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Parents' Reports of School Practices to Involve Families

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An extensive literature documents the relationship between parent involvement in education and children's learning and school performance (e.g., Baker & Stevenson, 1986; Coleman et al., 1966; Dave, 1963; Epstein, 1983; Epstein & McPartland, 1979; Marjoribanks, 1979; McDill & Rigsby, 1973). For example, parent involvement in children's education has been linked to children's achievement (Baker & Stevenson, 1986; Keith et al., 1986; Teale, 1984), academic standing (Zill & Nord, 1994), and grade repetition (Zill & Nord, 1994). Given the importance of parent involvement, there are increasing efforts to find ways to help parents become more involved in their children's education.

A growing body of research shows that school practices to involve parents are strong predictors of parent involvement (Dauber and Epstein, 1989; Epstein, 1995; Epstein, 1996). For example, parents' reports of school communication with them about school programs and activities, and school efforts to help them help their children learn at home have been related to overall levels of parent involvement. This includes parent involvement at school, work with children at home on homework and reading, and engagement in other activities that help children learn at home (Dauber and Epstein, 1989). In addition, research has shown that parents who receive more requests from teachers to be involved in their children's education report higher levels of involvement both at home and at school (Eccles and Harold, 1994).

Research showing that school practices are related to parent involvement is now reflected in federal policies, such as the Goals 2000 legislation. This legislation has made school practices to involve parents a voluntary goal for all schools in the nation. The eighth National Education Goal focuses on the practices of schools to involve families and states that "by the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children."

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Because of the importance of school practices to parent involvement, it is important to understand whether school efforts to involve families are similar for all types of families and students, and for families in different schools and communities. Previous research suggests that this is not the case, and that practices initiated by schools vary by school, community, student, and family characteristics. For example, in a study of middle school principals, Epstein and Lee (1995) found that sending information to parents about how to help children learn at home was more frequent in Catholic and other private schools than it was in public schools. Also, sending information about children's learning and schoolwork was more common in urban than in rural schools. Other studies of teachers and parents have shown differences in school practices by student grade level. For example, research has shown that school programs to involve parents generally become less strong and comprehensive as children enter higher grade levels (Eccles and Harold, 1994; Epstein and Dauber, 1991).

Many of the previous studies of school practices have been small and have been based on community samples. Although these studies are essential to understanding the details of school practices and family involvement, larger studies are also needed to provide a national picture. The only existing national data sets of parent reported school practices to involve families (the 1988 National Educational Longitudinal Study (NELS:88; Ingels et al., 1990); Prospects: The Congressionally Mandated Study of Educational Growth and Opportunity (U.S. Dept. of Education)) are limited either to middle and high school students or to elementary and junior high school students. In this Brief, national data from a new data source, the 1996 National Household Education Survey, (NHES:96) is introduced. The NHES:96 includes a wider grade range of children than has been included in previous studies of parent-reported school practices.

The NHES:96 was conducted by Westat for the National Center for Education Statistics (NCES). Data were collected in telephone interviews with 20,792 parents of children age 3 through the 12th grade. Data were also collected from youth in grades 6 through 12, but are not included in this

report. More information about the parent and youth data can be found in the forthcoming National Household Education Survey of 1996, Data File User's Manual, Volumes I-V (Collins, et al. 1996).

Current Report

In this Brief, national data from the Parent and Family Involvement in Education component of the NHES:96 were used to examine school practices in relation to the frequency of parent involvement at the school. In addition, school practices to involve families were examined in relation to school, family, student, and community characteristics that have been related in past studies to school practices and/or parent involvement.

Questions about school practices varied somewhat depending on the grade level of the child. The set of questions about school practices that was common to the broadest range of grade levels was administered to parents of 1st through 12th graders. Thus, in this Brief, data were used from 16,151 parents of 1st through 12th graders. It should be noted that the unit of analysis in the NHES:96 is the child and not the parent. Thus, when parent-reported data are presented in this report, they are referenced to the children. Strictly speaking, "the percent of parents reporting" is "the percent of children whose parents reported."

