.73%). Of those in for-profit child care centers, 57.45% were located in for-profit chains, with the rest being independent centers. Head Start and public school–based classes were combined, since 3 of the 4 Head Start classes were located in Head Start programs where the public school was the grantee. Of the 12 classrooms listed as "Other," half were located in institutions of higher education. Most of the classrooms were open 12 months per year and offered extended hours care (9 or more hours per day). Almost all of the teachers were female, and most (89.57%) reported their race as White, non-Latino. Although nearly a quarter of the teachers reported no education beyond a high-school diploma or General Educational Development (GED) certificate, 38.65% reported having earned a BA or higher. More than 15% reported a BA or higher in the field of early childhood education. On average, these providers had worked in child care or educational settings for more than 10 years, most of it with children in the 3- to 4-year-old range. However, experience was positively skewed, with the median years of experience in a preschool setting being 6.50.

Procedures

Preschool expulsion and suspension data

The 185 teachers most directly responsible for each of these classrooms were mailed a comprehensive 15-page survey, a postage-paid return envelope, and a cover letter explaining the study and offering a $20 incentive for participation. The director or site-level administrator was contacted at each of the 60 sites in order to explain the study and request the number of teachers/classrooms at that site. Surveys were mailed directly to the teachers' worksite in separate envelopes addressed to each teacher by name.

K-12 expulsion and suspension data

In order to calculate the number of K-12 students expelled and suspended, data were obtained from the Elementary and Secondary School Survey: 2000 (ESSS; National Center for Educational Statistics, 2001). The ESSS is a survey of district-level administrators for more than 92,000 K-12 public schools in the United States. More than 97% of the nation's schools completed the survey. Data indicating the total enrollment numbers and numbers

Table 1. Characteristics of programs, classrooms, children, and teachers

	n[a]	%	*M*	SD
Program setting	119			
Head Start or public school		3.36		
Private school		12.61		
For-profit child care center		39.50		
Faith-affiliated program		6.72		
Nonprofit agency		27.73		
Other		10.08		
Program hours per day	118		9.19	2.68
Program months per year	118		11.62	0.99
Enrolled class size on October 1	118		16.15	5.14
Maximum child-teacher ratio	111		7.48	3.16
Child age (October 1), y	118			
Younger than 3		20.90		
3		24.91		
4		35.48		
5 and older		18.81		
Child racial/ethnic composition	118			
Asian		3.85		
Latino/Hispanic		10.64		
Native American		0.38		
Black (non-Latino)		11.12		
White (non-Latino)		66.76		
Other/multiracial		4.56		
Teachers' gender	119			
Female		98.32		
Teachers' race/ethnicity	115			
Asian		0.87		
Latino		2.61		
Native American		0.00		
Black		5.22		
White		89.57		
Mixed/other		1.74		
Teachers' highest degree/credential	119			
High school/GED		24.37		
CDA		10.92		
AA		26.05		
BA		30.25		
MA		8.40		
BA or higher in ECE		15.13		

[a] *n* refers to the number responding to this item.

of expulsions and suspensions for the 1999–2000 school year for all of the nearly 15,000 school districts were downloaded from the US Department of Education Web site. The ESSS defined *expulsion* as follows: "The exclusion of a student from school for disciplinary reasons that results in the student's removal from school attendance rolls or that meets the criteria for expulsion as defined by the appropriate state or local school authority. Not suspension." Data only for suspensions that were served "out-of-school" are presented

in this article. In the ESSS, *out-of-school suspension* was defined as follows: "Excluding a student from school for disciplinary reasons for one school day or longer. Not students who were suspended from the classroom but who served the suspension in the school." Data are expressed for the total number of children grades kindergarten through 12, but are not disaggregated by grade level. Formulas were written to calculate within each state and for the nation the proportion of expulsions in each state by diving the total number of expulsions in surveyed districts by the total number of students enrolled, both for each state and for the nation on the whole. The same was done for out-of-school suspensions. For ease of reporting, these quotients were multiplied by 1000 to calculate the number of expulsions and suspensions in each state per 1000 students enrolled.

Measures

Data for Massachusetts' preschool programs were obtained from a comprehensive survey of prekindergarten teachers regarding the characteristics of their programs' services, teachers, and students. The survey was developed as a pilot instrument for a national study of prekindergarten teachers in a sample of about 4000 classrooms. The survey was designed to elicit teachers' reports regarding the characteristics of their programs in order to map those responses onto various structural variables collected in national policy studies regarding prekindergarten (Barnett et al., 2003; Gilliam & Ripple, 2004; Schulman, Blank, & Ewen, 1999). In addition, several validated measures of teachers' pedagogical style, job stress, and depression were included. The sections of this comprehensive survey that provide data for this article are described below.

Preschool expulsion and suspension practices

Four questions were asked regarding preschool expulsion and suspension practices. Teachers were asked whether over the past 12 months they had expelled a child from their preschool program because of behavioral concerns. Expulsion was defined as terminating the child's participation in the program. Teachers were also asked whether in the past 12 months they had suspended a child from their program because of behavioral concerns, with suspension defined as not allowing the child to attend the program for a certain number of days, analogous to "out-of-school suspension" as defined in the ESSS. For both expulsion and suspension, children who were transitioned directly from the classroom or program to a different program deemed by the program to be a more appropriate setting for the child (eg, a special education or transitional classroom or a therapeutic preschool program) were not included. Teachers were allowed to respond with "yes," "no," or "I did not teach here last year." Teachers who responded "yes" were asked to report the number of different children expelled and suspended over the past 12 months. Only 2 teachers endorsed the third response for these items, and their data do not appear in analyses regarding expulsion and suspension practices.

