

GAO

Briefing Report to the Chairman,  
Subcommittee on Children, Family,  
Drugs and Alcoholism, Committee on  
Labor and Human Resources, U.S.  
Senate

July 1993

# POOR PRESCHOOL- AGED CHILDREN

## Numbers Increase but Most Not in Preschool



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United States  
General Accounting Office  
Washington, D.C. 20548

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Human Resources Division

B-251658

July 21, 1993

The Honorable Christopher J. Dodd  
Chairman, Subcommittee on Children,  
Family, Drugs and Alcoholism  
Committee on Labor and Human Resources  
United States Senate

Dear Mr. Chairman:

In 1990, the President and the nation's governors expressed a commitment to preschool programs for all disadvantaged children.<sup>1</sup> The first of the National Education Goals adopted in 1990 states that by the year 2000 all children in America will start school ready to learn and all disadvantaged children will have access to preschool programs.

In light of this goal and the upcoming reauthorization of the Head Start program, you requested that we examine (1) the number and characteristics of preschool-aged children—3- to 4-year-olds—and how they changed between 1980 and 1990, and (2) differences in preschool participation rates for children by income level, age, other demographic characteristics, and location. We reported our preliminary results in a briefing to your staff on April 8, 1993, shown in appendix I. This report presents our final results.

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## Results in Brief

The increase in the number, diversity, and needs of disadvantaged preschool-aged children poses potential obstacles to achieving the first National Education Goal that all children be ready for school by the year 2000. During the 1980s, the number of children who were most likely to face difficulties upon entering school and who would have benefitted the most from preschool programs—poor,<sup>2</sup> near-poor, and at-risk

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<sup>1</sup>The National Education Goals Panel uses a variety of definitions for disadvantaged children, including those in poverty, near poverty, and at-risk. Children at-risk are those who, while not necessarily poor, face significant obstacles to achieving academic success in school. In this report, the term refers to children who live in immigrant families, linguistically isolated households, single-parent families, families where the most educated parent has less than a high school diploma, or families where parents do not work.

<sup>2</sup>Poor children, as defined by the Office of Management and Budget (OMB), live in families with an annual household income below \$12,674 for a family of four. We define near-poor as those children who live in families with an annual household income between 100 and 133 percent of poverty—or between \$12,674 to \$16,856 for a family of four. Nonpoor children live in families with an annual household income at or above 133 percent of poverty or above \$16,856 for a family of four.

children—increased substantially.<sup>3</sup> For example, from 1980 to 1990 the number of poor preschool-aged children increased 28 percent—from 1.1 to 1.4 million—compared with an increase among all preschool-aged children of only 16 percent. Further, the poverty rates for preschool-aged children have increased since the decennial census.<sup>4</sup>

Head Start and other preschool programs are now faced with a target population consisting of more poor, near-poor, and at-risk children.<sup>5,6</sup> Further, poor and near-poor preschool-aged children are more likely than nonpoor children to be in at-risk categories. To be successful in school, these children may require services that may not currently be provided, such as language or family support services.

In 1990, about one-third of poor preschool-aged children participated in preschool. About 35 percent of all poor 3- and 4-year-olds participated in preschool compared with over 60 percent of the highest income 3- and 4-year-olds. Preschool participation rates for poor 3- and 4-year-olds were consistently low; no state had preschool participation rates of above 45 percent. Further, poor preschool-aged children in rural areas participated at even lower rates—about 30 percent.

## Background

The nation's governors and the President made a commitment to preschool programs for all disadvantaged children in light of the demonstrated benefits of these programs. Among such benefits are improved test scores in elementary school, fewer grade retentions, as well as reduced placements in special education programs. However, recent studies suggest that the number of poor, near-poor, and at-risk children is increasing, yet these children continue to be the least likely to participate in preschool.

<sup>3</sup>Census does not determine poverty status for children who live with nonrelatives, in institutions, or are homeless. A percentage of these children also may be poor, near-poor, or at-risk.

<sup>4</sup>Current Population Survey (CPS) data show an increase in the number and rate of poor young children. For example, the March 1992 CPS shows 25 percent of children under age 5 living in poverty, compared with 20 percent in 1990.

<sup>5</sup>Head Start regulations require that 90 percent of the children enrolled in each program be from low-income families, defined as below OMB's poverty income guidelines or living in families that receive public assistance. Some state and locally funded preschool programs targeted poor, near-poor, and at-risk children.

<sup>6</sup>This report does not include data on children in families receiving public assistance because of limitations in the Census public assistance variable (see appendix II for a discussion of this variable). However, no state has an AFDC threshold above 133 percent of poverty and only seven states have an AFDC threshold between poverty and 133 percent of poverty.

The Head Start program is the primary federal vehicle for preparing poor children to start school ready to learn. Head Start is the largest federal program providing education, health, and developmental services to poor children and their families. A number of other federal, state, and local programs also provide preschool services. For example, federal Chapter 1 funds can be used for preschool, and preschool programs are funded through the Even Start program, but these federal programs serve fewer children than Head Start.<sup>7</sup> In addition, many states and localities fund preschool services, although states vary in the resources they devote to preschool programs and the types of services these programs deliver.

Recent proposals to expand the Head Start program to reach every poor child have raised questions about how many disadvantaged children are not participating in any preschool program. However, no good estimates have been available of the number, location, and preschool participation rates of 3- and 4-year-old children. Current estimates provide national data, but do not provide information about smaller geographic areas, such as states and counties, or on detailed demographic, social, and income characteristics of children. While some studies suggest that certain groups of children are less likely to participate—such as 3-year-olds or children with specific risk factors—comprehensive data on these children's participation rates have not been available.

## Scope and Methodology

To determine the number, characteristics, and preschool participation rates of young children, we contracted with the U.S. Bureau of the Census in October 1992 to obtain a special tabulation of data from the 1980 and 1990 decennial censuses. The GAO tabulation contains detailed information on preschool-aged children and their families, including data on their race/ethnicity, immigration status, family income and type, educational attainment and employment status of parents, and other characteristics. The tabulation includes this information for the urban and rural sections of every county in the United States. These data can be aggregated into metropolitan areas, states, regions, and the nation as a whole.

Decennial census data on preschool participation include a larger and more comprehensive sample than other existing data sets (see app. II). For example, Census provides state- and county-level data, whereas other data

<sup>7</sup>Chapter 1 and Even Start are authorized under title I of the Elementary and Secondary Education Act. Chapter 1 targets financial aid through states to local education agencies to assist educationally disadvantaged students attending schools with high concentrations of low-income students. Even Start provides adult basic education, parenting education, and early childhood education to families with young children who live in Chapter 1 attendance areas.

sets provide little data below the national level. However, there are some limitations with how the Census asks about preschool participation. First, Census data do not provide information on the quality of preschools that children attend. Second, Census's preschool participation question asks the parent whether the child is enrolled in school and may be difficult for the parent to interpret, given the variety of preschool and child care arrangements in the nation. In addition, the 1990 decennial census data underestimate school participation of all children by approximately 5 percentage points.<sup>8</sup> Despite these limitations, this data set is the best available. For a further discussion of the GAO tabulation see appendix II.

Because the GAO tabulation is based on the detailed sample files of the 1980 and 1990 decennial censuses, the data we present have associated sampling errors. For a further discussion of the sampling errors see appendix II. Data points for all figures in appendix I appear in appendix III. Tables containing detail on children's preschool participation at single years of age appear in appendix IV. We conducted our review between May 1992 and April 1993 in accordance with generally accepted government auditing standards.

## Principal Findings

The findings are organized around two main topics: the characteristics of the preschool-aged population and preschool participation rates. Appendix I contains an updated version of the April 1993 briefing we gave you. State data points and data for figures are provided in appendix III.

### Characteristics of Preschool-Aged Children

#### Number of Poor Preschool-Aged Children Increased Substantially During the 1980s

The number of poor preschool-aged children increased by 28 percent during the 1980s—from approximately 1.1 million in 1980 to 1.4 million in 1990 (see fig I.6 and footnote 4).<sup>9</sup> More specifically, the number of poor preschool-aged children increased in 46 states—with 4 states experiencing small decreases in the number of poor children (see fig. I.7).

<sup>8</sup>In addition, the 1990 decennial census, like all previous censuses, undercounted the population of the United States. This undercount does not greatly affect the statistics in this report. (See app. II for a detailed discussion.)

<sup>9</sup>We focus on children aged 3 and 4 living in families; that is, households where one or more persons are related. Head Start eligibility regulations target children in poverty; only children in families have poverty status determined. We do not include 5-year-olds in our analysis because the majority of them participate in kindergarten. (See app. II.)

Preschool-aged (3 and 4 years old) and very young (birth to 2 years old) children had higher poverty rates than the remaining population. About 20 percent of the preschool-aged and very young lived in poverty, compared to 9 percent of prime-aged adults (25 to 64) and 13 percent of the elderly (see fig I.8).

#### Poor Children More Likely to Be From Minority Groups

Children in minority groups comprised about 57 percent of the poor preschool-aged population—with 31 percent black, 21 percent Hispanic, 3 percent Asian, and 2 percent American Indian/other.<sup>10</sup> In comparison, children in minority groups comprised approximately 30 percent of the total preschool-aged population—with about 14 percent black, 12 percent Hispanic, 3 percent Asian, and 1 percent American Indian/other (see fig. I.9).

#### Children's Poverty Rates Vary by Location

Poor preschool-aged children were more concentrated in parts of the South and Southwest. Of the nine states with the highest poverty rates, all were in the South or Southwest (see fig. I.10). Poor and near-poor children were more likely than nonpoor children to live in large cities and small towns.<sup>11</sup> By contrast, nonpoor children were more likely to live in smaller cities and suburbs. About one-fourth of poor preschool-aged children lived in rural areas (see fig. I.11 and table IV.12).

#### Poor and Near-Poor Preschool-Aged Children More Likely to Be At-Risk

Poor and near-poor preschool-aged children were more likely than nonpoor children to be immigrants and to live in linguistically isolated households,<sup>12</sup> single-parent families, and families where the most educated parent had less than a high school diploma or where parents did not work. For example, poor and near-poor preschool-aged children were at least twice as likely as nonpoor children to be immigrants or linguistically isolated. And poor and near-poor children were more than three times as likely as nonpoor children to live in families where the most educated parent had not completed high school.

However, near-poor children were less likely than poor children to live in families where parents did not work or to live in single-parent families. For example, about 60 percent of poor and 30 percent of near-poor children

<sup>10</sup>In this report, we base our designations for race and ethnicity on the 1990 decennial census question regarding Hispanic origin. The categories "white," "black," "Asian," and "American Indian/other" refer only to non-Hispanic members of those racial groups. All Hispanics—regardless of race—are included in the Hispanic category.

<sup>11</sup>GAO's tabulation of decennial census data did not include a variable on central cities. See appendix II.

<sup>12</sup>These are households in which no person 14 years or older speaks English "only" and no person aged 14 years or older who speaks a language other than English speaks English "very well."

lived in single-parent families, compared with less than 10 percent of the nonpoor population. Variability in family type existed within the poor population, however. Poor black children were much more likely to live in single-parent families than poor Asian children. The number of children in each risk category had increased between 1980 and 1990 except near-poor and nonpoor children living in families where the most educated parent had less than a high school diploma. (See figs. I.13 to I.18, and apps. III and IV.)

## Preschool Participation Rates

### Participation Rates Lowest for Poor and Near-Poor

About 35 percent of poor and near-poor 3- and 4-year-olds participated in preschool, compared with 45 percent of the nonpoor population. The gap in preschool participation between poor and near-poor compared with nonpoor children was greater for 3-year-olds than for 4-year-olds. For example, 22 percent of poor 3-year-olds participated in preschool, compared with 33 percent of nonpoor 3-year-olds. About 49 percent of poor 4-year olds participated, compared with 57 percent of nonpoor 4-year olds. (See fig. I.20.)

Participation rates among nonpoor children rose as their families' incomes increased. For example, for children in families of four with an income between \$23,447 and \$44,359, about 40 percent participated in preschool. In contrast, over 60 percent of children participated if they lived in families of four with incomes above \$63,370.<sup>13</sup> (See fig. I.21.)

Among poor and near-poor 3- to 4-year-olds, preschool participation was higher for black children than for white and Hispanic children. Approximately 40 percent of poor black 3- to 4-year-olds participated in preschool, compared with approximately 30 percent of poor white 3-to 4-year-olds and 34 percent for Hispanic 3- to 4-year-olds. (See fig. I.22.)

### Participation Low for Poor and Near-Poor Children in Rural Areas

Children living in rural areas were the least likely to participate in preschool, compared to children who lived in large cities, smaller cities and suburbs, and small towns. Only about 30 percent of poor and near-poor 3- to 4-year-olds in rural areas participated in preschool,

<sup>13</sup>The tabulation of data used poverty increments rather than dollar amounts to control for family size. Children in families with an annual household income between 185 and 350 percent of poverty had an annual household income between \$23,447 and \$44,359 for a family of four. Children in families with an annual household income above 500 percent of poverty had an annual household income above \$63,370 for a family of four.



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compared with participation rates of about 37 percent for children living in large cities. (See fig. I.23.)

#### Participation Rates Low Across States

In all states, fewer than 45 percent of poor 3- to 4-year-olds participated in preschool. However, state participation rates varied for poor children. Connecticut, Illinois, New Jersey, New York, Massachusetts, Maryland, Michigan, Mississippi, Rhode Island, and South Carolina all had participation rates of 40 percent or more for poor children, while the remaining states had participation rates below 40 percent. Although not indicated on the map, Washington, D.C., had participation rates of approximately 51 percent. (See fig. I.24 and table III.17.)<sup>14</sup>

#### Participation Rates Low for At-Risk Children

In all cases, children at-risk participated in preschool at lower than average rates. Children who were from immigrant families or linguistically isolated households, families where parents did not work, families where parents had not completed high school, and single-parent families had low rates of participation. For example, the average rate of preschool participation for immigrant, linguistically isolated children or children in families with parents who did not work was about 35 percent, compared with about 42 percent for the total population. For children living in families where parents had not completed high school, average participation was slightly lower, about 32 percent. Further, poor and near-poor children in these groups had even lower rates of participation. For example, less than one-third of the poor and near-poor linguistically isolated and immigrant children participated in preschool, compared with about 35 percent of all poor children. (See figs. I.25-I.27.)