Parents of children in the 1st through 12th grades were asked how well their child's school performed seven different school practices to involve them in their children's education. Questions addressing various types of involvement were based on items from a questionnaire developed by Epstein and Salinas (1993). Answer categories were: "does it very well," "just o.k.," or "doesn't do it at all." In this Brief, the focus is on school practices reported to be done "very well." Descriptions of these items are shown in the right column of table 1.

The practices included in the current report were based on types of parent involvement identified by Epstein (Epstein, 1992). Each type of involvement includes practices that are initiated by both schools and by parents. For this report, practices initiated by the schools are the focus.

Table 1.--Correspondence between NHES:96 school practice items and Epstein's types of parent involvement

Five of Epstein's six types of parent involvement	Corresponding NHES:96 school practice items <i>Parents were asked how well their child's school did the following things during the school year:</i>
Type 1: Improving parents' understanding of parenting and child development.	- Helped them understand what children at their child's age are like.
Type 2: Communicating with parents and keeping them informed about their child's progress and school programs.	- Let them know between report cards how their child was doing in school. - Provided information about why their child was placed in particular groups or classes.
Type 3: Encouraging parent volunteering at the school and participation in school activities.	- Made them aware of chances to volunteer at school.
Type 4: Helping families help children learn at home.	- Helped them help their child learn at home. - Provided information about how to help with homework.
Type 6: Supporting families by collaborating with the community to bring families needed resources and to increase family participation in the community.	- Provided information about community services.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996; and Epstein, 1992.

The five types of involvement addressed in the current report, and their correspondence to specific items in the NHES:96 survey included in the report are shown in table 1.¹

Parents' Reports of School Practices

First, the seven school practices were examined to assess whether some practices were reported to be done "very well" more often than others. As seen in table 2, over half of parents reported that their child's school did "very well" at letting them know between report cards how their child was doing in school and making them aware of chances to volunteer at the school. For the remaining 5 items, significantly fewer (33 to 41 percent) reported that the school was doing "very well".

It is not surprising that a higher percentage of parents reported that schools did "very well" at communicating with them about their child's progress. Epstein and Dauber (1991) previously noted that most schools have conferences with families, send them notices, and engage in other communication practices such as making phone calls. It is also understandable that making parents aware of chances to volunteer at school is a common school practice. Many schools send flyers and newsletters home that tell parents about volunteer opportunities.

It should be noted that the other types of school practices included in the current study were each reported by 41 percent or less of the children's parents. These findings show that schools do not do as well at providing information in several

Table 2.--Percentage of students whose parents reported various school practices done "very well": 1996

School practice	Number of students in grades 1 through 12 (thousands)	Percentage of students whose parents reported various school practices done "very well"	
		Percent	s.e.
Total.....	45,551	100	--
Let parent know between report cards how his/her child was doing in school.....	26,719	59	0.5
Made parent aware of chances to volunteer at the school.....	26,000	57	0.5
Provided information about why child was placed in particular classes.....	18,608	41	0.5
Provided information about how to help their child with his/her homework.....	17,443	38	0.4
Provided workshops, materials, or advice about how to help their child learn at home..	16,725	37	0.5
Helped parent understand what children at their child's age are alike.....	15,931	35	0.4
Provided information on community services to help child or family.....	15,239	33	0.4

NOTE: Parents of children in the 1st through 12th grades were asked about seven different school information practices. They were asked how well the school did the following: let them know how their child was doing in school, helped them understand what children at their child's age are like, made them aware of chances to volunteer at school, helped them help their child learn at home, provided information about community services, provided information about how to help with homework, and provided information about why their child was placed in particular groups or classes. Answer categories were: does it "very well," "just o.k.," or "doesn't do it at all." s.e. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996.

areas -- reasons for tracking children into particular classes, how to help children with homework, how to help children with home learning, how to understand children's development, and ways to become connected with community services that the family or child may need.

Parents' Reports of School Practices and the Frequency of their Involvement at the School

One of the objectives of this report was to examine the relationship between parent-reported school practices done "very well" and the frequency of family involvement. In order to provide an overall measure of school practices, the seven practices reported to have been done "very well" were added together. The average number done "very well" was three out of seven practices (see first row of table 3).