Teachers' job control, job demands, and job resources

The Child Care Worker Job Stress Inventory (Curbow, Spratt, Ungaretti, McDonnell, & Breckler, 2000) consists of 3 parts: (1) Job Control, a 17-item measure of how much control the teacher feels that she or he has over things that occur at or around work, (2) Job Demands, a 22-item measure of stressful situations and demands associated with providing early care and education, and (3) Job Resources, a 17-item measure of things associated with providing early care and education that may help contribute to the teacher feeling positive or satisfied about her or his work. All items are rated on a 5-point Likert-type scale. The survey was validated originally on a sample of 196 randomly selected child care workers in Maryland, and Cronbach αs for the 3 subscales ranged from .77 to .89. Factor analysis and concurrent validity studies, using other measures of job stress not specific to child care workers, demonstrated acceptable validity of this survey as a

measure of job stress. In the present study, Cronbach α for the job control, job demands, and job resources sections was .81, .86, and .84, respectively.

Teachers' pedagogical beliefs and practices

The Pre-K Survey of Beliefs and Practices (Marcon, 1999) was developed to assess differential impacts of the District of Columbia Prekindergarten Program as a function of pedagogical preferences. The instrument assesses child-initiated versus academically directed models of prekindergarten implementation. Teachers' beliefs and practices are measured separately and scored on a continuum from 1 to 10. Higher scores indicate a greater focus on child-directed pedagogical style and social-emotional development, and lower scores indicate greater focus on teacher-directed activities and academic skills preparation. Marcon (1999) found that prekindergarten children scored significantly higher on measures of academic progress when taught by teachers endorsing a child-initiated model. In the present study, the 7-item beliefs scale had a Cronbach α of .77 and the 7-item practices scale had a Cronbach α of .78. The beliefs scale and the practices scale correlated very highly ($r = .85$, $P < .001$).

Teachers' depressive symptoms

The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) is one of the most widely used measure of depressive symptoms in adults. Respondents rate the frequency of 20 symptoms of depression, with a focus on depressed mood, on a 4-point Likert-type scale, ranging from 0 to 3. Validation research supports its use as a measure of depression across differing ethnicities. Internal consistency for the overall score ranges from .85 to .90, and test-retest coefficients average .57. Previous research has indicated high known-groups and concurrent validity.

Analytic strategy

There were 2 main goals of analyses in this article: (1) to describe the prevalence of expulsion and suspension in preschoolers and (2) to examine potential correlates or predictors of preschool expulsion and suspension. Expulsion and suspension rates were calculated for preschool classrooms and compared with expulsion and suspension rates for K-12 students in order to provide a context for interpretation. Rates for preschool classrooms were calculated by summing the number of children expelled and the number suspended and dividing those sums by the sum of the number of children enrolled in these classes. Rates for K-12 students were calculated nationally and in individual states by dividing the sum of the number of children expelled or suspended in each school district in the nation or the respective state by the sum of the total applicable student enrollment. For ease of reporting, these quotients were multiplied by 1000 and indicate the number of children expelled or suspended per 1000 students enrolled.

In order to explore potential predictors of preschool expulsion and suspension, both expulsion and suspension variables were regressed against the teacher measures described above and various programmatic and classroom variables that previous literature suggests might be related to behavioral problems (eg, teachers' educational level, group size and child-teacher ratios, number of hours the preschool operates per day, and demographic characteristics of the children in the classroom). Because the number of preschoolers expelled or suspended was highly skewed positive, as described below, expulsion and suspension were analyzed as dichotomous variables, indicating whether the teacher reported having expelled or suspended at least one child from her or his classroom in the past 12 months. For all analyses, "No" = 0 and "Yes" = 1.

Bivariate correlations between expulsion and suspension and the various potential predictors were examined first. The independent effects of the statistically significant predictors of expulsion and suspension were then examined with separate hierarchical logistic regression analyses. To facilitate interpretability of the results obtained, variables were

standardized prior to entry into the logistic regression equation. Standardization equates the metrics of the variables and centers their means, enabling a meaningful interpretation of the odds ratios (ORs) of the logistic regression analyses. With standardized predictors, ORs are the odds of an occurrence of an event (ie, expulsion or suspension) following a standard deviation change of the predictor. Values greater than 1 represent odds increases, whereas values lower than 1 represent odds decreases. A value of 1 represents no relation between the independent and dependent variables. Therefore, subtracting 1 from resultant ORs indicates the percentage increase or decrease in the likelihood of the dependent variable (ie, expulsion or suspension) given each standard deviation change in a given predictor.

RESULTS

Rates of expulsion and suspension in preschool and K-12 public schools

Descriptive analyses indicated that 39.3% of teachers reported having expelled and 14.7% reported suspending at least one child from their program over the past 12 months. Of those teachers reporting having expelled at least one child, 75.0% reported expelling 1 child, 15.9% reported expelling 2 children, 6.8% reported expelling 3 children, and 2.2% reported expelling 6 children from a class of 16. Of the teachers reporting having suspended at least one child, 52.9% suspended 1, 23.5% suspended 2, and 23.5% suspended 3.