In contrast, poor and near-poor children in single-parent families participated at higher rates than children in married-couple families. This was especially true for single working mothers (see table IV.13). However, among the population as a whole, children in single-parent families participated in preschool at lower rates than children in married-couple families (see fig. I.28).

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<sup>14</sup>Note that these data are from 1990 and participation rates since then may have changed.

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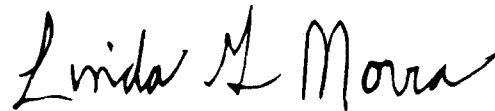
## Conclusions

The first National Education Goal will be difficult to attain in light of the increasing numbers of disadvantaged preschool-aged children, including more at-risk children who may require services that are not currently available. Such a growing number of disadvantaged children could strain the existing capacity of preschool programs. To meet the goal, federal, state, and local governments will need to develop ways to serve disadvantaged children, especially for those whose participation is very low. Without such changes, the portion of disadvantaged children who are ready for school could continue to be low in the year 2000.

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As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this briefing report until 15 days from the date of this letter. At that time, we will send copies to the Secretary of Health and Human Services, the Secretary of Education, and other interested parties. If you have any questions concerning this briefing report, please call me at (202) 512-7014. Other major contributors to this report are listed in appendix V.

Sincerely yours,



Linda G. Morra  
Director, Education  
and Employment Issues



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**Abbreviations**

AFDC	Aid to Families with Dependent Children
CPS	Current Population Survey
LTHD	less than high school diploma
LI	linguistically isolated
MAs	metropolitan areas
NCCS	National Child Care Survey
NHES	National Household Education Survey
OMB	Office of Management and Budget
PES	Post Enumeration Survey





# Poor Preschool-Aged Children: Numbers Increase but Most Not in Preschool

Figure I.1: Assignment Objective and Significance

## Assignment Objective

- Identify and analyze characteristics of preschool-aged children and describe participation in preschool.

## Significance

- Increase in number, diversity, and needs of poor children challenges capacity of Head Start and other early childhood programs.
- Low rates of preschool participation among poor children pose obstacles to achieving national education goals.
- Low preschool participation for selected groups and locations has implications for the distribution of early childhood services that Head Start and other programs provide.

Figure I.2: Assignment Methodology

**Analyze 1980/90 census data and focus on:**

- **Preschool-aged children -- 3- to 4-year-olds**
- **Poor and near-poor children**
- **Preschool participation**

Figure I.3: Characteristics of Census Data

### **Strengths:**

- Largest and most comprehensive database of demographic characteristics of preschool-aged children and their participation in preschool.
- Comparable data over time.

### **Limitations:**

- Census data do not provide information on the quality of preschool that children attend.
- Census data underestimate school participation of all children by approximately 5 percentage points.
- Like other existing surveys, census's preschool participation question may be difficult to interpret, given variety of preschool and child care arrangements.

Figure I.4: Results in Brief

Poor preschool-aged population:

- has increased and become more diverse between 1980 and 1990.<sup>15</sup>
- has increased in number in almost every state.

In 1990, poor and near-poor preschool-aged children:

- were more diverse and a higher percentage are at-risk<sup>16</sup> compared to the remainder of the population.
- participated in preschool at lower rates than nonpoor children.
- in rural areas, had the lowest rates of preschool participation.

No state had more than 45 percent of all poor children participating in preschool.

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<sup>1</sup>All data presented in this report are from the 1980 and 1990 decennial censuses; however, Current Population Survey data indicate that the percentage of children living in poverty has increased since 1990.

<sup>2</sup>At-risk children are those who, while not necessarily poor, face significant obstacles to achieving academic success in school. In this report, the term refers to children who live in immigrant families, linguistically isolated households, in single parent families, in families where the most educated parent has less than a high school diploma, or where parents do not work.

Figure I.5: Characteristics of Preschool-Aged Population

**Preschool-aged children:**

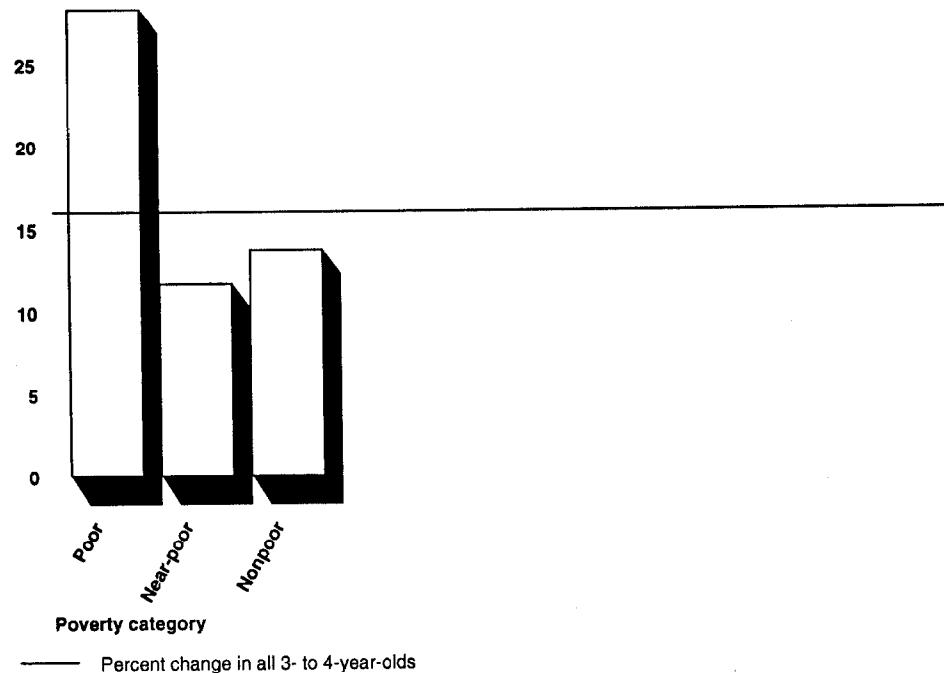
- were poorer than the rest of the population in 1990, and became poorer between 1980 and 1990.

**Poor preschool-aged children:**

- were more racially/ethnically diverse than children above poverty level.
- increased in numbers in almost every state between 1980 and 1990.
- were highly concentrated in some southern and southwestern states.
- were more likely to live in cities and suburbs, but about one-fourth lived in rural areas.

Figure I.6: From 1980 to 1990, Number of Poor Preschool-Aged Children Increased Faster Than Children Living Above Poverty

Percent change in 3- to 4-year-olds, 1980-90



- From 1980 to 1990, the number of poor children increased by 28 percent, while the total preschool-aged population increased by only 16 percent.

Appendix I  
Poor Preschool-Aged Children: Numbers  
Increase but Most Not in Preschool

Figure I.7: Number of Poor Preschool-Aged Children Has Increased in Almost Every State

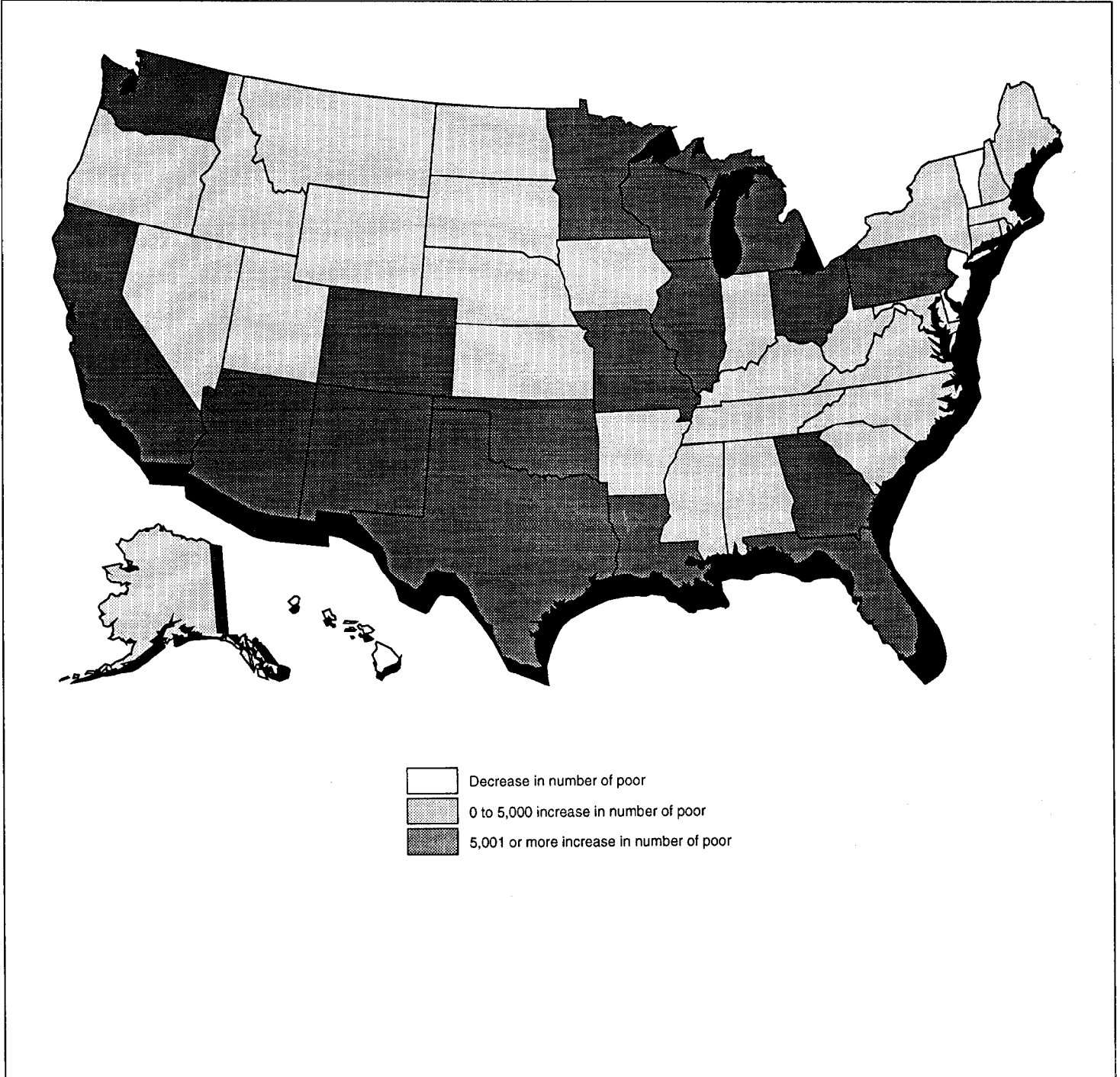
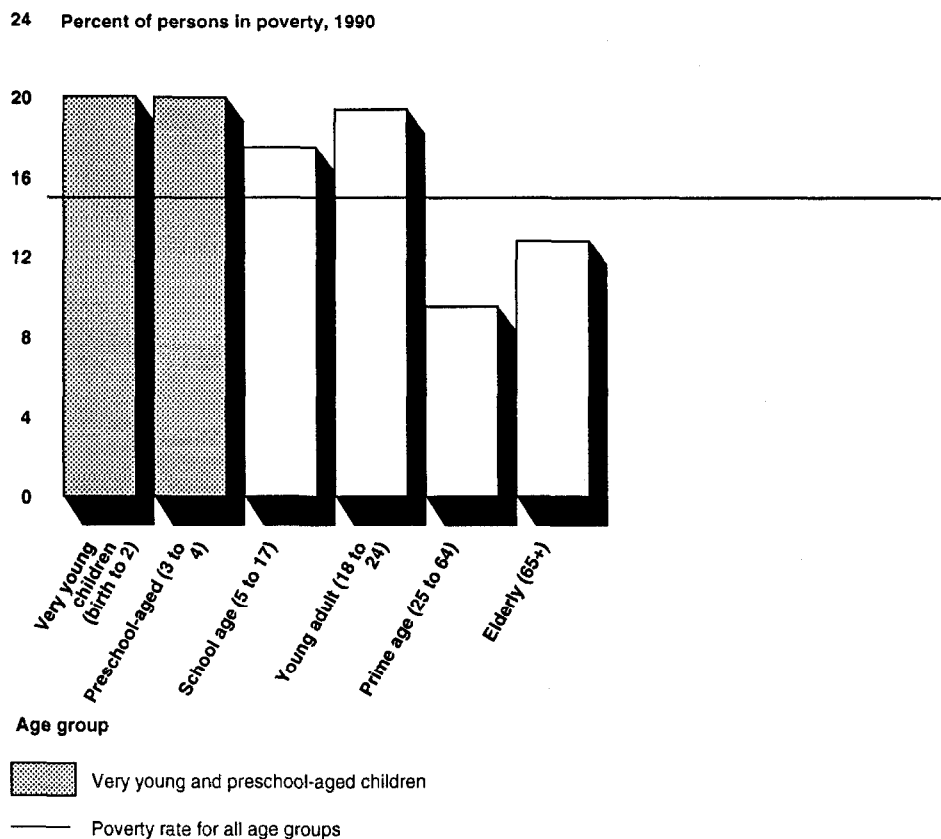




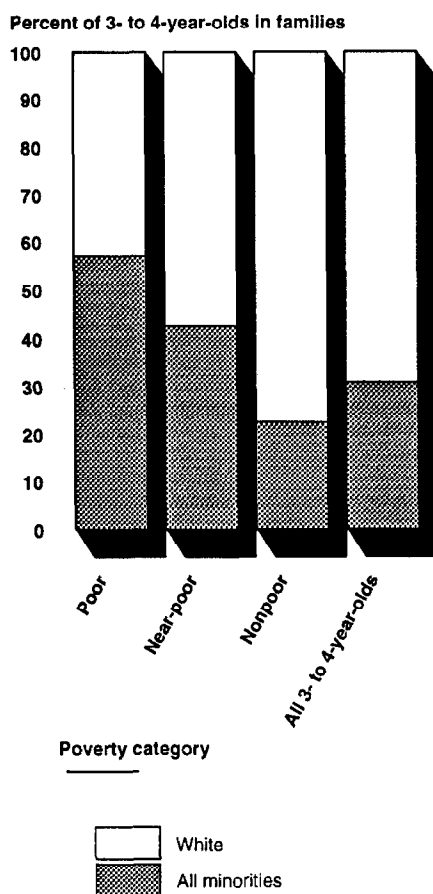
Figure I.8: Very Young and Preschool-Aged Children Are More Likely to Be Poor Than Rest of Population



- In 1990, 20 percent of all very young and preschool-aged children lived in families with incomes below the poverty level.
- Children aged birth-2 and 3-4 had similar rates of poverty.