Family involvement was measured by the following question: "During this school year, how many times have you [or OTHER ADULT FAMILY MEMBERS/ADULTS IN THE HOUSEHOLD] gone to meetings or participated in activities at (CHILD)'s school?" For this Brief, answers were coded according to whether families were involved at the school "zero," "one to two," "three to five," "six to nine," and "ten or more" times. The frequency distribution of the children's parents' reported level of involvement and the means and standard errors for the sum of school practices done "very well" at each level are also reported in table 3. The percentages of parents involved at the school increased from 8 percent for parents who were never involved at the school to 34 percent for those who were involved there 3 to 5 times. Compared to those involved 3 to 5 times, lower percentages of parents were

Table 3. -- Percentage of students whose parents reported various levels of participation and average number of parent-reported school practices done "very well," by frequency of family involvement at school: 1996

Frequency of family involvement at school	Number of students in grades 1 through 12 (thousands)	Percentage of students whose parents reported various levels of participation		Average number of parent-reported school practices done "very well" ²	
		Percent	s.e.	Mean	s.e.
Total	45,551	100	--	3.0	<0.1
0 times.....	3,635	8	0.3	1.9	0.1
1-2 times.....	11,191	25	0.4	2.7	0.1
3-5 times.....	15,690	34	0.5	3.1	<0.1
6-9 times.....	5,212	11	0.3	3.5	0.1
10 or more times.....	9,823	22	0.5	3.3	0.1

¹Parents of children in the 1st through 12th grades were asked how many times they or another adult in their household went to meetings or participated in activities at their child's school.

²Parents were asked about seven different school information practices. They were asked how well the school did the following: let them know how their child was doing in school, helped them understand what children at their child's age are like, made them aware of chances to volunteer at school, helped them help their child learn at home, provided information about community services, provided information about how to help with homework, and provided information about why their child was placed in particular groups or classes. Answer categories were: does it "very well," "just o.k.," or "doesn't do it at all."

NOTE: s.e. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996.

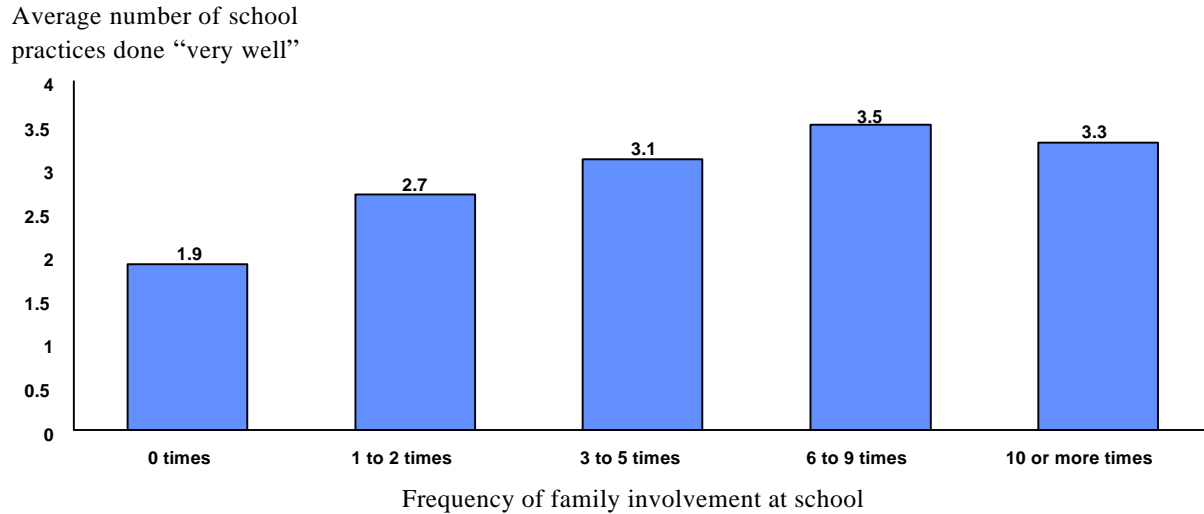
involved 6 to 9 times (11 percent) and 10 or more times (22 percent).