For every 1000 K-12 students enrolled across the nation during the 1999–2000 school year, there were 2.09 expulsions. The Massachusetts K-12 expulsion rate, at 0.80 per 1000 enrollees, was well below the national average, which ranged from a low of 0 in Hawaii to a high of 7.93 per 1000 in Indiana. The expulsion rate for Massachusetts' preschoolers (27.42 per 1000 enrolled), however, was more than 34 times the rate for K-12 students in Massachusetts' public schools, more than 13 times the national K-12 rate, and nearly $3\frac{1}{2}$ times the rate for the state with the highest K-12 expulsion rate. The suspension rate across Massachusetts' preschool classrooms (12.83 per 1000) was less than one fourth the rate for K-12 students in Massachusetts (54.68 per 1000) and less than one fifth the rate for K-12 students nationally (67.05 per 1000).

Results of bivariate analyses

Correlational analyses were used to examine the relations between various characteristics of the program, teacher, children, and whether the program expelled or suspended at least one child in the past 12 months, coded dichotomously (0 = "No;" 1 = "Yes"). Teachers who reported expelling at least one child in the past 12 months were significantly more likely to have also suspended at least one child ($r = .32$, $P < .01$), and vice-versa. Examined predictors of expulsion and suspension included program variables (group size, child-staff ratios, teachers' highest degree, whether the teacher held a bachelor's degree in early education, and the number of hours the classroom operated per day), characteristics of the children in the class (proportion of children younger than 3 years, 3 years old, 4 years old, and 5 years old or older; and proportion of children in the class who were African American, Latino, White [non-Latino], or other ethnicity), and teacher-rated variables (teachers' sense of job control, job demands, job resources, pedagogical belief and practices, and depressive symptoms).

Categorical variables of program type and teachers' highest level of education were examined first. The proportion of teachers who expelled or suspended at least one child in the past 12 months across program type and teachers' level of training is presented in Table 2. Program type was collapsed into 3 groups to allow for sufficient cell sizes for analyses: (1) public or private school and Head Start programs, (2) for-profit child care program, or (3) nonprofit agency. Significant differences by program type were found for expulsion ($\chi^2_2 = 8.20$; $P < .05$) but not

Table 2. Percentage of classrooms with at least one child expelled or suspended in the past 12 months by program setting and teachers' highest level of education

	Expulsion ($n = 117$ classes)	Suspension ($n = 116$ classes)
Program setting[a]		
Public/private schools and Head Start	11.11	16.67
For-profit child care	50.00	8.70
Nonprofit agency	39.62	19.23
Teachers' highest level of training[b]		
High school or GED	34.48	13.79
CDA	38.46	23.08
Associate's degree	41.94	16.13
Bachelor's degree	38.24	15.15
Master's degree or higher	50.00	0.00

[a]Expulsion $\chi^2_2 = 8.20$, $P < .05$; Suspension $\chi^2_2 = 2.23$, NS.
[b]Expulsion $\chi^2_4 = 0.87$, NS; Suspension $\chi^2_4 = 2.53$, NS.

for suspension ($\chi^2{}_2 = 2.23$). Specifically, the proportion of teachers indicating that they had expelled at least one child in the past 12 months was lower for teachers in public/private schools or Head Start (11.11%) than for teachers in either for-profit child care programs (50.00%) or nonprofit agencies (39.62%). No significant differences were found for teachers' highest level of training in terms for either expulsion ($\chi^2{}_4 = 0.87$) or suspension ($\chi^2{}_4 = 2.53$).

Results of bivariate correlations are presented in Tables 3, 4, and 5. Statistically significant bivariate relations are presented below. In terms of program, teacher, and child characteristics, expulsion was significantly related

Table 3. Intercorrelations between teacher and classroom variables and expulsion and suspension ($n = 112$)[a]

	1.	2.	3.	4.	5.	6.	7.	8.
1. Group size	...							
2. Child-staff ratio	.05	...						
3. Highest degree[b]	.16	.07	...					
4. BA in ECE? (0 = No; 1 = Yes)	−.11	.04	.49**	...				
5. Hour per day	−.19*	−.03	−.12	−.09	...			
6. Program in a school/HS? (0 = No; 1 = Yes)[c]	−.04	−.11	.02	.15	−.21*	...		
7. Expelled? (0 = No; 1 = Yes)	.21*	.02	.06	−.08	.12	−.27**	...	
8. Suspended? (0 = No; 1 = Yes)	.03	.05	−.06	−.03	.06	−.01	.32**	...
M	16.15	7.48	2.87	0.15	9.19	0.16	0.39	0.15
SD	5.14	3.16	1.31	0.36	2.60	0.37	0.49	0.36

[a]Correlations for dichotomous variables are point-biserial. *, indicates $P < .05$; **, $P < .01$.
[b]Highest degree was coded as follows: 1, High school or GED; 2, child development associate (CDA) credential; 3, associate's degree; 4, bachelor's degree; and 5, master's degree or higher.
[c]"Program in a school/HS" includes classrooms that are located in a public school, private school, or Head Start program.