Appendix I  
Poor Preschool-Aged Children: Numbers  
Increase but Most Not in Preschool

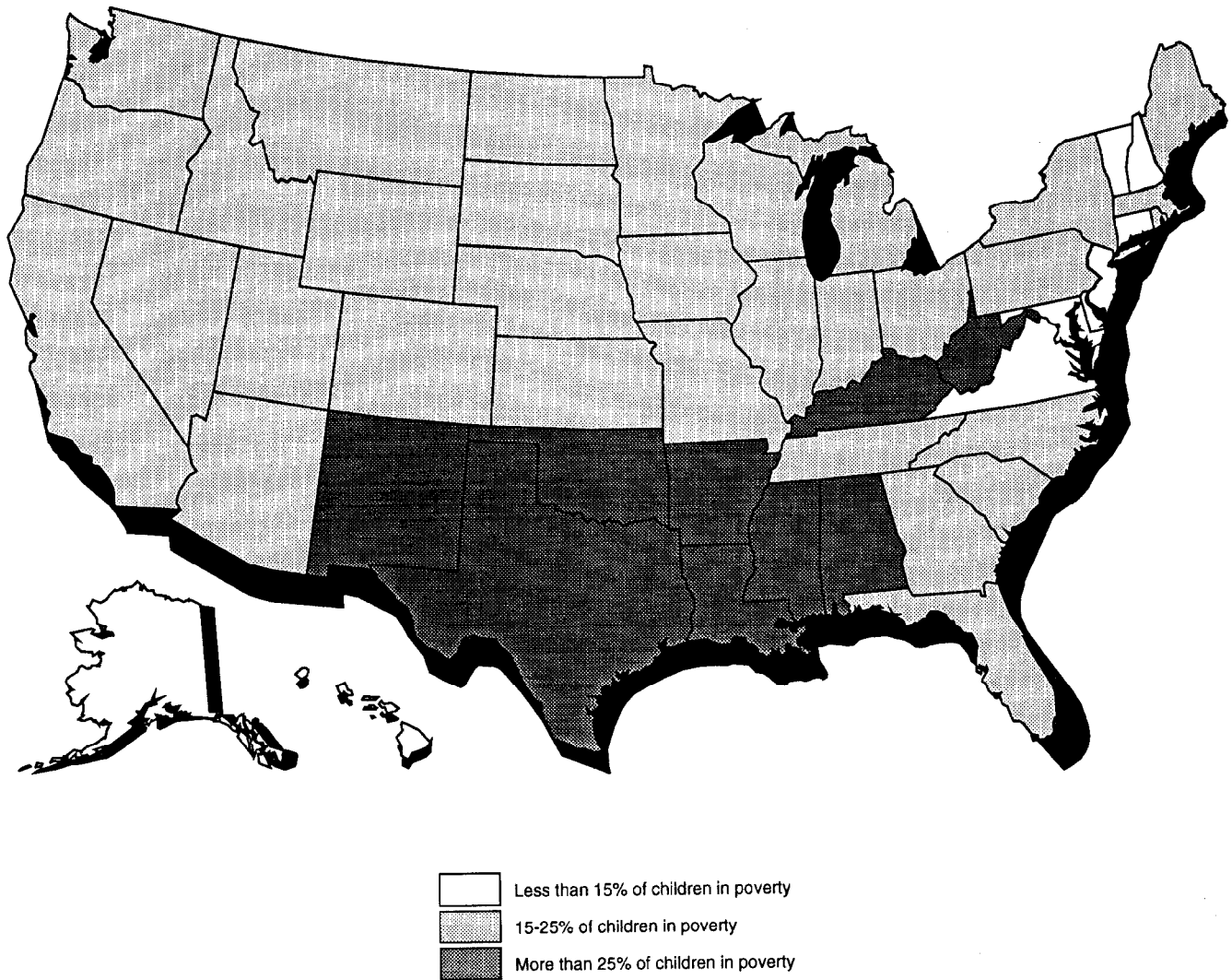
Figure I.9: Poor Preschool-Aged Children More Racially and Ethnically Diverse Than Children Above Poverty



- Minorities comprised approximately 30 percent of total preschool-aged population.
- By contrast, about 60 percent of poor preschool-aged children were minority.

**Appendix I**  
**Poor Preschool-Aged Children: Numbers**  
**Increase but Most Not in Preschool**

**Figure I.10: Poor Preschool-Aged Children More Concentrated in Parts of South and Southwest**



**Appendix I**  
**Poor Preschool-Aged Children: Numbers**  
**Increase but Most Not in Preschool**

**Figure I.11: About One-Fourth of Poor Preschool-Aged Children Live in Rural Areas**

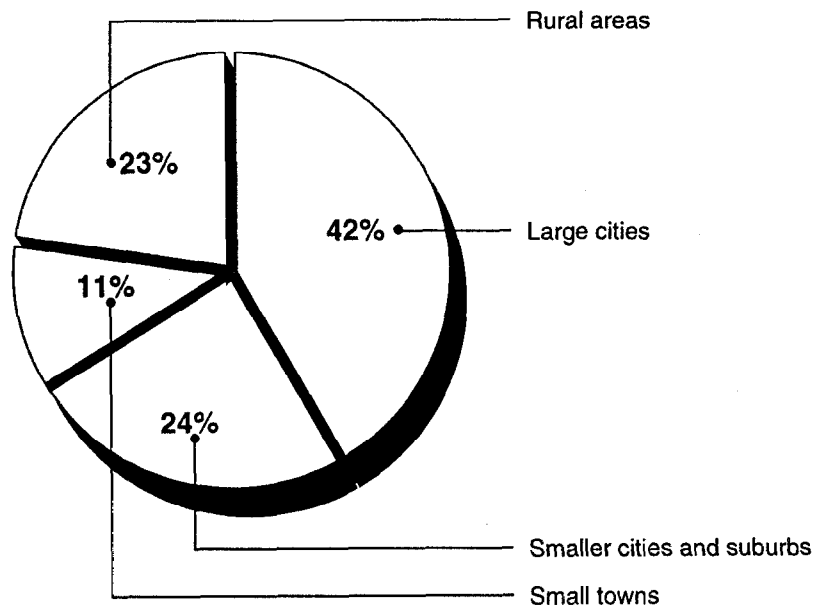


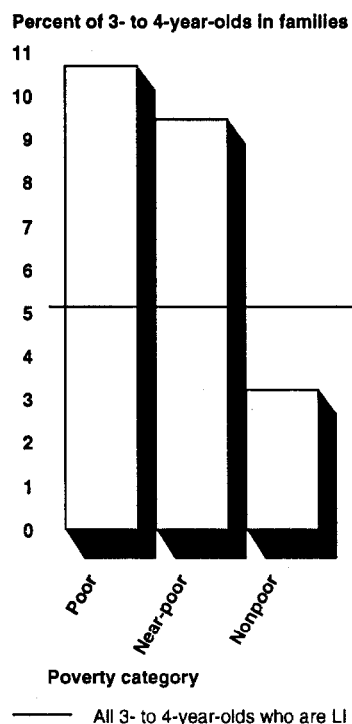
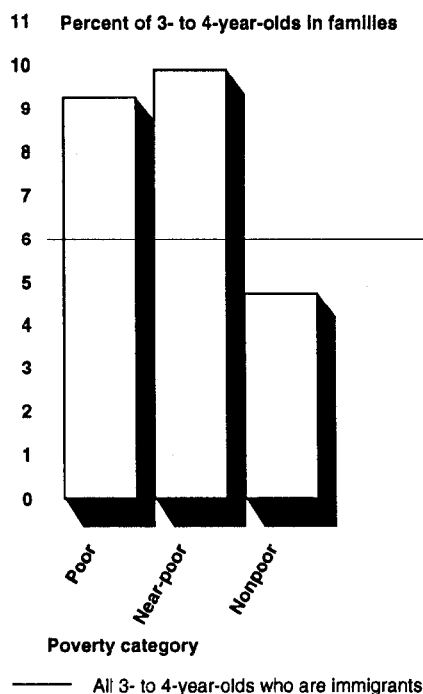
Figure I.12: Poor and Near-Poor Preschool-Aged Children More Likely to Be At-Risk Than Nonpoor

Poor and near-poor preschool-aged children were more likely than nonpoor children to be at-risk:

- be in immigrant families or linguistically isolated (LI) households;
- be in families where the most educated parent has less than a high school diploma (LTHD);
- live in families where parents do not work; and
- live with a single parent.

**Appendix I**  
**Poor Preschool-Aged Children: Numbers**  
**Increase but Most Not in Preschool**

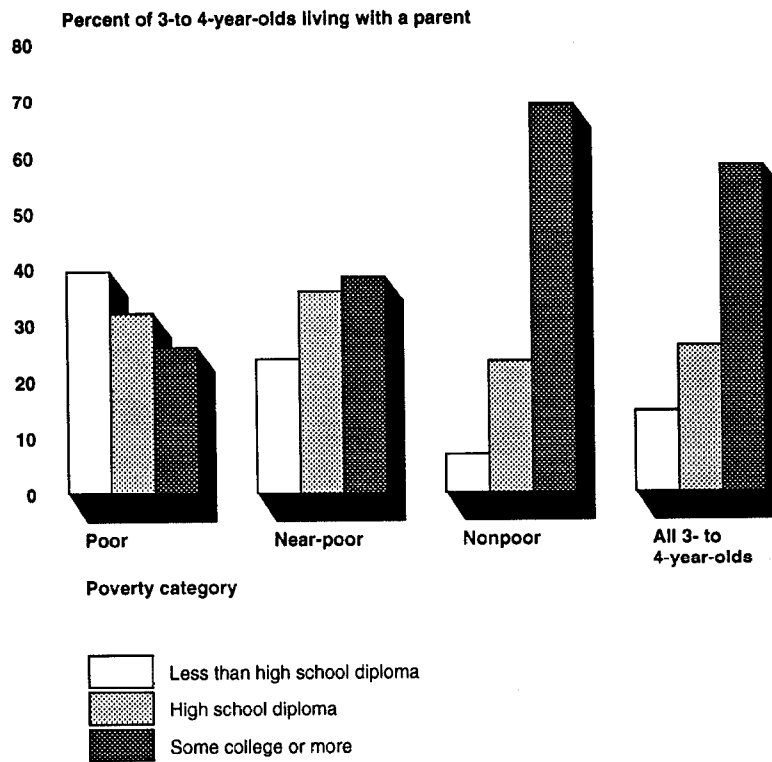
**Figure I.13: Poor and Near-Poor Preschool-Aged Children Are Much More Likely Than Nonpoor to Be Immigrant or LI**



- About 10 percent of poor and near-poor preschool-aged children lived in LI and immigrant homes, compared with much lower rates for the nonpoor population.

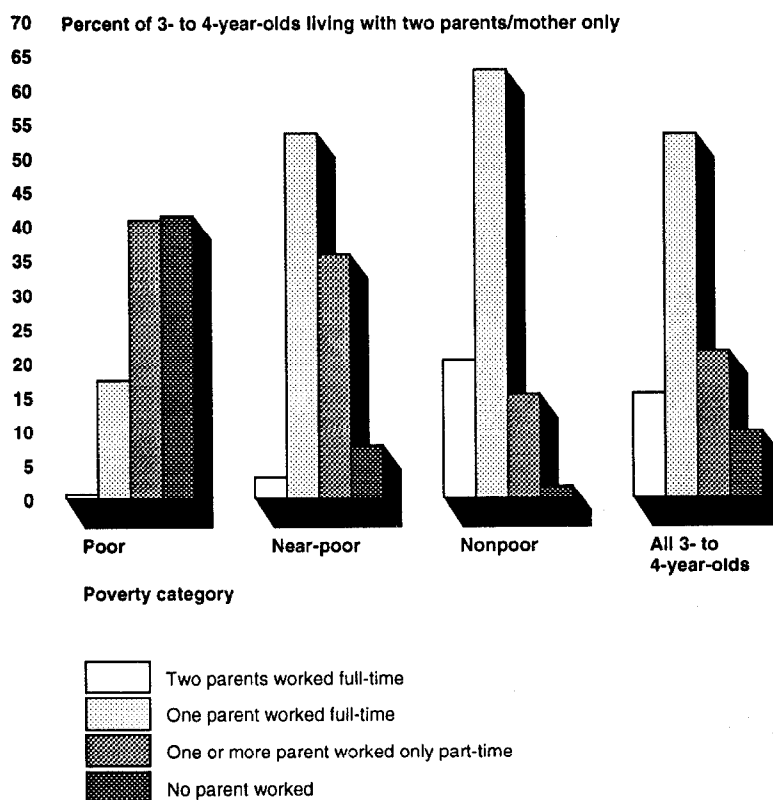
**Appendix I**  
**Poor Preschool-Aged Children: Numbers**  
**Increase but Most Not in Preschool**

**Figure I.14: Poor Preschool-Aged Children More Likely to Live in Families Where Parents Have Not Completed High School**



- About 40 percent of poor and 24 percent of near-poor preschool-aged children lived in families where neither parent completed high school.
- By contrast, less than 7 percent of the nonpoor children lived in LTHD families.