As seen in table 3 and figure 1, the average number of school practices done "very well" increased each level of family involvement up to six to nine times. There were no substantively meaningful differences in the average number of school practices done "very well" among the categories of 3-5, 6-9, and 10 or more times. Thus, the relationship between school practices done "very well" and the frequency of parent involvement seems to be most meaningful in terms of distinctions between parents who are uninvolved completely and those involved at the school at least three times a year. These results provide support for previous research from

community studies that shows that school practices are related to parent involvement (Dauber and Epstein, 1989; Epstein, 1995; 1996).

In understanding the relationship between parents' reports of school practices and involvement, it should be noted that higher levels of involvement may indicate that children are having difficulty at school. Parents whose children are having problems at school may be asked to attend more conferences and may be contacted more about their child's school progress. Future research on school practices and involvement should take into account the reasons behind different levels of involvement and school practices.

Figure 1. -- Average number of parent-reported school practices done "very well," by frequency of family involvement at school: 1996



NOTE: Parents of children in the 1st through 12th grades were asked how many times they or another adult in the household went to meetings or participated in activities at their child's school this school year. Parents were asked about seven different school information practices. They were asked how well the school did the following activities: let them know how their child was doing in school, helped them understand what children at their child's age are like, made them aware of chances to volunteer at school, helped them help their child learn at home, provided information about community services, provided information about how to help with homework, and provided information about why their child was placed in particular groups or classes. Answer categories were: does "very well," "just o.k.," or "doesn't do it at all."

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996.

Parent-reported School Practices by School, Family, Student, and Community Characteristics

Next, variations in school practices by school, family, student, and community characteristics were examined (table 4). Variables included in this analysis are those that have been shown to be linked either to school practices or to levels of family involvement. These variables do not represent an exhaustive list of constructs thought to be related to school practices. Rather, they were chosen to provide at least one key indicator from each of the domains of school, family, student, and community characteristics.

Differences by School Type

Based on past research from the NELS:88 showing differences in school practices in public and private schools (Epstein and Lee, 1995), school practices were examined with respect to school type. Public schools were identified by parents as either "regularly assigned" or "chosen" by the parents. If parents answered that the

school assigned to their child was also their school of choice, the school was categorized as a chosen school. Private schools were identified by parents as those that were and were not "church-related."

Parent reports of school practices varied by school type (table 4). The average number of school practices reported by parents to have been done "very well" was higher for children in church-related or other types of private schools than for children in either type of public school. In addition, the average number of school practices done "very well" was higher in public schools that had been chosen rather than assigned. The largest differences were shown between assigned public schools and private schools. For example, parents with children in assigned public schools reported an average of 2.8 school practices done "very well." By comparison, parents with children in private, church-related schools reported an average of 4.0 practices as being done "very well." Results for public and private schools confirm previous

Table 4.-- Average number of parent-reported school practices done "very well," by selected characteristics: 1996

Characteristics	Number of students in grades 1 through 12 (thousands)	Average number of parent-reported school practices done "very well" ¹	
		Mean	s.e.
Total.....	45,551	3.0	<0.1
School type ²			
Public, assigned.....	34,614	2.8	<0.1
Public, chosen ³	6,228	3.2	0.1
Private, church-related.....	3,654	4.0	0.1
Private, not church-related.....	1,054	3.8	0.2
School size ⁴			
Under 300.....	7,503	3.4	0.1
300-599.....	17,345	3.2	<0.1
600-999.....	10,294	2.8	<0.1
1,000 or more.....	10,409	2.6	<0.1
Parents' highest level of education ⁵			
Less than high school.....	4,492	3.7	0.1
High school graduate or equivalent.....	13,890	3.1	<0.1
Vocational/technical education after high school or some college.....	13,592	2.8	<0.1
College graduate.....	7,000	2.9	<0.1
Graduate or professional school.....	6,577	2.9	0.1
Student grade level			
1st grade.....	4,349	4.0	0.1
2nd-3rd grade.....	7,710	3.7	0.1
4th-5th grade.....	7,811	3.4	0.1
6th grade.....	3,927	3.1	0.1
7th-8th grade.....	7,567	2.6	0.1
9th grade.....	3,734	2.3	0.1
10th-11th grade.....	7,049	2.2	0.1
12th grade.....	3,377	2.3	0.1
Ungraded ⁶	19	--	--
Student race			
White, non-Hispanic.....	30,684	2.8	<0.1
Black, non-Hispanic.....	7,166	3.3	0.1
Hispanic.....	5,777	3.6	0.1
Other.....	1,924	2.9	0.1
Household urbanicity ⁷			
Urban, inside urbanized area.....	27,602	3.1	<0.1
Urban, outside urbanized area.....	6,250	3.0	0.1
Rural.....	11,699	2.8	<0.1