Table 4. Intercorrelations between characteristics of children in the classes and expulsion and suspension ($n = 112$)[a]

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. <3 years old,%	...									
2. 3 years old,%	−.26**	...								
3. 4 years old,%	−.54**	−.03	...							
4. 5 years or older,%	−.30**	−.29**	−.11	...						
5. African American,%	.19*	.03	−.11	−.12	...					
6. Latino,%	.01	−.10	−.18	.20*	.00	...				
7. White, non-Latino,%	−.17	−.00	.21*	.05	−.58**	−.50**	...			
8. Other ethnicity,%	.10	.01	−.11	−.05	.08	.11	−.39**	...		
9. Expelled? (0 = No; 1 = Yes)	.07	.24**	−.03	−.10	.10	.06	−.03	−.04	...	
10. Suspended? (0 = No; 1 = Yes)	−.08	−.07	.02	.02	.12	.26**	−.21*	−.00	.32**	...
M	0.21	0.25	0.35	0.19	0.11	0.11	0.67	0.09	0.39	0.15
SD	0.35	0.29	0.32	0.29	0.19	0.17	0.33	0.16	0.49	0.36

[a]Correlations for dichotomous variables are point-biserial. Variables 1–8 refer to the percentage of children in each class that fits that category. *, indicates $P < .05$; **, $P < .01$.

to group size ($r = .21$, $P < .05$) and, as reported above, whether the classroom was located in a public school, private school, or Head Start ($r = -.27$, $P < .01$). The proportion of 3-year-olds served in the classroom was also significantly related to expulsion ($r = .24$, $P < .01$), but the racial composition of the children in the classroom was not related to expulsion. Whether a teacher expelled a child in the past 12 months was related positively to both teachers' job stress (as measured by the Job Demands survey; $r = .24$, $P < .01$) and depressive symptoms (as measured by the CES-D Total; $r = .23$, $P < .05$). Teachers' sense of work satisfaction (as measured by the Job Resources survey) was negatively related to

Table 5. Intercorrelations between teachers' beliefs and feelings and expulsion and suspension ($n = 112$)[a]

	1.	2.	3.	4.	5.	6.	7.	8.
1. Job control	...							
2. Job demands	−.35**	...						
3. Job resources	.22*	−.01	...					
4. Pedagogical beliefs	−.04	.03	.07	...				
5. Pedagogical practices	.07	−.06	.09	.84**	...			
6. Center for Epidemiological Studies Depression Scale total	−.17	.32**	−.31**	−.18	−.17	...		
7. Expelled? (0 = No; 1 = Yes)	−.09	.24**	−.21*	.05	.07	.23*	...	
8. Suspended? (0 = No; 1 = Yes)	−.15	.01	−.19*	.01	.08	.15	.32**	...
M	56.27	57.03	72.16	52.32	50.09	9.39	0.39	0.15
SD	10.08	13.59	8.04	8.09	8.06	8.81	0.49	0.36

[a]Correlations for dichotomous variables are point-biserial. *, indicates $P < .05$; **, $P < .01$.

Table 6. Hierarchical logistic regression analysis for expulsion (No = 0, Yes = 1; $n = 112$)[a]

	χ^2	$\Delta\chi^2$	$B_{(\text{Block 1})}$	$B_{(\text{Block 2})}$	$\text{OR}_{(\text{Block 2})}$
Block 1	20.00***	20.00***			
Program in a school/HS? (0 = No; 1 = Yes)			−.77*	−.87*	0.42
Group size			.39	.71*	2.03
Proportion of 3-year-olds in group			.55*	.65**	1.91
Block 2	37.86***	17.86***			
Job demands			...	.70*	2.01
Job resources			...	−.56*	0.57
Center for Epidemiological Studies Depression Scale total			...	.13	1.13

[a]*, indicates $P < .05$; **, $P < .01$; ***, $P < .001$.

expulsion ($r = -.21$, $P < .05$). Other aspects of the program and teacher, such as child-staff ratio, hours of operation per day, whether the teacher held a bachelor's degree in early education, teachers' sense of job control, and teachers' pedagogical beliefs and practices, were not significantly related to expulsion. Only 2 variables were related significantly to suspension, with a greater likelihood of suspension in classrooms with a greater proportion of Latino children ($r = .26$, $P < .01$) and among teachers with lower scores on the Job Resources survey ($r = -.19$, $P < .05$).

Results of hierarchical logistic regression analyses

The 6 variables found to be significant correlates of expulsion were entered into a hierarchical logistic regression analyses (Table 6). The 3 variables related to characteristics of the program and children in the class (setting in a school or Head Start, group size, and proportion of 3-year-olds in the class) were entered into the model as the first block. As a block, these classroom descriptive variables were significantly related to expulsion ($\chi^2_3 = 20.00$, $P < .001$), with location in a school or Head Start ($B = -.77$, $P < .05$) and proportion of 3-year-olds ($B = .55$, $P < .05$) significantly contributing to the overall prediction. The 3 measures of teachers' stress and depressive symptoms (Job Demands, Job Resources, and CES-D Total) were entered together as a second block. As a block, these variables significantly added to the model above the predictive relations of program and child variables ($\Delta\chi^2_3 = 17.86$, $P < .001$), with Job Demands ($B = .70$, $P < .05$) and Job Resources ($B = -.56$, $P < .05$) significantly contributing to the model. The contribution of CES-D Total, however, was nonsignificant, suggesting that teachers' depressive symptoms add little unique predictive power within the context of Job Demands and Job Resources. Odds ratios for the final model indicated that a standard deviation unit change in group size was associated with a 103% increased likelihood of expulsion, that a unit change in the proportion of 3-year-olds was associated with a 91% increased likelihood of expulsion, and that a standard deviation unit change in job demands was associated with a 101% increased likelihood of expulsion. A standard deviation unit change in job resources, however, was related to a 43% decreased likelihood of expulsion and location in a school or Head Start was associated with a 58% decreased likelihood of expulsion.