Figure I.15: Poor Preschool-Aged Children Most Likely to Live in Homes Where Parents Do Not Work

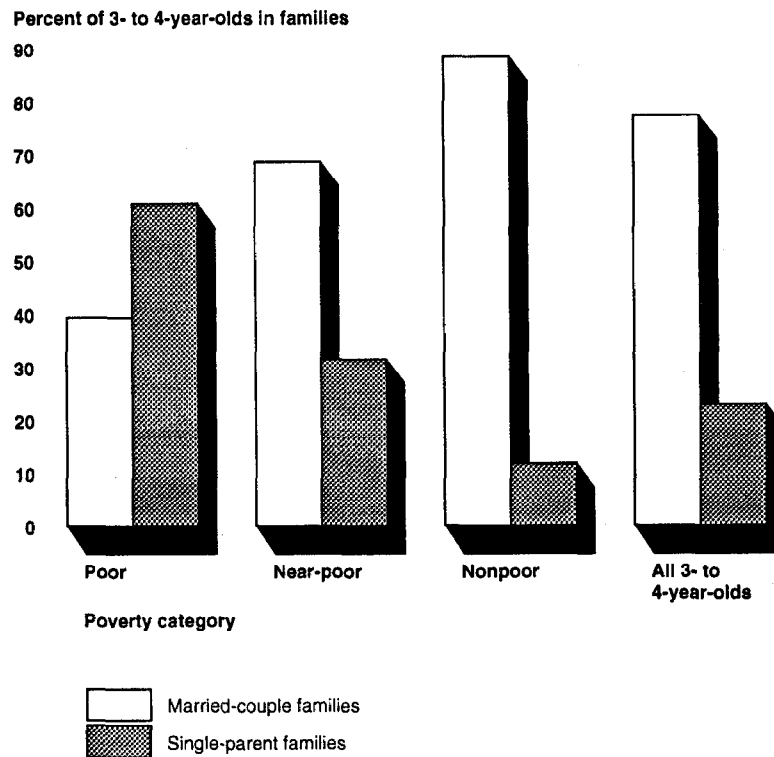


- Close to 42 percent of poor preschool-aged children lived in families where no one worked.
- By contrast, about 8 percent of the near-poor and less than 2 percent of the nonpoor preschool-aged children lived in families where no parent worked.



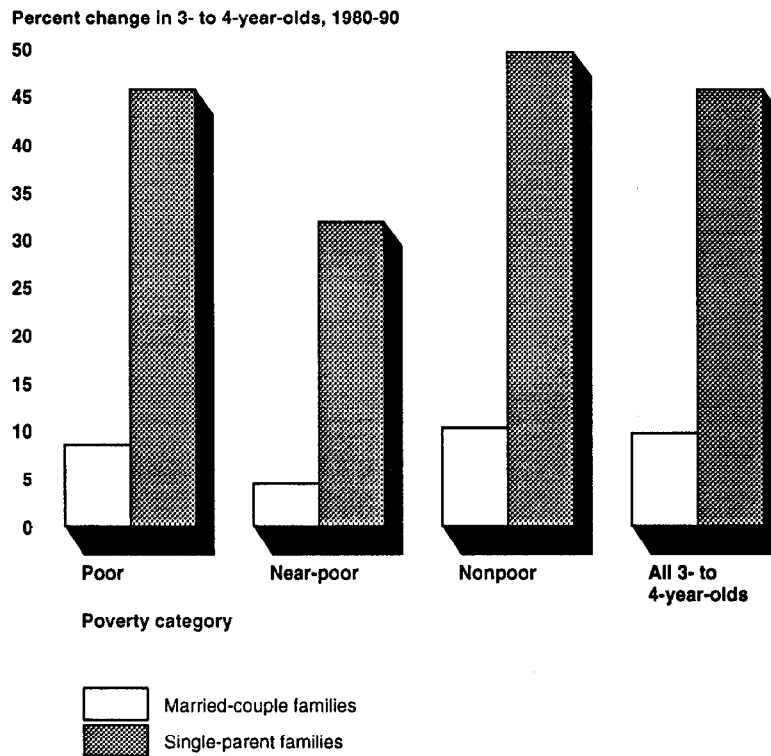
**Appendix I**  
**Poor Preschool-Aged Children: Numbers**  
**Increase but Most Not in Preschool**

**Figure I.16: Poor Preschool-Aged Children More Likely to Live in Single-Parent Families Than Other Children**



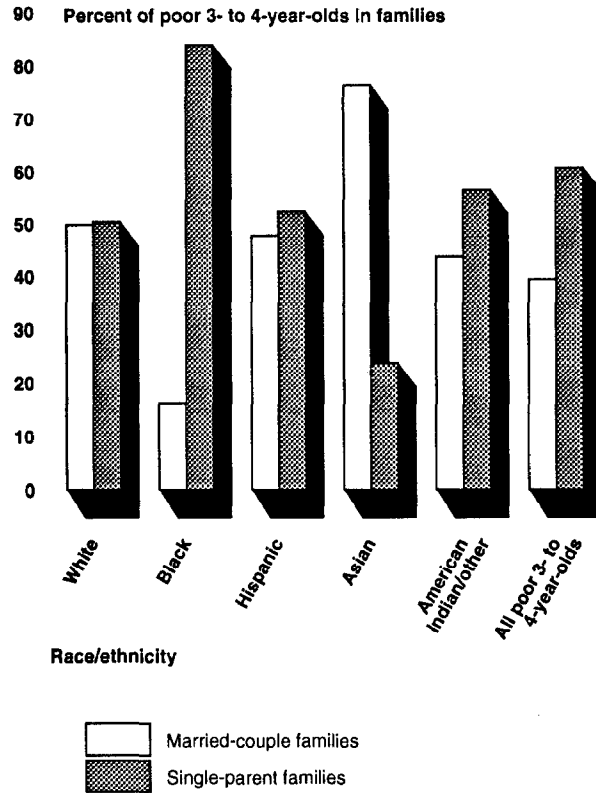
- About 60 percent of poor and 30 percent of near-poor preschool-aged children lived in single-parent families.
- By contrast, less than 10 percent of the nonpoor population lived in single-parent families.

Figure I.17: From 1980 to 1990, Preschool-Aged Children in Single-Parent Families Increased for Poor, Near-Poor, and Nonpoor



- The number of preschool-aged children living in single-parent families increased for all poverty categories.
- Nonpoor preschool-aged children in single-parent families had the largest increase, almost 50 percent.

Figure I.18: Among Poor Preschool-Aged Children, Family Patterns Differ Among Racial/Ethnic Groups

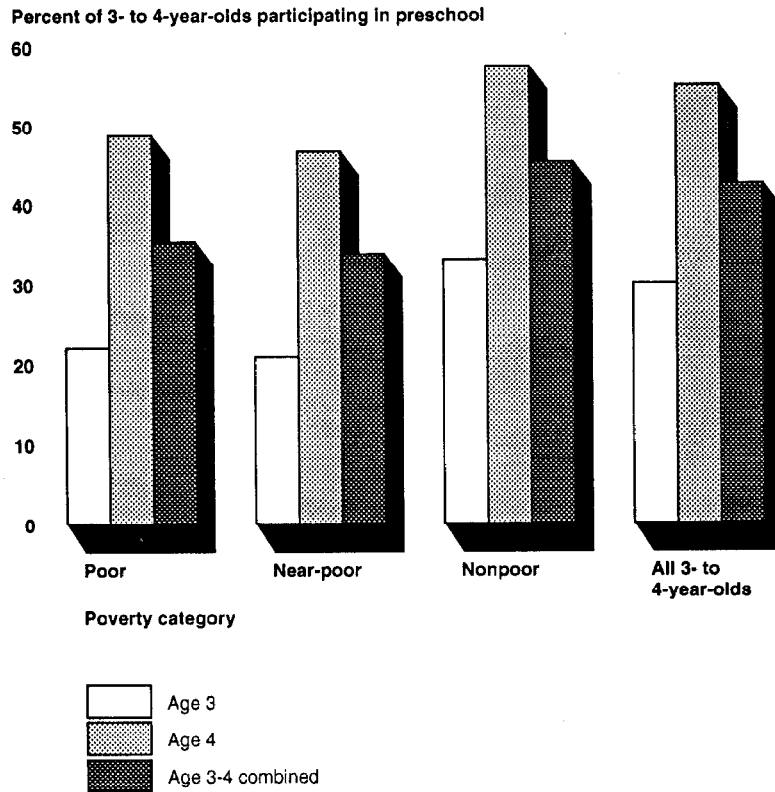


- Over 80 percent of poor black preschool-aged children lived in single-parent families.
- Over 75 percent of poor Asian preschool-aged children lived in married-couple families.

Figure I.19: Preschool Participation

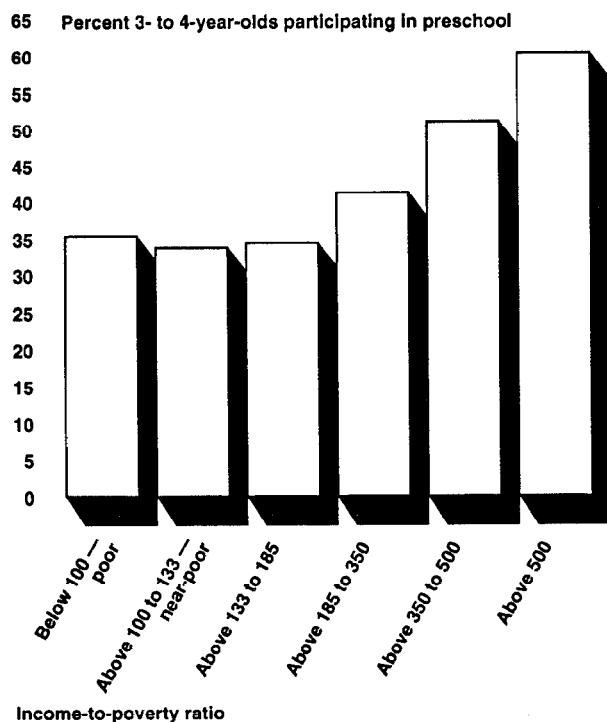
- Poor and near-poor 3- to 4-year olds participated in preschool at lower rates than nonpoor 3- to 4-year-olds.
- Rates of participation varied by:
  - Age: Three-year-olds participated at much lower rates than 4-year-olds.
  - Race/  
Ethnicity: Black poor 3- to 4-year-olds participated at higher rates than other poor children.
  - Risk  
status: Poor and near-poor 3- to 4-year-olds in groups identified as at-risk participated at substantially lower rates than other children.
  - Location: In some states, poor 3- to 4-year-olds participated in preschool at very low rates.

Figure I.20: Preschool Participation Low for Poor and Near-Poor Children



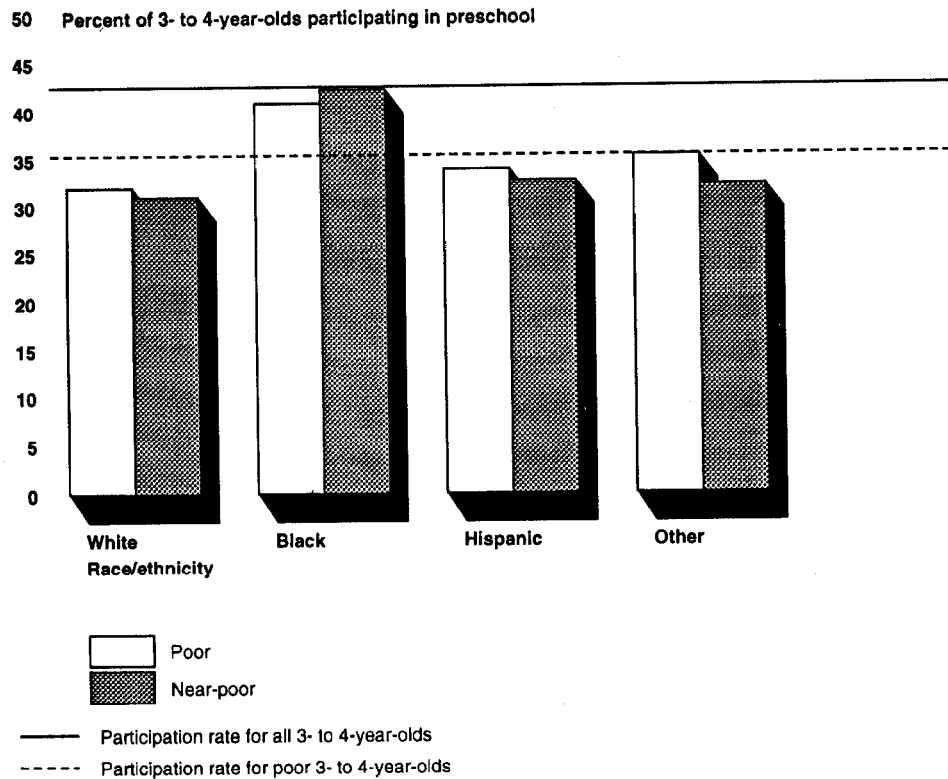
- About 35 percent of poor and near-poor preschool-aged children participated in preschool, compared with 45 percent of the nonpoor population.
- Poor and near-poor 3-year-olds participated in preschool at much lower rates than nonpoor 3-year-olds.