¹Parents of children in the 1st through 12th grades were asked about seven different school practices. They were asked how well the school did the following: let them know how their child was doing in school, helped them understand what children at their child's age are like, made them aware of chances to volunteer at school, helped them help their child learn at home, provided information about community services, provided information about how to help with homework, and provided information about why their child was placed in particular groups or classes. Answer categories were: does it "very well," "just o.k.," or "doesn't do it at all."

²School type was reported by parents.

³Parents were asked whether their child's school was his or her regularly assigned school or a school that the parent chose. If parents answered that the assigned school was also their school of choice, the school was categorized as a chosen school.

⁴School size was reported by parents.

⁵Parents' highest education level refers to the highest level of education completed by the child's parent or parents.

⁶There were less than 30 unweighted cases in the ungraded category; thus, it was not included in the analyses.

⁷Household urbanicity refers to the student's residence. Urbanicity was determined by linking the respondent's ZIP code to extract data from the 1990 census.

NOTE: s.e. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1996.

findings from other studies (Epstein and Lee, 1995) and also augment those findings by showing that parents with children in chosen public schools reported more school practices done "very well" than did those in assigned public schools.

Differences by School Size

Results from the current analysis also showed that school size was related to parent-reported school practices. Parents of children in smaller schools gave more favorable reports about school practices, on average, than did parents of children in larger schools. The average number of school practices reported to be done "very well" decreased with each category as school size increased above 300-599 students. For example, parents of children in schools with 300 - 599 students reported an average of 3.2 school practices done "very well", compared to 2.8 practices reported by parents of children in schools with 600-999 students, and 2.6 practices reported by parents of children in schools with 1,000 or more students.²

These findings suggest that parents with children at smaller schools report more practices done "very well" than do parents with children in larger schools. Future research using data from schools about school size and school practices, such as the U.S. Department of Education's Survey on Family and School Partnerships in Public School, K-8 (Carey and Farris, 1996), should be used to try to replicate and further clarify this result from the point of view of schools.

Differences by Parents' Highest Level of Education

An important family characteristic included in the current study was parents' education level. A variable was created to define the highest level of schooling completed by either parent or guardian in the household or the only parent or guardian in the household. Parents who had not completed a high school program reported, on average, more school practices done "very well" (3.7 practices) than did parents with higher education levels (2.8 to 3.1 practices, reported by those who had completed vocational or technical education or

some college; college graduate; or graduate or professional school).

These findings may indicate that more highly educated parents are more critical of schools than less educated parents. Other research on parents' views of teachers and social class, a variable related to parent education level, has shown differences in how working-class and upper-middle class parents view teachers. For example, in an in-depth study of first grade classrooms, Lareau (1989) found that upper-middle-class parents (all of whom had a college degree) viewed educators as equals to themselves. These parents were more critical of schools than were working-class parents. Their perceptions of the school seemed to have less to do with actual school practices than with their idea of their relationship to the school staff as equals. By comparison, working-class parents saw teachers as "educated people" with professional expertise and a higher status than themselves. They tended to turn over more responsibility for education to teachers and to be less critical of them.

Another interpretation of the finding that parents with lower education levels reported more school practices done "very well" is that schools may be making more efforts to do a good job of offering information to parents with lower education levels than to those with higher education levels, and perhaps making efforts to increase the participation of parents with less education. Future analyses with the NHES:96 data should address whether the differences found by parent education level are due to differences in the absolute number of school practices reported (combining answers of those judged to be done "just o.k." and those done "very well") or to the judgment of how well the school practice was conducted. Also, further research should examine whether particular school practices are being reported more often and/or more or less critically by parents with lower rather than higher education levels.