Since certain work conditions might exacerbate job stress (as measured by the Job Demands variable), the potential for interaction effects was examined between stress and both

Table 7. Percentage of preschool teachers expelling at least one child under conditions of high and low group size and job demands[a]

	Job demands	
	Low	**High**
Group size		
High	46.88% ($n = 32$)	50.00% ($n = 20$)
Low	12.00% ($n = 25$)	45.71% ($n = 35$)

[a] n is the number of cases that satisfy the 2 × 2 condition, regardless of expulsion status.

group size and proportion of 3-year-olds in the class. These interactions were entered together in a third block as the product of the relevant variables. Only the interaction between job demands and group size ($B = .69$, OR = 1.99, $P < .05$) significantly added to the model ($\Delta\chi^2 = 6.00$, $P < .05$). Because larger group sizes increase the opportunity of expulsion by providing more children that can be expelled, the existence of an interaction effect with this variable suggests that group size is an important predictor. In order to understand this interaction better, the effects of job demands were examined under both high and low group size conditions. Table 7 shows the percentage of teachers expelling at least one child in the past 12 months for each of 4 conditions created by a 2 × 2 examination of high and low (as defined by a median split) job demands and group size. Across the 3 conditions where either or both of these variables were high, the percentage of teachers expelling ranged from 45.71% to 50.00%. In contrast, when both group size and job stress were low, the percentage of teaches expelling also was low (12.00%).

For suspension, the proportion of Latino children in the classroom was entered first, followed by job resources. As shown in Table 8, the proportion of Latino children in the class significantly predicted whether the teacher reported suspending at least one child in the past 12 months ($\chi^2 = 6.14$, $P < .05$). The addition of job resources significantly added to the model ($\Delta\chi^2 = 4.13$, $P < .05$), although it did not alter the pattern of results. Odds ratios for the final model indicated that a standard deviation unit change in the proportion of Latino children was associated with a 75% increased likelihood of suspension and a standard deviation unit change in job resources was associated with a 42% decreased likelihood of suspension. There was no significant interaction effect for these 2 predictors when entered as a third step ($\Delta\chi^2 = 0.64$; $B = .23$).

DISCUSSION

Results from the present study suggest that preschoolers have a much higher rate of expulsion, but not suspension, relative to K-12 students. For K-12 students nationally, there were 2.09 expulsions per 1000 students enrolled. The K-12 expulsion rate was much lower in Massachusetts, where there were only 0.80 expulsions per 1000 students. The expulsion rate for Massachusetts' preschoolers (27.42 per 1000 students), however, was more than 34 times that state's K-12 rate, more than 13 times the national K-12 rate, and about $3\frac{1}{2}$ times the rate for Indiana—the state with the highest K-12 expulsion rate. These rates were far greater than those reported for kindergarten in Massachusetts and Connecticut, where fewer than 0.3 students were expelled per 1000 enrolled.

When faced with serious student behavioral problems, K-12 schools seem to resort primarily to suspension, whereas preschool programs may favor a quicker move toward the permanent resolution provided by expulsion. Currently, all 50 states have compulsory school attendance laws that require children to attend an educational program, with the required entry age ranging across states from 5 to 8 years (Mitchell, 2001). These laws may reduce expulsion during the K-12 years, because the expulsion would create a legal problem for the parents who would then need to find educational programming for their children elsewhere. Also, public schools are required to provide a free and appropriate education for all children kindergarten through

Table 8. Hierarchical logistic regression analysis for suspension (No = 0, Yes = 1; $n = 115$)[a]

	χ^2	$\Delta\chi^2$	$B_{(\text{Block 1})}$	$B_{(\text{Block 2})}$	$\text{OR}_{(\text{Block 2})}$
Block 1	6.14*	6.14*			
Proportion of Latino children in group			.55*	.56*	1.75
Block 2	10.28**	4.13*			
Job resources			...	−.55*	0.58

[a] *, indicates $P < .05$; **, $P < .01$.

grade 12, whereas prekindergarten services for children without developmental disabilities is not a requirement in Massachusetts.

PREDICTORS OF PRESCHOOL EXPULSION AND SUSPENSION

Preschool expulsion is related to a variety of factors regarding the program, characteristics of the children in the class, and the teacher's self-reported stress and depressive symptoms. Controlling for other classroom and teacher factors, preschool programs located in public or private schools or Head Start (3 of the 4 Head Start classes in this sample were located in public schools) were 58% less likely to expel, relative to programs located in for-profit child care centers or community-based nonprofit agencies. Although children enrolled in Head Start tend to exhibit greater levels of physical aggression relative to children in community-based child care (Kupersmidt, Bryant, & Willoughby, 2000), less is known about children in other programs.