Figure I.21: Preschool Participation Highest for Children in High-Income Groups



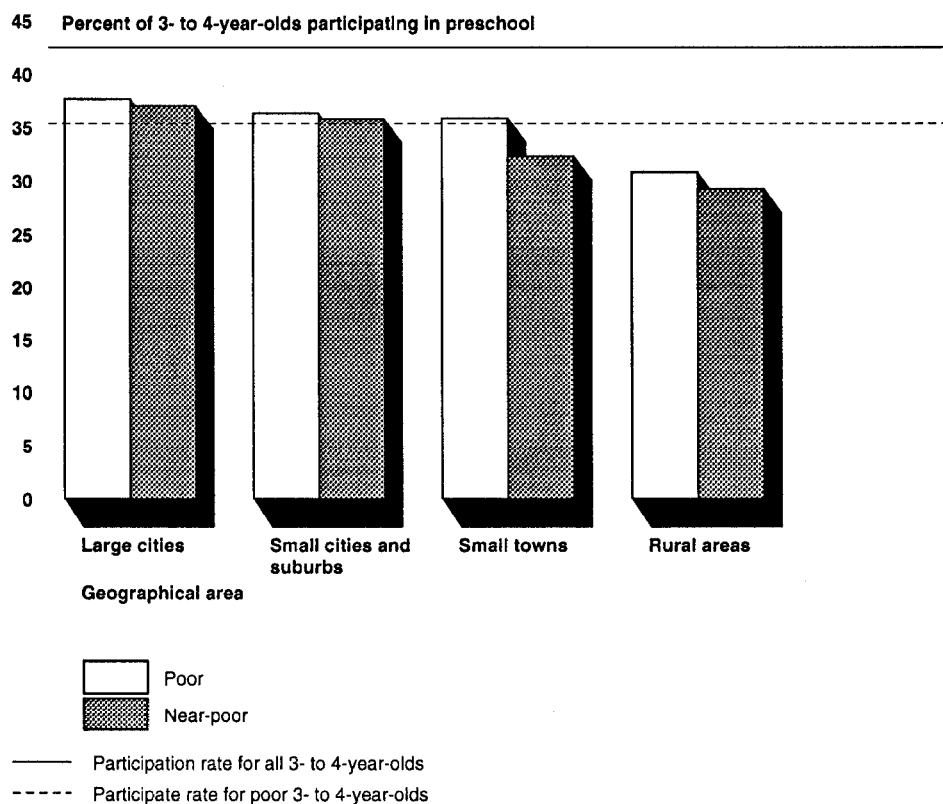
- Preschool participation was highest for children in families with annual incomes above 500 percent of poverty--or above \$63,370 for a family of four.

Figure I.22: Among Poor and Near-Poor, Black Preschool Participation Higher Than White and Hispanic



- About 40 percent of poor black 3- to 4-year-olds participated in preschool.
- Approximately 30 percent of poor white 3- to 4-year-olds participated in preschool.

Figure I.23: Poor and Near-Poor Children in Rural Areas Least Likely to Participate in Preschool



- About 30 percent of poor and near-poor 3- to 4-year-olds in rural areas participated in preschool, compared to 35 percent of all poor 3- to 4-year olds.



## Poor Preschool-Aged Children: Numbers Increase but Most Not in Preschool

**Figure I.24: All States Have Preschool Participation Rates for Poor Children Below 45 Percent**

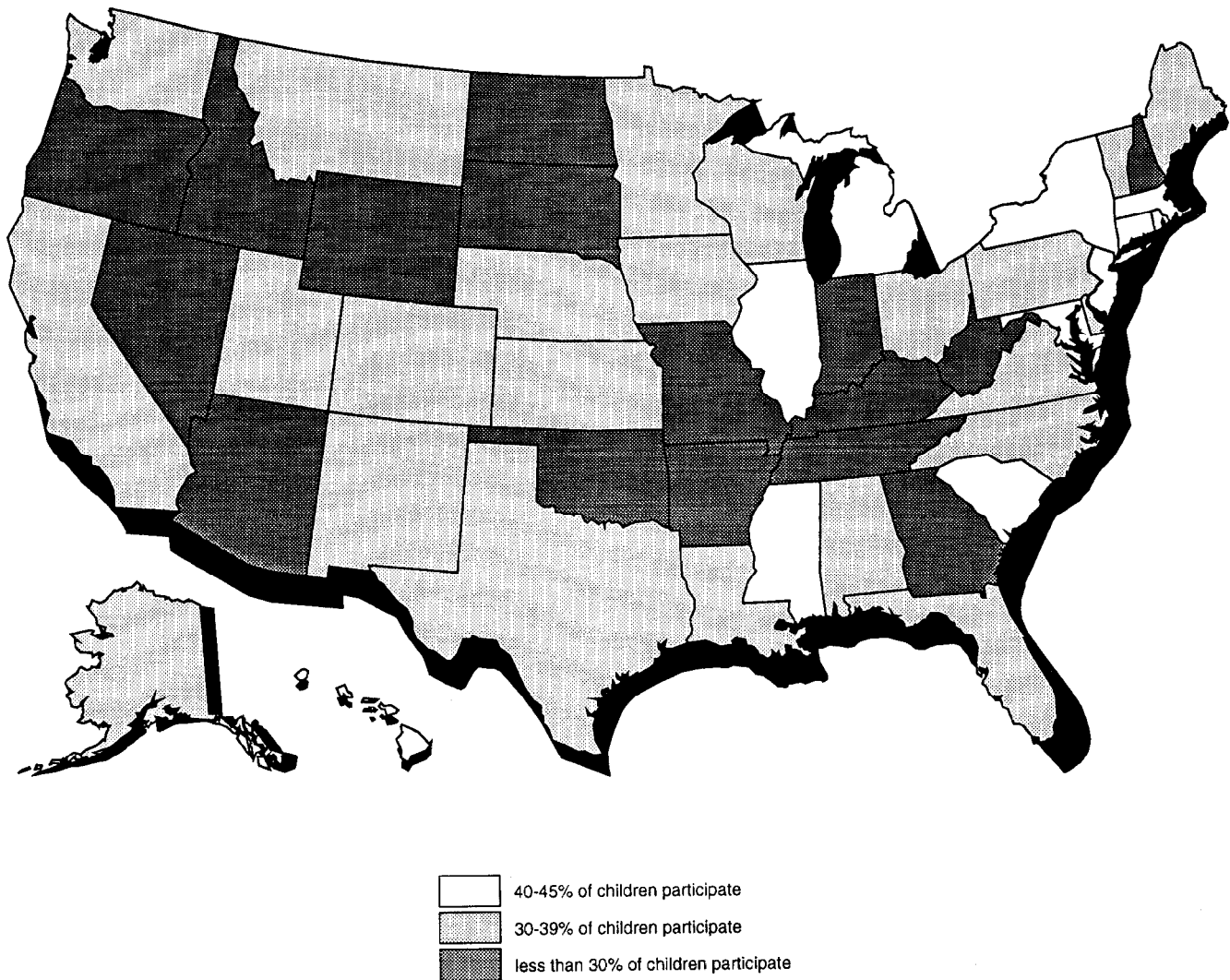
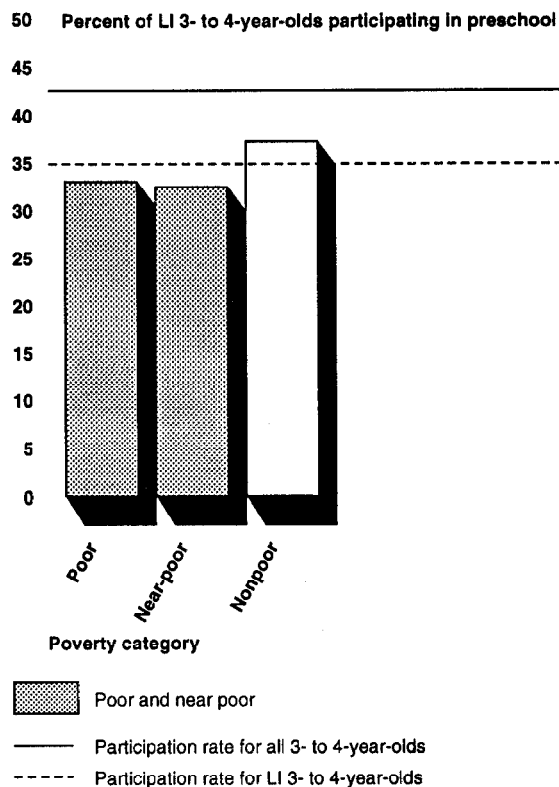


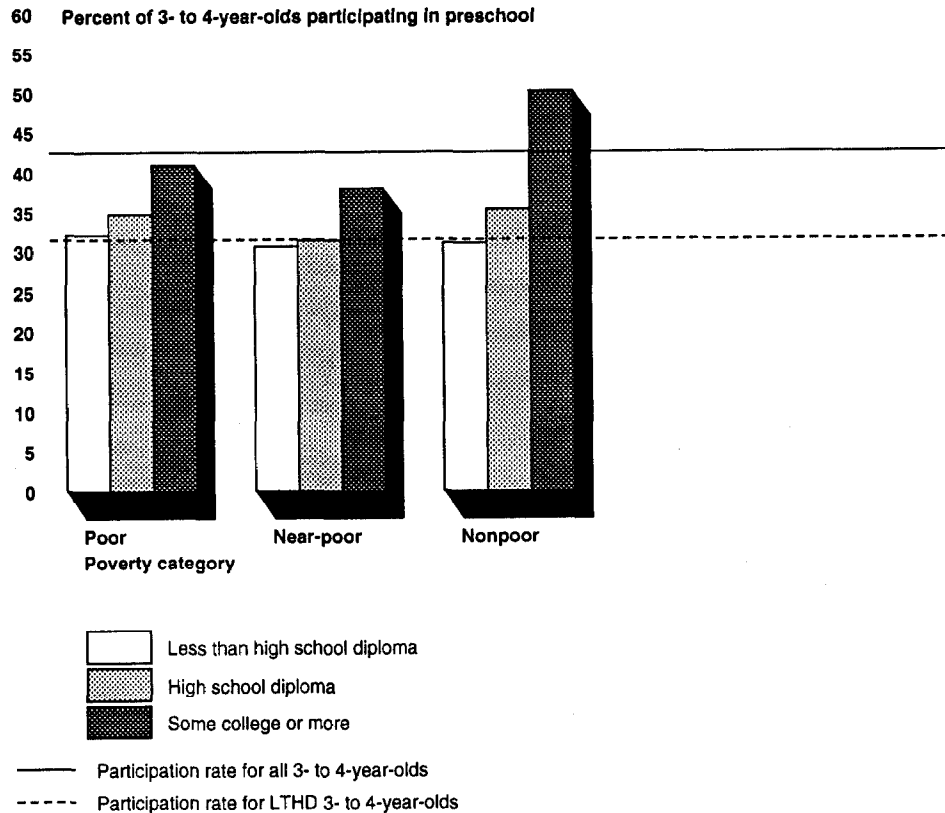
Figure I.25: Immigrant and LI Children Have Lower Than Average Rates of Participation



- About one-third of poor and near-poor immigrant and LI 3- to 4-year-olds participated in preschool compared to 42 percent of all 3- to 4-year-olds.
- All immigrant and LI 3- to 4-year olds had below-average preschool participation rates.

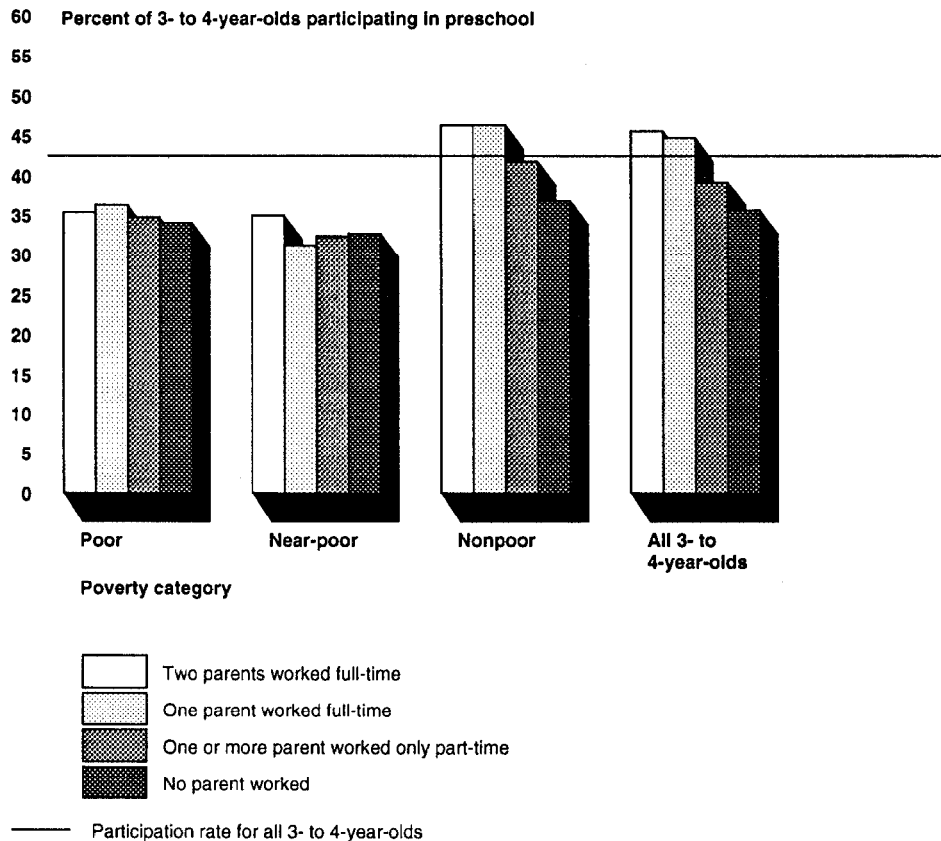
**Appendix I**  
**Poor Preschool-Aged Children: Numbers**  
**Increase but Most Not in Preschool**