Differences by Student Grade Level

As noted earlier, past research has also shown that school efforts to involve parents decrease as children enter higher grade levels and enter into different levels of school (e.g., middle school, high school) (Epstein and Dauber, 1991). Based

on these findings, student grade levels were categorized such that common years for school transition were analyzed separately. Of particular interest were grades 6 (a common year for beginning middle or junior high school) and 9 (a common year for beginning senior high school).³

In general, parents of students in lower grades reported more information practices were done "very well," compared to parents of children in higher grades. The average number of school practices was highest in the 1st through the 3rd grades at 3.9 practices, decreased progressively to 2.3 practices by the 9th grade, and remained at about that level through the 12th grade. Across important transition years, the average number of school practices done "very well" decreased by nearly one school practice between the first grade (mean = 4.0) and the 6th grade (mean = 3.1), and by another school practice between the sixth grade (mean = 3.1) and the 9th grade (mean = 2.3).

Future research is needed to understand the decline in school practices judged to be done "very well" as children's grade level increases. One possibility is that schools become more neglectful of the needs of older children and families. However, research by Lareau (1989) suggests that an important reason for the decline in school practices to involve families with increasing grade levels is teachers' beliefs about child development. Teachers of children in upper grade levels report that they want to make their students more independent and responsible for their own actions in school. Thus, teachers of older children may not feel it is desirable to involve parents in areas such as homework and home learning. The decline in school practices in some areas may not, therefore, indicate neglect of older children but rather a pattern of beliefs about what children need as they grow older.

Another explanation for the decline in school practices is that older students do not want their parents to be involved. However, some research has shown that older students report wanting more help from their parents in some areas, such as homework (Sylvan Learning Centers and the National Association of Secondary School Principals, 1993). Future research should take

these multiple perspectives into account in trying to understand variations in school practices by the grade level of the child.

Differences by Student Race/Ethnicity

Differences in school practices were also examined with respect to race/ethnicity. The categories for race/ethnicity were "white, non-Hispanic," "black, non-Hispanic," "Hispanic," and "other." Results showed that parent reports of school practices varied by the racial and/or ethnic background of the child. Parents of Hispanic children reported more school practices done "very well" than parents of white children or parents of children who were in the racial/ethnic category "other." Also, parents of black children reported more school practices done "very well" than parents of white children.

It is unclear why parents of Hispanic and black children reported more school practices done "very well" compared to parents of other children. Like the findings for parent education level, it may be that parents of Hispanic and black children are more satisfied with schools than are parents of white children and children of "other" races or ethnic groups. Alternatively, it may be that schools are making more efforts to involve parents of Hispanic and black children. Future analyses should clarify whether parents of children of various racial or ethnic groups differ from each other in their reports of what practices were done and in their evaluations of specific practices. Also, multivariate analyses should also be conducted to examine the unique effects of race/ethnicity with respect to other variables related to school practices, such as parent education level, school type, school size, and student grade level. These variables may be related to each other and thus are worthy of further consideration in multivariate modeling.

Differences by Household Urbanicity

Household urbanicity was examined based on past research showing differences in school practices in rural and urban schools (Epstein and Lee, 1995). Parent-reported school practices were examined in relation to whether the student lived in an urban area that was inside an urbanized area, an urban area that was outside an urbanized area, or a rural area. Urbanicity was

determined by linking the respondent's ZIP code to extract data from the 1990 census.⁴ Results showed that there were no substantively important differences in parent-reported school practices based on the urbanicity of the community where the child lived.

Summary

In this Brief, items from the NHES:96 Parent/Family Involvement in Education component were used to examine parent reports of school practices to involve them in their children's education in relation to family involvement at school and school, family, student, and community characteristics. Of particular note was the finding that the average number of parent-reported school practices done "very well" was positively related to the frequency of the family's involvement at school, although the causal direction of this relationship cannot be determined in a cross-sectional study. The broad pattern of other results showed that the average number of parent-reported school practices done "very well" was greater for parents of children in private versus public schools; smaller versus larger schools; parents with less than a high school education versus parents with a high school diploma or more; students in lower grade levels versus those in higher grade levels; and parents of Hispanic and black children versus parents of children of other racial/ethnic backgrounds.