Although it is not possible from these data alone to determine why school-based preschool programs and Head Start are less likely to expel, several possibilities seem plausible. First, preschool programs located in schools or Head Start may have better access to services and alternative placements for children with disruptive behaviors. Because of their proximity to school support staff, these programs may have better access to behavioral and mental health support systems (eg, school psychologists and social workers, special education staff, and guidance counselors), which could be helpful in providing supports needed to help keep students in the educational program. Head Start has long recognized the important role of mental health in terms of children's overall well-being and school readiness, and has invested effort in developing promising models of behavioral support (Boyce, Hoagwood, Lopez, & Tarullo, 2000; Piotrkowski, Collins, Knitzer, & Robinson, 1994). Because of their place within a larger educational system, schools may also have greater access to alternative placements (eg, small-sized transitional classrooms and alternative programs for children with serious behavioral problems) for children whose behavioral problems are so great that they are difficult to maintain in a full-size classroom of children with differing levels of development.

In addition, there may be differences in the implicit missions of educational settings, such as schools and Head Start, versus child care programs, which might explain some of the differences in expulsion practices. All of the programs in this sample are regulated by public agencies and are eligible to receive state subsidies to provide education and care for children. However, the historic mission of public schools and Head Start to provide educational services to all eligible children may not be shared by child care programs, which may view their services as being oriented more around providing safe care, rather than education, with parents as the primary consumers, rather than children. Public schools often have explicit policies regarding student disciplinary consequences

and clear processes in place regarding how these consequences are distributed. This may not be the case in many other preschool or child care programs, where the service may not be viewed as an educational right. Also, expulsion from public school systems may preclude the child from receiving services in other school-based settings, whereas expulsion from child care programs may leave children with several other early care and education options within their communities.

Group size and the proportion of 3-year-olds in the class were also positively related to whether a teacher reported expelling at least one child in the past 12 months. In this sample of classrooms, none served 3-year-olds exclusively, though 7 of the 118 classrooms reporting children's ages served only 4-year-olds. Many early education and child care programs for preschoolers serve children across this age range in one classroom—often mixing 3- and 4-year-olds together in the same class. Larger group sizes and classes with a higher proportion of children on the younger end of the preschool-age spectrum may place high demands on teachers' efforts to maintain an orderly classroom setting, resulting in an increased reliance on expulsion to manage classroom behavior. Racial composition of the classroom was not related to whether the teacher expelled, but teachers in classrooms with higher Latino populations were more likely to report suspending a child. Further research, where data regarding the exact age and ethnicity of expelled and suspended children are collected, may be able to examine better the role of child characteristics in predicting expulsion and suspension. Teachers' level of education, whether the teacher held a bachelor's degree in early education, the number of hours of operation for the program, and teachers' pedagogical beliefs and practices were not related to either expulsion or suspension.

The percentage of teachers expelling at least one child in the past 12 months was about 4 times as high when job stress, class size, or both were high, relative to when both were low. Rather than a cumulative risk relation, where increased job stress combined with increased class size was related to an increased likelihood for expulsion, the relation was more an issue of expulsion being more likely when either of these conditions was present versus when both were absent.

Although self-reported symptoms of depression or emotional distress was related bivariately to whether a teacher expelled a child in the past 12 months, job stress emerged as a more robust correlate. Both job stress and depressive symptoms were correlated significantly. It may be that the relation between teachers' depressive symptoms is mediated fully by job stress. In other words, teachers' depressive symptoms may lead to increased job stress, which is then related to expulsion. Another possibility is that the Job Stress survey simply measured psychological distress related to expulsion decisions better than did the Depression survey. Further research, where these 3 factors can be measured across time in a longitudinal study, may be useful in testing these hypotheses. Although job stress and depressive symptoms were not related to whether the teacher suspended a child in the past 12 months, positive feelings about the effects of one's work as a preschool teacher (Job Resources)—which may serve as a protective factor against preschool expulsion and suspension—was negatively associated to near-equal degrees with both expulsion and suspension.

The nature of these cross-sectional data makes it impossible to draw causal inferences. Job stress and a poor sense of job satisfaction may impact teachers' relationship to children or their perceptions of children's behavioral problems, which then might lead to an increased reliance on expulsion or suspension. It is equally plausible that teaching young children who are at risk of expulsion or suspension leads to increased feelings of job-related stress and a decrease in positive work experiences. Other factors not measured in this study, such as teaching in a high-risk community or an absence of support services,

may contribute to both. Further research will be needed to draw causal inferences and better understand the mechanism of relation between these variables.

IMPLICATIONS FOR SERVICE, POLICY, AND FUTURE RESEARCH

Clearly, these findings have implications for mental health consultation in preschool settings and early education policy. Mental health consultation in early education and child care settings typically focuses on the behaviors of the target child and may ignore issues of teachers' job stress and work satisfaction, which may contribute to expulsion and suspension decisions. Indeed, mental health consultants may consider their role with preschool teachers as being focused solely on building rapport and establishing a good relationship for their work with the child (Donahue, Falk, & Provet, 2000), and not as being an agent for helping improve teachers' mental health or work perceptions. More needs to be learned about the factors that contribute to teachers' (and administrators') decision-making processes regarding if and when to expel or suspend preschoolers. Regardless of any causal directionality between job stress and expulsion, these 2 variables appear to be meaningfully related, and mental health service providers should consider the potential utility of direct services to preschool teachers aimed at decreasing feelings of job stress and increasing teachers' feelings regarding the positive impacts they may be having on the children placed in their care. Furthermore, keeping class sizes small, limiting the proportion of 3-year-olds mixed with older children, and increasing access to behavioral support professionals are reasonable recommendations for preschool and child care administrators concerned about expulsion rates.