**Figure I.26: Participation Lowest for Children in Families Where Parents Have Not Completed High School**



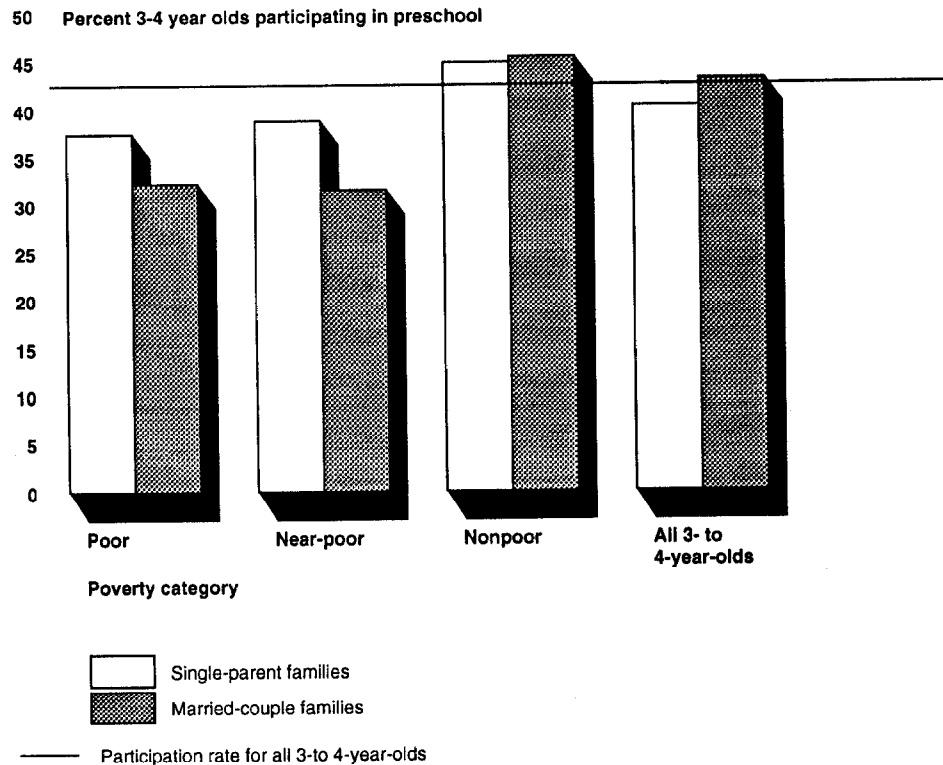
- About 35 percent of 3- to 4-year-olds in LTHD families participated in preschool.
- 3- to 4-year-olds in families where most educated parent has some college or more participated in preschool at higher rates.

Figure I.27: Participation Lowest for Children in Homes Where Parents Do Not Work



- About 35 percent of 3- to 4-year-olds in homes where no parent works participated in preschool.

Figure I.28: Children in Poor and Near-Poor Married-Couple Families Have Lowest Rates of Preschool Participation



- About 30 percent of poor and near-poor 3- to 4-year-olds in married-couple families participated in preschool.
- By contrast, more than 45 percent of nonpoor 3- to 4-year-olds in married-couple families participated in preschool.

# Objectives, Scope, and Methodology

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The Chairman of the Senate Subcommittee on Children, Family, Drugs, and Alcoholism, asked us to analyze decennial census data to examine the following issues:

- the characteristics of preschool-aged children and how they changed between 1980 and 1990; and
- differences in preschool participation rates for children by income level, age, other demographic characteristics, and location.

To obtain the best data available to address these issues, we held discussions with Bureau of the Census officials, academic experts, and an outside consultant. From these discussions, we decided that a tabulation of 1980 and 1990 decennial census data designed to our specifications regarding the characteristics of preschool-aged children would most effectively meet our needs. We conducted our review between September 1992 and April 1993 in accordance with generally accepted government auditing standards.

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## The Special Tabulation of 1980 and 1990 Decennial Census Data

In October 1992, we contracted with the Bureau of the Census to obtain a specially designed tabulation of 1980 and 1990 decennial census data. This tabulation is a subset of the 1980 and 1990 Decennial Census Sample Edited Detail Files and contains characteristics of the population of specific geographic units. Census created the tabulation from its detailed sample files containing individual records on the population of the entire United States. Census's 1990 detailed files represent a 15.5-percent sample of the total U.S. population and a 16-percent sample of all U.S. households. Census's 1980 detailed files represent an 18.2-percent sample of the total U.S. population and an 18.4-percent sample of all U.S. households.

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## Contents of the Special Tabulation: Geographic, Age, Income, and Racial/Ethnic Characteristics

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The tabulation contains detailed information on the economic, social, and demographic characteristics of the U.S. population, with a particular focus on preschool-aged children ages 3 and 4 living in families.<sup>1</sup> The tabulation contains this information for certain geographic units and age groups, and generally includes comparable data for both 1980 and 1990.

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### Geographic Location

The tabulation includes detailed characteristics on the population of the urban and rural sections of every county or county equivalent<sup>2</sup> in the United States, including Alaska and Hawaii.<sup>3</sup> The urban section of each county represents the aggregation of:

- places of 2,500 or more persons incorporated as cities, villages, boroughs, and towns, excluding the rural parts of extended cities;<sup>4</sup>
- census-designated places of 2,500 or more persons; and
- other territories, incorporated or unincorporated, included in urbanized areas in that county.

Census defines all remaining areas of a county as rural. The tabulation data for the urban and rural sections of a county can be aggregated to comprise the entire county. Counties can be aggregated into states, regions, or the nation.

The tabulation also permits the analysis of the detailed characteristics of populations residing in metropolitan areas (MAs). MAs are counties or

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<sup>1</sup>Census defines a family as consisting of a householder and one or more other persons living in the same household who are related to the householder by birth, marriage, or adoption. A household includes all the persons who occupy a housing unit—a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied as separate living quarters. All persons in a household who are related to the householder are regarded as members of his or her family. A household can contain only one family for purposes of census tabulations. Not all households contain families because a household may comprise a group of unrelated individuals or one person living alone.

<sup>2</sup>In Louisiana, the county equivalent is the parish. In Alaska, county equivalents are organized as boroughs and census areas. Some states—like Virginia—have “independent cities,” which are treated as counties for statistical purposes.

<sup>3</sup>Our tabulation does not include information on the population of Puerto Rico, American Samoa, or other outlying areas of the United States.

<sup>4</sup>Census aggregates the boroughs of a county in all states except Alaska and New York. Census aggregates the towns of a county in all states except New York and Wisconsin and the six New England states—Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, and Vermont.

groups of counties<sup>5</sup> that have close economic and social relationships with each other and meet the standards for defining metropolitan areas set by the Office of Management and Budget (OMB). The tabulation includes both 1980 and 1990 census data on MAs based on 1990 geographic boundary definitions in its most recent January 1990 revisions.

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Age

For both 1980 and 1990, the tabulation contains information on populations by single year of age for persons from birth through age 7. It also includes information on persons in age groups 8 to 11, 12 to 17, 18 to 24, 25 to 64, and 65 years and over.

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Poverty  
Status/Income/Public  
Assistance

The tabulation contains information on household income and poverty status for all persons for whom the Census can determine a poverty status.<sup>6</sup> Census derives information on income and poverty status from answers to census questions concerning income received by persons 15 years of age and older during the calendar year prior to the census year. Thus, the 1990 decennial census contains information on persons' 1989 calendar year income. Information on persons' poverty status in the tabulation is based on the standard definition of poverty status used by Census and prescribed by the OMB as a statistical standard for federal agencies.<sup>7</sup>

Specified poverty levels also are included in the tabulation; these are obtained by multiplying the income cutoffs at the poverty level by the appropriate factor. For example, the average income cutoff of 1.33 percent of poverty level (near-poor) was \$16,856 (\$12,674 multiplied by 1.33) in 1989 for a family of four.

Analysts have criticized the poverty threshold for being both too high or too low. For example, the existing poverty thresholds do not account for area cost-of-living differences. Price differences among areas imply that more expensive areas need higher incomes to maintain adequate levels of consumption. Because some parts of the country (for example, the

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<sup>5</sup>The GAO tabulation also includes information on MAs in the six New England states where they are defined as the aggregation of minor civil divisions, rather than counties.

<sup>6</sup>Census does not determine poverty status for institutionalized persons, homeless persons, persons in military group quarters and in college dormitories, and unrelated individuals under 15 years of age. These persons are excluded from the denominator when Census calculates poverty rates—the percentage of persons in poverty.

<sup>7</sup>Census determines poverty thresholds on the basis of family size and the corresponding poverty level income for that family size. Census and the GAO tabulation classify the family income of each family or unrelated individual according to their corresponding family size category. For example, for the 1990 census, the poverty cutoff for a family of four was a 1989 income of \$12,674.



Northeast and urban areas in general) have higher prices than others, families that live in these areas may need higher incomes to maintain the same level of consumption as lower-income families in less expensive places. Correcting for this difference in price levels would tend to increase poverty rates in areas with high costs of living and decrease them in others, even after adjusting for differences in median income.

The decennial census also includes a question on public assistance, but the question asks if any person in the household received any form of public assistance. Given that this question did not differentiate among different forms of public assistance and that the question was asked of the entire household rather than the family, we did not include it in our analysis. All but seven states have thresholds for Aid to Families with Dependent Children (AFDC) below the OMB poverty level. The seven states with AFDC thresholds above poverty are: Alaska, California, Connecticut, Massachusetts, New Hampshire, New York, and Vermont. Each of these states' thresholds are below 133 percent of poverty. AFDC is the primary form of public assistance received by young children in families.

## Race and Ethnicity

The tabulation contains information on 22 separate racial and ethnic classifications. (See table II.1.) The tabulation's racial/ethnic classifications are based on the Census question regarding Hispanic origin. Thus, the non-Hispanic classifications—white, black, or others—are for non-Hispanic members of those racial groups only. The "Hispanic" categories include Hispanic persons of all races. The tabulation includes racial and ethnic classifications that are comparable in definition for 1980 and 1990, except for the categories "Central/South American" and "Other Hispanic." Census calculated the "Central/South American" classification for 1990 but not for 1980, when it included these persons in the "Other Hispanic" classification.

**Table II.1: Contents of the Special Tabulation: Racial and Ethnic Characteristics, 1980 and 1990 Decennial Censuses**

Not of Hispanic origin	Hispanic origin
Total white	Mexican
Total black	Puerto Rican
<b>Total Asian and Pacific Islander</b>	Cuban
Chinese	Central/South American
Japanese	Other Hispanic
Filipino	
Asian Indian	
Korean	
Vietnamese	
Cambodian	
Hmong	
Laotian	
Thai	
Other Asian	
Pacific Islander, except Hawaiian	
Hawaiian	
<b>American Indian, Eskimo, or Aleut</b>	
<b>Other races</b>	

## Contents of the Special Tabulation: Other Social and Demographic Characteristics

The special tabulation also contains information on family type, parental employment status, educational attainment, and similar social characteristics. (See table II.2.) Except where noted, data are comparable for both 1980 and 1990.

**Table II.2: Contents of Special  
Tabulation: Demographic  
Characteristics, 1980 and 1990  
Decennial Censuses**

<b>Family type<sup>a</sup></b>	
1. Married-couple family	
2. Female householder, no husband present	
3. Male householder, no wife present	
<b>Work experience (employment status) of parents in 1989<sup>a</sup></b>	
Living with two parents	Living with mother
1. Both parents worked full-time, full-year	5. Mother worked full-time, full-year
2. One parent worked full-time, full-year, other parent part-time or did not work	
3. One or both parents worked part-time or part-year	6. Mother worked part-time or part-year
4. Neither parent worked	7. Mother did not work
<b>Immigrant status</b>	
1. Foreign born	
2. First generation (recent arrival)	
3. Nonimmigrant	
<b>Education level of most educated parent</b>	
1. Grade school or less	
2. Some high school (9-12, no diploma)	
3. High school graduate (diploma)	
4. Some college or associate degree	
5. Bachelor's degree or more	
6. No parent present	
<b>School enrollment</b>	
1. Not attending school	
2. Enrolled in school	

<sup>a</sup>This variable includes persons aged 3- to 4-years-old who are not in a family in a separate category.

## Family Type

The special tabulation includes information on a person's family type. This variable classifies persons in families by family type even when the family does not include a parent. For example, a family with children headed by a grandmother with no spouse is included in the category "female householder—no husband."

## Parental Employment Status

The special tabulation's work experience variable focuses on persons in families with two parents or single-parent families including the mother

only. Like the 1980 and 1990 decennial censuses, the special tabulation does not contain information on the parental work experience of families headed by any other relative (grandmother, aunt, uncle, or other relatives) or single-parent families headed by the father. The tabulation includes comparable data on this variable for both 1980 and 1990.

## Parental Educational Attainment

The special tabulation's education level of the most educated parent variable includes information only on persons in families with parents.<sup>8</sup> The tabulation contains information on persons in families where at least one parent is present. However, it does not classify other families, for example, those headed by grandmothers, uncles, or other relatives, by educational attainment.

Census included instructions with the questionnaire that specified that schooling completed in foreign or ungraded systems should be reported as the equivalent level of schooling in the regular American system and that vocational certificates or diplomas from vocational, trade or business schools, or colleges were not to be reported unless they were college-level degrees. Census also asked respondents to exclude honorary degrees.

Although the tabulation includes consistent data on the educational attainment question for both 1980 and 1990, their construction is different. The data for 1990 conform to the 1990 decennial census's question regarding educational attainment. The 1980 census reported numbers of years of education for each respondent. The special tabulation contains the 1980 data translated into the 1990 categories.<sup>9</sup>

## Immigrant Status

The GAO tabulation's immigrant variable includes information on those persons who are foreign born and not of U.S. parents. It also includes a separate "recent arrival" category for those persons who are native born but who have a foreign-born mother<sup>10</sup> who came to the U.S. during the 10

<sup>8</sup>We chose to focus on the educational attainment of the most educated parent because many analyses have found that "educated status of the more educated parent" is highly correlated with educational outcomes as well as social behaviors like career choice.