Although parents' satisfaction with practices in every area measured in the current study may not be necessary for parents to feel that they are in a partnership with their child's school, results suggest that there are many areas in which schools could increase their efforts. The average number of school practices reported by parents as being done "very well" was three out of seven practices. In addition, some types of practices were less frequently reported to be done by schools "very well". Of note was that only 37 percent of parents reported that their child's school provided information about how to help their child learn at home. This school practice is of particular importance because helping children learn more at home is important to improving their school performance (Leler, 1983; Walberg, 1984; U.S. Department of Education, 1994).

Further research with the NHES:96 data should explore how different levels of school practices are related to the frequency of family involvement among parents with children in different grade levels and parents of children in different types of schools, families, and communities. This research could also make use of data from youth about whether youth feel that their parents are involved at school as much as they would like for them to be. The NHES:96 provides a rich data base with which to explore these and other topics related to school practices and family involvement.

Survey Methodology and Data Reliability

The 1996 National Household Education Survey (NHES:96) is a telephone survey conducted for the U.S. Department of Education, National Center for Education Statistics, by Westat. Data collection took place from January through April of 1996. The sample was selected using list assisted, random digit dialing (RDD) methods and is nationally representative of all civilian, noninstitutionalized persons in the 50 states and the District of Columbia. Data were collected using computer-assisted telephone interviewing (CATI) technology.

The Parent and Family Involvement in Education (PFI) component of the NHES:96, which is the basis of this report, employed a sample of students age 3 through grade 12. Up to three instruments were used to collect data on the school and family experiences of these students. A household Screener, administered to an adult member of the household, was used to determine whether any children of the appropriate ages or grades lived in the household, to collect information on each household member, and to identify the appropriate parent/guardian respondent for the sampled child. For sampling purposes, children residing in the household were grouped into younger children, age 3 through grade 5, and older children, in grades 6 through 12. One younger child and one older child from each household could have been sampled for the NHES:96. If the household contained more than one younger child or more than one older child, one from each category was randomly sampled as an interview subject. For households with youth in 6th through 12th grade who were

sampled for the survey, an interview was conducted with the parent/guardian most knowledgeable about the care and education of each youth, and following completion of that interview and receipt of parental permission, an interview also was conducted with the youth. Because the greatest number of items about school practices were asked of parents of 1st through 12th graders, this report is based on the responses of parents of children in the 1st through the 12th grades.

Response Rates

For the NHES:96 survey, Screeners were completed with 55,838 households, of which 19,337 contained a child sampled for the PFI component. The response rate for the Screener was 69.9 percent. The completion rate for the interview with parents of children age 3 through 12th grade students, that is, the percentage of interviews conducted with parents for sampled children in that age and grade range, was 89.4 percent. Thus, the overall response rate for the interview with parents of students age 3 through 12th grade was 62.5 percent (the product of the Screener response rate and the parent interview completion rate). For the NHES:96, item nonresponse (the failure to complete some items in an otherwise completed interview) was very low. For some items in the interview, a response of don't know or refused was accepted as a legitimate response. Through an operation known as the "hot-deck procedure," responses were imputed for missing values (i.e., don't know or refused for items not specifically designated to have those legitimate response categories or not ascertained). As a result, no missing values remain. The item nonresponse rates for variables in this report are generally less than 2 percent, except for school size and household urbanicity, which both had nonresponse rates under 10 percent.

Data Reliability

Estimates produced using data from the NHES:96 are subject to two types of error, sampling and nonsampling errors. Nonsampling errors are errors made in the collection and processing of data. Sampling errors occur because the data are collected from a sample rather than a census of the population.

Nonsampling Errors

Nonsampling error is the term used to describe variations in the estimates that may be caused by population coverage limitations and data collection, processing, and reporting procedures. The sources of nonsampling errors are typically problems like unit and item nonresponse, the differences in respondents' interpretations of the meaning of the questions, response differences related to the particular time the survey was conducted, and mistakes in data preparation.