Further research will be needed to determine the degree to which these findings reflect preschool expulsion and suspension rates in other states. Regardless, expulsion and suspension rates appear to be variables that decision-makers and early education administrators at state and national levels should consider collecting. Considerably more needs to be learned about expulsion and suspension practices in early education settings to provide an empirical base for policy development. Beyond the limited classroom-level child demographic data presented in this article, what sociodemographic characteristics at the individual child level best describe those at greatest risk for expulsion or suspension, and how might these variables interact with teacher and classroom characteristics? What is the nature and severity of the behavioral problems most likely to lead to expulsion or suspension? Teachers likely do not make decisions regarding expulsion and suspension alone, and more needs to be known about how these decisions are made in relation to input from others, such as administrators, parents, and support staff.

More needs to be known about both the mechanisms by which these predictors lead to expulsion and suspension decisions and the impact of these decisions on the children, parental expectations for their children's futures, and other children in the classroom. What is the long-term outlook for these children? Do preschoolers who have been expelled or suspended show behavioral improvements in their next educational setting, or are they more likely to be expelled or suspended later? If Connecticut's experiences with kindergarten suspension are a fair indicator (Connecticut State Department of Education, 2002), most of these preschoolers may experience similar disciplinary actions in the future. Although Connecticut and Michigan have launched efforts to prevent expulsion in preschool and child care settings through networks of on-call mental health consultants available to child care and early education programs, these efforts have not yet been rigorously evaluated. Also, a better understanding of these children's experiences before preschool may allow for a more complete appreciation of the factors that place children at risk for expulsion. Understanding

these risk factors will be essential to informing early intervention efforts during infancy and toddlerhood.

Early education, when administered at appropriate levels of intensity and quality, offers many well-documented benefits to participants in terms of latter educational achievement and lifelong success (for reviews, see Barnett, 1998; Guralnick, 1997; Heckman & Krueger, 2004; Karoly et al., 1998; Yoshikawa, 1995; Zigler, Taussig, & Black, 1992). Although many children still have limited opportunities to participate in a high-quality early education program, access has clearly improved over the past decades (Barnett et al., 2003). Behavioral problems and resulting expulsion and suspension limit the availability of early education services to those children who stand the most to benefit from the socializing impact of preschool programs. Although the findings presented in this article highlight the scope of preschool expulsion and suspension and provide some indication of possible predictors, myriad questions remain as to how best to conceptualize the issue and how best to intervene.

REFERENCES

Barnett, W. S. (1998). Long-term cognitive and academic effects of early childhood education on children in poverty. *Preventive Medicine*, *27,* 204–207.

Barnett, W. S., Robin, K. B., Hustedt, J. T., & Schulman, K. L. (2003). *The state of preschool: 2003 state preschool yearbook*. New Brunswick, NJ: National Institute for Early Education Research.

Boyce, C. A., Hoagwood, K., Lopez, M. L., & Tarullo, L. B. (2000). The Head Start Mental Health Research Consortium: New directions for research partnerships. *Behavioral Disorders*, *26,* 7–12.

Cicchetti, D., Rogosch, F. A., & Toth, S. L. (1998). Maternal depressive disorder and contextual risk: Contributions to the development of attachment insecurity and behavior problems in toddlerhood. *Development and Psychopathology*, *10,* 283–300.

Connecticut State Department of Education. (2002, April). *Preliminary 1999–2000 disciplinary offense report: Kindergarten offenses*. Middletown, CT: Author.

Cuda, A. (2004, July 10). Problem preschoolers: Children expelled from child care is growing concern. *Connecticut Post* (Bridgeport, CT), Womanwise, p. D-1.

Curbow, B., Spratt, K., Ungaretti, A., McDonnell, K., & Breckler, S. (2000). Development of the Child Care Worker Job Stress Inventory. *Early Childhood Research Quarterly*, *15,* 515–536.

Dale, M. (2002, December 21). Kindergarten suspensions up, researchers say. *USA Today*, Domestic News, p. B-1. Retrieved September 14, 2004, from www.usatoday.com/news/education/2002–12–21-kindergarten_x.htm

Dawson, G., Ashman, S. B., Panagiotides, H., Hessl, D., Self, J., Yamada, E., et al. (2003). Preschool outcomes of children of depressed mothers: Role of maternal behavior, contextual risk, and children's brain activity. *Child Development*, *74,* 1158–1175.

Donahue, P. J., Falk, B., & Provet, A. G. (2000). *Mental health consultation in early childhood*. Baltimore, MD: Paul H. Brookes.

Galloway, D., Martin, R., & Wilcox, B. (1985). Persistent absence from school and exclusion from school: The predictive power of school and community variables. *British Educational Research Journal*, *11,* 51–61.

Gilliam, W. S., & Ripple, C. H. (2004). What can be learned from state-funded prekindergarten initiatives? A data-based approach to the Head Start devolution debate. In E. Zigler & S. J. Styfco (Eds.), *The Head Start debates* (pp. 477–497). Baltimore: Paul H. Brookes.

Gilliam, W. S., & Zigler, E. F. (2004). *State efforts to evaluate the effects of prekindergarten: 1977 to 2003*. Retrieved September 14, 2004, from nieer.org/resources/research/StateEfforts.pdf

Grannan, M., Carlier, C., & Cole, C. E. (1999, March). *Early childhood care and education expulsion prevention project*. Southgate, MI: Downriver Guidance Clinic, Department of Early Childhood Programs.