<sup>9</sup>Census translated the 1980 years of education totals as follows: 8 years of education or less to "Grade School or Less," 9 to 11 years to "Some High School (9-12, no diploma)," 12 years to "High School Graduate (diploma)," 13 to 15 years to "Some College or Associate Degree," 16 years or more to "Bachelor's Degree or more." "No Parent Present" remained the same.

<sup>10</sup>Although somewhat more narrow, this definition is consistent with research definitions of the foreign stock populations. This population is considered crucial to understanding that segment of the population with the strongest foreign language and cultural experience.

years before the census.<sup>11</sup> In this report, we typically define the foreign-born and first-generation categories as immigrant.

## School Enrollment

The special tabulation also contains information on a person's enrollment in school.

## Contents of the Special Tabulation: Linguistic Characteristics

The tabulation also contains information on linguistic isolation. (See table II.3.) This variable was identical for both 1980 and 1990.

**Table II.3: Contents of Special Tabulation: Linguistic Characteristics, 1980 and 1990 Decennial Censuses**

### Linguistic Isolation

1. In linguistically isolated households	2. In nonlinguistically isolated households
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## Linguistic Isolation

The special tabulation includes information on persons living in linguistically isolated (LI) households. (See table II.3.) These are households in which no one 14 years or older speaks English "only" and no persons aged 14 years or older who speaks a language other than English speaks English "very well." We typically focused on LI children—persons aged 3 and 4 in families—living in LI households. The tabulation classifies all members of an LI household as LI, including members who may speak "only English."

<sup>11</sup>For 1980, the recent arrival category includes native born children with a foreign-born mother who immigrated to the United States during the previous 10 years (back to 1970). For those children who have no mother, the question examines the father's place of origin. Children without either parent are classified as nonimmigrant.

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## Variables Created From the Special Tabulation

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### GAO's Age Variable

In order to accurately convey the number of children enrolled in school as of the beginning of the school year, GAO age-adjusted all the special tabulation data for 3- and 4- year-olds to October 1989. The Census was completed by respondents as of April 1990, but most children began school in the fall of 1989. Therefore, providing data as of April could convey an incomplete picture of the number of children eligible to enroll at the beginning of the school year. For example, a child who was 3 in April could have been 2-1/2 in October 1989, and, therefore, ineligible for preschool.

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### GAO's Parental Employment Status Variable

The GAO tabulation's work experience variable focuses only on persons in families with two parents or single-parent families including the mother only. Like the 1980 and 1990 Censuses, the tabulation does not contain information on parental work experience of families headed by any other relative (grandmother, aunt, uncle, or another relative) or single parent families headed by the father. GAO defined a Parental Employment Status variable by collapsing the tabulation's Parental Employment Status variable in the following manner:

- Two parents with full-time work: includes all persons aged 3 and 4 in families where "both parents worked full-time, full-year."
- One parent with full-time work, other parent working less than full-time: includes "only one parent worked full-time, full-year," and all preschool-aged children in families headed by a single mother where "the mother worked full-time, full-year."
- No employed parent with full-time work: includes all persons aged 3 and 4 in families where "neither parent worked full-time, full-year" and all preschool-aged children in families headed by a single mother where "the mother worked part-time or part-year."
- No parent employed: includes persons aged 3 and 4 in families where "neither parent worked" and all persons aged 3 and 4 in families headed a single mother where "the mother did not work."

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**GAO's Preschool  
Participation Variable**

The preschool participation variable is derived from the GAO tabulation's school enrollment variable, which asked whether the child was enrolled in school. From this variable, we assumed that any 3- or 4-year-old child enrolled in school was participating in preschool.

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**GAO's Large Cities,  
Smaller Cities and  
Suburbs, Small  
Towns, and Rural  
Areas Variable**

The GAO tabulation contains detailed information on counties and metropolitan areas but not cities, per se. Thus, the term largest cities used in the GAO analyses refer to the urban portions of the 39 counties that Census identified as comprising a part or all of the 25 largest cities as determined by their total population in 1990 (See table II.5). For some cities, like New York or San Francisco, the county or counties are exactly contiguous with the city's boundaries. For other cities like Detroit (Wayne County) or Cleveland (Cuyahoga County), the counties contain other jurisdictions besides the city. In the GAO analyses, smaller cities and suburbs are defined as the urban portions of the remaining MAs. Small towns are defined as the urban portions of non-MAs. All remaining portions of a county are defined as rural.

**Appendix II**  
**Objectives, Scope, and Methodology**

**Table II.4: Census Designations of  
Counties Comprising 25 Largest Cities  
in Total Population in 1990, GAO  
Tabulation of Census Data, 1990**

<b>City</b>	<b>Counties</b>
New York City	Bronx, Kings, New York, Queens, Richmond
Los Angeles	Los Angeles
Chicago	Cook, DuPage
Houston	Fort Bend, Harris, Montgomery
Philadelphia	Philadelphia
San Diego	San Diego
Detroit	Wayne
Dallas	Collin, Dallas, Denton, Kaufman, Rockwall
Phoenix	Maricopa
San Antonio	Bexar
San Jose	Santa Clara
Baltimore	Baltimore
Indianapolis	Marion
San Francisco	San Francisco
Jacksonville	Duval
Columbus	Fairfield, Franklin
Milwaukee	Milwaukee, Washington, Waukesha
Memphis	Shelby
Washington, D.C.	Washington, D.C.
Boston	Suffolk
Seattle	King
El Paso	El Paso
Cleveland	Cuyahoga
New Orleans	Orleans Parish
Nashville	Davidson



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## Strengths and Limitations of Decennial Census Data

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### Strengths

GAO's tabulation of 1980 and 1990 decennial census data provides the most comprehensive national database, at a detailed geographic level, on the characteristics of preschool-aged children and their participation in preschool. Although we identified other sources of data that address some of the requester's concerns, weaknesses in these data sources led us to choose a special tabulation of 1980 and 1990 decennial census data. For example, some information on the characteristics of preschool-age children and preschool participation rates is available from the October Current Population Survey (CPS) supplements, the National Child Care Survey (NCCS), and the National Household Education Survey (NHES). However, because of the far smaller sample sizes, CPS, NCCS, and NHES do not permit statistically meaningful analysis of many state populations.

Despite the strengths of the Census tabulation, it has some limitations. The first set regards the preschool participation variable and the second regards the undercount of the population.

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### Limitations: Preschool Participation Variable

Limitations exist with regard to the preschool participation question. The census preschool participation question reads:

**At any time since February 1, 1990, has this person attended regular school or college?**

*Include only nursery school, kindergarten, elementary school, and schooling which leads to a high school diploma or a college degree.*

This question provides data on children's school enrollment but information on the quality of the program cannot be derived from this question. Further, Census does not include follow-up questions about the quality of preschool that a child attends.

In addition, Census's preschool participation question asks only whether or not the child is enrolled in school and specifies "nursery school" in the

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prompt. Thus, answers to this question may be difficult to interpret, given the variety of preschool and child care arrangements that exist and the terms used to describe them. GAO examined other data from the NCCS and NHES, which asked about children's participation in a variety of preschool and child care arrangements, to ascertain the degree to which the Census question wording might have affected responses. We found that Census data are no more than 5 percentage points lower than the NCCS data. For example, according to the decennial census data, 22 percent of low-income<sup>12</sup> 3-year-olds, and 49 percent of low-income 4-year-olds participated in preschool in 1990. According to NCCS approximately 26 percent of 3-year-olds and 54 percent of 4-year-olds living in low-income families participated in preschool or center-based care. We found that NHES reported slightly higher enrollment rates on a slightly different concept. NHES asked if primary school-aged children had ever participated in any type of preschool or child care arrangement, and therefore obtained information on the range of each child's experience. According to this source, 55.7 percent of respondents had participated in nursery school, prekindergarten, or center-based care. Because the question is retrospective and the percent participating is higher than responses to questions about current participation, it appears that children may move in and out of preschool during their preschool years.

Another limitation of the decennial census data is that there appears to be a 5-percentage-point underreporting of enrollments at all levels of education. Census officials have examined the nature of this underestimate and have not been able to determine why this occurred, but believe it is a result of measurement error.

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**Limitations:  
Undercounting the  
Population**

The decennial census typically fails to count a portion of the population, and because our estimates are based on Census data they are also affected by the undercount. Census has studied certain aspects of the 1990 census net undercount<sup>13</sup> through its 1990 Post Enumeration Survey (PES), which interviewed a sample of 165,000 census respondents several months after the census. Census also studied the 1990 undercount through demographic analysis—a development of an independent estimate of the population obtained administratively through the use of birth and death record data. Census's demographic analysis forms a historical series profiling the undercount population begun in 1940 and continued through 1990.

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<sup>12</sup>NCCS defined low-income children as children living in homes with an annual income of below \$15,000. We used this definition with the special tabulation data for these comparisons.

<sup>13</sup>The undercount is net because, while the census misses some persons, it improperly counts others.

For the 1990 census, both the PES and Census's demographic analysis show a net census undercount. The net undercount as estimated by PES was about 1.6 percent of the resident census count of 248.7 million or approximately 4.2 million people. Based on demographic analysis, the net undercount was about 1.8 percent or approximately 4.7 million persons.<sup>14</sup>

Census's PES was geared toward developing undercount estimates for regions, census divisions, and cities and does not directly provide national undercount estimates. The PES also was limited in that it estimated net undercounts for selected age strata, for example, persons from birth to 9 years old and aged 10 to 19.

Census's demographic analysis has focused on the variation in the net undercount by age, race, and sex. Although estimates of the net undercount have declined for each decennial census since 1940, the undercount estimate for 1990 showed a significant increase for males compared to 1980. Evidence exists that shows that the net undercount in 1990 varied by race, sex, and age. Analysis by Census researchers suggests that the net undercount was largest for blacks and particularly for black males of ages 25 to 45.<sup>15</sup> The net undercount was also large for black children under age 10, although it approached 0 for black males and females aged 15 to 19. Estimated net undercounts for non-black males and females were typically much lower than for blacks and approached 0 for persons aged 10 to 14 years old.

Revising our estimates for uncounted black preschool-age children increases the total preschool-age poverty rate. Using data provided us by Census regarding the estimated net undercount of all black children aged 3 and 4, we corrected Census's preschool-age poverty rate.<sup>16</sup> Incorporating the net black preschool-aged undercount increases the numerator and denominator of the total poverty rate for preschool-aged children, increasing the poverty rate for preschool-age children from about 20.0 percent to 20.1 percent.

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<sup>14</sup>About three-fourths of these omissions or 3.48 million persons were males. About 40 percent of all omissions, or 1.84 million persons, were black.

<sup>15</sup>Although one can infer net undercount estimates of 5 percent for Hispanics from the PES, Census's demographic analysis provides no undercount estimates for Hispanics. Neither the PES nor the demographic analysis examines variation in the net undercount by family income.

<sup>16</sup>In performing this calculation, we assumed that the net undercount estimate of 8.1 percent for black children aged 3 to 4 was the same as that for the non-Hispanic black children. We also assumed that the undercounted black children have the same poverty rate as that for the counted non-Hispanic black children. For non-black children aged 3 to 4 the estimated net undercount was 2.7 percent.

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## Sampling Errors

Because the tabulation is based on Census's 1990 detailed sample files containing individual population records, each reported estimate has an associated sampling error. The size of the sampling error reflects the precision of the estimate; the smaller the error the more precise the estimate. Sampling errors for estimates from the tabulation were calculated at the 95-percent confidence level. This means that the chances are about 19 out of 20 that the actual number or percentage being estimated falls within the range defined by our estimate, plus or minus the sampling errors. For example, if we estimated that 30 percent of a group has a particular characteristic and the sampling error is 1 percentage point, there is a 95 percent chance that the actual percentage is between 29 and 31.

Generally, the sampling errors for characteristics of national and many state groups did not exceed 1 percent at the 95-percent confidence level. For the figures in appendix I, sampling errors typically did not exceed 0.5 percent. However, in states with smaller populations the sampling errors were greater—for example, the sampling error for the number of poor preschool-aged children in Wyoming participating in preschool is approximately 6 percent.

# Data Points for Figures in Appendix I

Tables in appendix III provide data points for figures in appendix I. Included in this appendix are state data points. As a result of rounding, details may not sum to totals in all cases.