In general, it is difficult to identify and estimate either the amount of nonsampling error or the bias caused by this error. In the NHES survey, efforts were made to prevent such errors from occurring and to compensate for them where possible. For instance, during the survey design phase, focus groups and cognitive laboratory interviews were conducted for the purpose of assessing respondent knowledge of the topics, comprehension of questions and terms, and the sensitivity of items. The design phase also entailed extensive CATI instrument testing and a multiphase test that included 3,200 Screeners and over 950 parent interviews.

An important nonsampling error for a telephone survey is the failure to include persons who do not live in households with telephones. About 93.3 percent of all students in the first through 12th grade live in households with telephones. Weighting adjustments using characteristics related to telephone coverage were used to reduce the bias in the estimates associated with youth who do not live in households with telephones.

Sampling Errors

The sample of households with telephones selected for the NHES:96 is just one of many possible samples that could have been selected from all households with telephones. Therefore, estimates produced from the NHES:96 sample may differ from estimates that would have been produced from other samples. This type of variability is called sampling error because it arises from using a sample of households with telephones, rather than all households with telephones.⁵

The standard error is a measure of the variability due to sampling when estimating a statistic; standard errors for estimates presented in this report were computed using a jackknife replication method. Standard errors can be used as a measure of the precision expected from a particular sample. The probability that a complete census count would differ from the sample estimate by less than 1 standard error is about 68 percent. The chance that the difference would be less than 1.65 standard errors is about 90 percent; and that the difference would be less than 1.96 standard errors, about 95 percent.

Standard errors for all of the estimates are presented in tables 2 and 3. These standard errors can be used to produce confidence intervals. For example, an estimated 48 percent of parents reported that their school sent their family personal notes. This figure has an estimated standard error of .46. Therefore, the estimated 95 percent confidence interval for this statistic is approximately 49 to 47 percent.

The tests of significance used in this analysis are based on Student's *t* statistics. As the number of comparisons at the same significance level increases, it becomes more likely that at least one of the estimated differences will be significant merely by chance, that is, it will be erroneously identified as different from zero. Even when there is no statistical difference between the means or percentages being compared, there is a 5 percent chance of getting a significant *t* value of 1.96 from sampling error alone. As the number of comparisons increases, the chance of making this type of error also increases.

A Bonferroni adjustment was used to correct significance tests for multiple comparisons. This method adjusts the significance level for the total number of comparisons made with a particular classification variable. All the differences cited in this report are significant at the .05 level of significance after a Bonferroni adjustment.

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Endnotes

¹An item measuring school practices to involve parents in decisionmaking (Epstein's type 5 involvement) was not included in this analysis because it had different response categories ("yes/no") than the other questions.

²Because private schools are frequently smaller than public schools, another analysis was conducted to assess whether school type was positively related to school practices, controlling for school size. Results from a multiple regression analysis showed that school type was significantly related to school practices (beta = .40; standard error = .03; $p < .0001$), even when controlling for school size (beta = -0.22; standard error = .02; $p < .0001$). Thus, both school variables were significantly related to school practices.

³Common transition years were verified using tabulations of the NHES:96 data prior to categorizing grade levels. Sixth graders were in schools with a variety of lowest grade levels (e.g., sixth grade, preschool, kindergarten, and first grade), but the greatest percentage of 6th graders (40 percent) were in schools in which 6th grade was the lowest grade level. Frequencies also showed that the highest percentage of 9th graders (71 percent) were in the lowest grade level of their schools.

⁴The Census Bureau defined "urban" for the 1990 census as "comprising all territory, population, and housing units in urbanized areas and in places of 2,500 or more persons outside urbanized areas." Territory, population, and housing units not considered urban are considered rural. "Urbanized area" is defined as "one or more places and the adjacent densely settled surrounding territory that together have a minimum of 50,000 persons" (U.S. Bureau of the Census, 1991).

⁵For additional information on telephone coverage issues and estimation procedures to correct for coverage biases, see J. M. Brick and J. Burke, *Telephone Coverage Bias of 14- to 21-year-olds and 3- to 5- year olds*. Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, report number NCES 92-101.

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