Guralnick, M. J. (1997). *The effectiveness of early intervention*. Baltimore, MD: Paul H. Brookes.

Hamre, B. K., & Pianta, R. C. (2004). Self-reported depression in nonfamilial caregivers: Prevalence and associations with caregiver behavior in child-care settings. *Early Childhood Research Quarterly*, *19,* 297–318.

Heckman, J. J., & Krueger, A. B. (2004). *Inequality in America: What role for human capital policies?* Cambridge, MA: MIT Press.

Higgins, L. (2004, June 23). Preschoolers with problems get help before they're expelled. *Detroit Free Press,* Lifestyle, p. B-1. Available from www.freep.com

Howse, R. B., Calkins, S. D., Anastopoulos, A. D., Keane, S. P., & Shelton, T. L. (2003). Regulatory contributors to children's kindergarten achievement. *Early Education and Development*, *14,* 101–119.

Kalson, S. (2004, June 3). Fred Rogers' workshop deals with disruptive kids. *Pittsburgh Post-Gazette,* Lifestyle, p. B-2.

Karoly, L. A., Greenwood, P. W., Everingham, S. S., Hoube, J., Kilburn, M. R., Rydell, C. P., et al. (1998). *Investing in our children: What we know and don't know about the costs and benefits of early childhood interventions*. Santa Monica, CA: RAND.

Keane, S. P., & Calkins, S. D. (2004). Predicting kindergarten peer social status from toddler and preschool problem behavior. *Journal of Abnormal Child Psychology*, *32,* 409–423.

Keenan, K., & Wakschlag, L. S. (2004). Are oppositional defiant and conduct disorder symptoms normative behaviors in preschoolers? A comparison of referred and nonreferred children. *American Journal of Psychiatry*, *161,* 356–358.

Kupersmidt, J. B., Bryant, D., & Willoughby, M. T. (2000). Prevalence of aggressive behaviors among preschoolers in Head Start and community child care programs. *Behavioral Disorders*, *26,* 42–52.

Little, K. (2003, April 12). Kids expelled after biting dispute. *Morning Star (Wilmington, NC),* Local/State, pp. 1B, 8B.

Lyons-Ruth, K., Connell, D. B., Grunebaum, H. U., & Botein, S. (1990). Infants at social risk: Maternal depression and family support services as mediators of infant development and security of attachment. *Child Development*, *61,* 85–98.

Marcon, R. A. (1999). Differential impact of preschool models on development and early learning of inner-city children: A three-cohort study. *Development Psychology*, *35,* 358–375.

Massachusetts Department of Education. (2004, June). *Student exclusions in Massachusetts public schools: 2002–2003*. Malden, MA: Author. Retrieved September 14, 2004, from www.doe.mass.edu/infoservices/reports/exclusions/0203/

Mitchell, A. W. (2001). *Education for all children: The role of states and the federal government in promoting prekindergarten and kindergarten*. New York: Foundation for Child Development.

McGoey, K. E., Eckert, T. L., & DuPaul, G. J. (2002). Early intervention for preschool-age children with ADHD: A literature review. *Journal of Emotional and Behavioral Disorders*, *10,* 14–28.

Mrozowski, J., & Byczkowski, J. (2004, February 22). Kicked out of kindergarten: Tougher discipline reaches lower grades, but do suspension, expulsion really work? *The Cincinnati Enquirer*. Retrieved September 14, 2004, from www.enquirer.com/discipline/disciplineday1main.html

National Center for Educational Statistics. (2001). *Overview of public elementary and secondary schools and districts: School year 1999–2000* (NCES 2001–339R). Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement. Retrieved from nces.ed.gov/pubs2001/2001339r.pdf. [Original data were retrieved June 2002, www.ed.gov/office/OCR/data.html.]

NICHD Early Child Care Research Network. (2003). Does amount of time spent in child care predict socioemotional adjustment during the transition to kindergarten? *Child Development*, *74,* 976–1005.

Piotrkowski, C. S., Collins, R. C., Knitzer, J., & Robinson, R. (1994). Strengthening mental health services in Head Start. A challenge for the 1990s. *American Psychologist*, *49,* 133–139.

Qi, C. H., & Kaiser, A. P. (2003). Behavior problems of preschool children from low-income families: Review of the literature. *Topics in Early Childhood Special Education*, *23,* 188–216.

Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, *1,* 385–401.

Schulman, K., Blank, H., & Ewen, D. (1999). *Seed of success: State prekindergarten initiatives 1998–1999*. Washington, DC: Children's Defense Fund.

Weissman, M. M., Warner, V., Wickramaratne, P., Moreau, D., & Olfson, M. (1997). Offspring of depressed parents: 10 years later. *Archives of General Psychiatry*, *54,* 932–940.

West, J., Hausken, E. G., & Collins, M. (1993). *Profile of preschool children's child care and early education program participation: National Household Education Survey.* Washington, DC: National Center for Education Statistics, Office of Education Research and Improvement, U.S. Department of Education (NCES 93–133).

Yoshikawa, H. (1995). Long-term effects of early childhood programs on social outcomes and delinquency. *The Future of Children*, *5,* 51–75.

Zigler, E., Taussig, C., & Black, K. (1992). Early childhood intervention: A promising preventative for juvenile delinquency. *American Psychologist*, *47,* 997–1006.