**Table III.1: Data for Figure I.6: From 1980 to 1990, Number of Poor Preschool-Aged Children Increased Faster Than Children Living Above Poverty**

Poverty category	Percent change in 3- to 4-year-olds
Poor	28.3
Near-poor	11.7
Nonpoor	13.7

**Appendix III  
Data Points for Figures in Appendix I**

**Table III.2: Data for Figure I.7: Number of Poor Preschool-Aged Children Increased in Almost Every State**

	Number of poor 3- to 4-year-olds 1980	Number of poor 3- to 4-year-olds 1990	Change in number of poor 3- to 4-year-olds 1980-90
Alabama	28,369	28,717	348
Alaska	2,016	2,620	604
Arizona	14,680	27,833	13,153
Arkansas	16,421	18,321	1,900
California	113,314	175,206	61,892
Colorado	10,901	17,483	6,582
Connecticut	10,257	10,383	126
Delaware	2,751	2,575	-176
Washington, D.C.	3,630	3,497	-133
Florida	45,981	65,927	19,946
Georgia	35,561	42,238	6,677
Hawaii	4,538	4,098	-440
Idaho	5,622	6,095	473
Illinois	54,549	62,431	7,882
Indiana	22,964	25,815	2,851
Iowa	10,969	12,993	2,024
Kansas	8,703	12,523	3,820
Kentucky	24,779	27,727	2,948
Louisiana	32,377	45,800	13,423
Maine	5,451	5,792	341
Maryland	14,265	16,647	2,382
Massachusetts	21,002	24,115	3,113
Michigan	43,019	57,968	14,949
Minnesota	14,165	19,952	5,787
Mississippi	24,968	28,040	3,072
Missouri	21,845	29,153	7,308
Montana	3,960	5,828	1,868
Nebraska	6,294	7,857	1,563
Nevada	2,216	5,269	3,053
New Hampshire	2,550	2,906	356
New Jersey	29,823	24,504	-5,319
New Mexico	9,920	15,525	5,605
New York	97,565	100,806	3,241
North Carolina	31,139	33,001	1,862
North Dakota	3,107	3,787	680
Ohio	47,456	64,385	16,929

(continued)

**Appendix III**  
**Data Points for Figures in Appendix I**

	<b>Number of poor 3- to 4-year-olds 1980</b>	<b>Number of poor 3- to 4-year-olds 1990</b>	<b>Change in number of poor 3- to 4-year-olds 1980-90</b>
Oklahoma	15,088	21,943	6,855
Oregon	10,844	14,518	3,674
Pennsylvania	45,469	55,029	9,560
Rhode Island	3,669	4,092	423
South Carolina	19,833	22,769	2,936
South Dakota	4,761	5,201	440
Tennessee	27,420	30,494	3,074
Texas	87,178	141,579	54,401
Utah	8,267	10,348	2,081
Vermont	2,376	2,215	-161
Virginia	22,306	24,592	2,286
Washington	15,860	24,000	8,140
West Virginia	11,167	13,367	2,200
Wisconsin	16,956	25,564	8,608
Wyoming	1,318	2,669	1,351
<b>Total</b>	<b>1,119,639</b>	<b>1,436,191</b>	<b>316,552</b>

**Appendix III**  
**Data Points for Figures in Appendix I**

**Table III.3: Data for Figure I.8: Very Young and Preschool-Aged Children More Likely to Be Poor Than Rest of Population**

<b>Age Group</b>	<b>Percent of persons in poverty, 1990</b>
Very young children (0-2)	20.0
Preschool-aged (3 to 4)	20.0
School age (5 to 17)	17.5
Young adult (18 to 24)	19.4
Prime age (25-64)	9.5
Elderly (65+)	12.8

**Table III.4: Data for Figure I.9: Poor Preschool-Aged Children More Racially and Ethnically Diverse Than Children Above Poverty**

<b>Poverty category</b>	<b>Percent of 3- to 4-year-olds in families</b>	
	<b>Non-Hispanic white</b>	<b>Non-white and Hispanic</b>
Poor	43.0	57.0
Near-poor	57.4	42.6
Nonpoor	77.5	22.5
All 3- to 4-year-olds	69.3	30.7

**Table III.5: Data for Figure I.10: Poor Preschool-Aged Children More Concentrated in Parts of South and Southwest**

	<b>Poverty rate for 3- to 4-year-olds 1980</b>	<b>Poverty rate for 3- to 4-year-olds 1990</b>
Alabama	26.5	25.5
Alaska	14.4	12.2
Arizona	18.5	24.3
Arkansas	24.0	27.5
California	17.8	19.2
Colorado	13.4	17.2
Connecticut	14.1	11.8
Delaware	17.8	13.6
Washington, D.C.	28.4	25.6
Florida	21.2	19.9
Georgia	22.1	21.9
Hawaii	15.8	12.6
Idaho	16.2	18.4
Illinois	17.0	18.7
Indiana	14.2	16.2
Iowa	13.4	16.6
Kansas	12.9	16.3
Kentucky	22.6	27.2
Louisiana	23.8	33.3

(continued)



**Appendix III**  
**Data Points for Figures in Appendix I**

	Poverty rate for 3- to 4-year-olds 1980	Poverty rate for 3- to 4-year-olds 1990
Maine	18.1	16.3
Maryland	13.9	12.1
Massachusetts	16.0	15.0
Michigan	16.4	20.8
Minnesota	12.3	14.6
Mississippi	30.1	34.9
Missouri	16.3	19.8
Montana	16.4	23.7
Nebraska	13.3	16.1
Nevada	10.8	14.9
New Hampshire	10.8	8.7
New Jersey	16.5	12.0
New Mexico	23.0	30.4
New York	22.3	20.9
North Carolina	19.5	18.6
North Dakota	15.5	19.0
Ohio	15.7	20.4
Oklahoma	16.8	24.0
Oregon	14.7	18.0
Pennsylvania	15.8	17.4
Rhode Island	16.7	16.0
South Carolina	21.3	22.6
South Dakota	22.0	23.0
Tennessee	21.6	23.0
Texas	19.5	25.5
Utah	12.4	15.2
Vermont	17.2	13.4
Virginia	16.1	14.3
Washington	14.0	16.6
West Virginia	19.4	30.4
Wisconsin	12.9	17.2
Wyoming	8.2	18.4
<b>Total</b>	<b>18.0</b>	<b>19.9</b>

**Appendix III**  
**Data Points for Figures in Appendix I**

**Table III.6: Data for Figure I.11: About One-Fourth of Poor Preschool-Aged Children Lived in Rural Areas**

Poverty category	Percent of 3- to 4-year-olds in families
Suburbs and smaller cities	41.7
Largest cities	24.3
Small towns	11.3
Rural areas	22.7

**Table III.7: Data for Figure I.13: Poor and Near-Poor Preschool-Aged Children Much More Likely Than Nonpoor to Be Immigrant or LI**

Poverty category	Percent of 3- to 4-year-olds in families who are immigrants
Poor	9.2
Near-poor	9.8
Nonpoor	4.7
Poverty category	Percent of 3- to 4-year-olds in families who are LI
Poor	10.7
Near-poor	9.4
Nonpoor	3.2

**Table III.8: Data for Figure I.14: Poor Preschool-Aged Children More Likely to Live in Families Where Parents Have Not Completed High School**

Poverty category	Percent of 3- to 4-year-olds living with a parent		
	Less than high school diploma	High school diploma	Some college or more
Poor	39.4	31.9	25.9
Near-poor	23.7	35.8	38.3
Nonpoor	6.8	23.2	68.8
All 3- to 4-year-olds	14.4	25.8	58.1

**Appendix III**  
**Data Points for Figures in Appendix I**

**Table III.9: Data for Figure I.15: Poor Preschool-Aged Children Most Likely to Live in Homes Where Parents Do Not Work**

Poverty category	Percent of 3- to 4-year-olds living with two parents/mother only			
	Two parents worked full-time	One parent worked full-time	One or more parent worked only full-time	No parent worked
Poor	0.6	17.3	40.7	41.4
Near-poor	3.1	53.4	35.7	7.8
Nonpoor	20.3	62.7	15.2	1.8
All 3- to 4-year-olds	15.3	53.5	21.6	9.8

Table III.10: Data for Figure I.16: Poor Preschool-Aged Children More Likely to Live in Single-Parent Families Than Other Children

Poverty category	Percent of 3- to 4-year- olds in families	
	Married-couple families	Single-parent families
Poor	39.3	60.7
Near-poor	68.6	31.4
Nonpoor	88.3	11.7
All 3- to 4-year-olds	77.2	22.8

Table III.11: Data for Figure I.17: From 1980 to 1990, Preschool-Aged Children in Single-Parent Families Increased for Poor, Near-Poor, and Nonpoor

Poverty category	Percent change in 3- to 4-year-olds	
	Married-couple families	Single-parent families
Poor	8.4	45.6
Near-poor	4.4	31.8
Nonpoor	10.2	49.5
All 3- to 4-year-olds	9.6	45.5

Table III.12: Data for Figure I.18: Among Poor Preschool-Aged Children, Family Patterns Differ Among Racial/Ethnic Groups

Race/ethnicity	Percent of poor 3- to 4-year olds in families	
	Married-couple families	Single-parent families
White	49.7	50.3
Black	16.1	83.9
Hispanic	47.7	52.3
Asian	76.3	23.6
American Indian/other	43.6	56.4
All poor 3- to 4-year-olds	39.4	60.6

Table III.13: Data for Figure I.20: Preschool Participation Low for Poor and Near-Poor Children

Poverty category	Percent of 3- to 4-year-olds participating in preschool		
	Age 3	Age 4	Age 3-4 combined
Poor	22.0	48.7	35.3
Near-poor	20.9	46.6	33.7
Nonpoor	33.0	57.4	45.3
All 3- to 4-year-olds	30.0	55.0	42.5

**Appendix III**  
**Data Points for Figures in Appendix I**

**Table III.14: Data for Figure I.21:  
Preschool Participation Highest for  
Children in High-Income Groups**

<b>Poverty category</b>	<b>Percent 3- to 4-year-olds participating in preschool</b>
Below 100% of poverty - poor	35.3
101-133% of poverty - near- poor	33.7
134-185% of poverty	34.4
186-350% of poverty	41.2
351-500% of poverty	50.9
501% of poverty and above	60.3

**Table III.15: Data for Figure I.22:  
Among Poor and Near-Poor, Black  
Preschool Participation Higher Than  
White and Hispanic**

<b>Race/ethnicity</b>	<b>Percent of 3- to 4-year-olds participating in preschool</b>	
	<b>Poor</b>	<b>Near-poor</b>
Non-Hispanic white	31.9	30.9
Black	40.8	42.2
Hispanic	33.8	32.6
Other	35.3	32.1

**Table III.16: Data for Figure I.23: Poor  
and Near-Poor Children in Rural Areas  
Least Likely to Participate in Preschool**

<b>Geographical areas</b>	<b>Percent of 3- to 4-year-olds participating in preschool</b>	
	<b>Poor</b>	<b>Near- poor</b>
Largest cities	37.6	37.0
Suburbs and smaller cities	36.3	35.7
Small towns	35.8	32.3
Rural areas	30.7	29.2

**Appendix III  
Data Points for Figures in Appendix I**

**Table III.17: Data for Figure I.24: All States Have Preschool Participation Rates for Poor Children Below 45 Percent**

	<b>Number of poor 3- to 4-year-olds participating</b>	<b>Number of poor 3- to 4-year-olds not participating</b>	<b>Percent of poor 3- to 4-year-olds participating</b>
Alabama	9,768	18,950	34.0
Alaska	1,030	1,590	39.3
Arizona	7,996	19,837	28.7
Arkansas	5,246	13,075	28.6
California	59,107	116,098	33.7
Colorado	5,906	11,577	33.8
Connecticut	4,557	5,825	43.9
Delaware	849	1,726	33.0
Washington, D.C.	1,779	1,718	50.8
Florida	24,144	41,783	36.6
Georgia	12,606	29,632	29.8
Hawaii	1,742	2,356	42.5
Idaho	1,800	4,294	29.5
Illinois	25,345	37,086	40.6
Indiana	7,395	18,420	28.6
Iowa	4,569	8,424	35.2
Kansas	3,893	8,630	31.1
Kentucky	8,109	19,618	29.2
Louisiana	17,783	28,017	38.8
Maine	2,039	3,753	35.2
Maryland	7,464	9,184	44.8
Massachusetts	10,316	13,798	42.8
Michigan	24,605	33,363	42.4
Minnesota	6,234	13,718	31.2
Mississippi	12,265	15,776	43.7
Missouri	8,463	20,690	29.0
Montana	1,993	3,836	34.2
Nebraska	2,546	5,312	32.4
Nevada	1,434	3,836	27.2
New Hampshire	823	2,082	28.3
New Jersey	10,127	14,376	41.3
New Mexico	4,832	10,693	21.1
New York	43,466	57,341	43.1
North Carolina	10,500	22,501	31.8
North Dakota	1,096	2,691	28.9

(continued)

**Appendix III  
Data Points for Figures in Appendix I**

	<b>Number of poor 3- to 4-year-olds participating</b>	<b>Number of poor 3- to 4-year-olds not participating</b>	<b>Percent of poor 3- to 4-year-olds participating</b>
Ohio	19,614	44,771	30.5
Oklahoma	6,563	15,379	29.9
Oregon	4,113	10,404	28.3
Pennsylvania	18,773	36,255	34.1
Rhode Island	1,668	2,423	40.8
South Carolina	9,924	12,846	43.6
South Dakota	1,517	3,684	29.2
Tennessee	8,876	21,619	29.1
Texas	49,734	91,844	35.1
Utah	3,462	6,885	33.5
Vermont	858	1,357	38.7
Virginia	8,568	16,024	34.8
Washington	8,102	15,899	33.8
West Virginia	3,787	9,580	28.3
Wisconsin	8,942	16,621	35.0
Wyoming	797	1,872	29.9
<b>Total</b>	<b>507,125</b>	<b>929,069</b>	<b>35.3</b>

**Table III.18: Data for Figure I.25:  
Immigrant and LI Children Have  
Lower-Than-Average Rates of  
Participation**

<b>Poverty category</b>	<b>Percent of immigrant 3- to 4-year-olds participating in preschool</b>
Poor	31.9
Near-poor	32.5
Nonpoor	40.5
<b>Poverty category</b>	<b>Percent of LI 3- to 4-year-olds participating in preschool</b>
Poor	32.9
Near-poor	32.4
Nonpoor	37.1

**Appendix III**  
**Data Points for Figures in Appendix I**

**Table III.19: Data for Figure I.26:  
Participation Lowest for Children in  
Families Where Parents Have Not  
Completed High School**

Poverty category	Percent of 3- to 4-year-olds participating in preschool		
	Less than high school diploma	High school diploma	Some college or more
Poor	32.1	34.7	40.9
Near-poor	30.5	31.4	37.8
Nonpoor	31.0	38.3	50.1

**Table III.20: Data for Figure I.27: Participation Lowest for Children in Homes Where Parents Do Not Work**

Poverty Category	Percent of 3- to 4-year-olds participating in preschool			
	Two parents worked full-time	One parent worked full-time	One or more parent worked only part-time	No parent worked
Poor	35.3	36.2	34.7	34.0
Near-poor	34.9	31.1	32.3	32.6
Nonpoor	46.3	46.3	41.8	36.8
All 3- to 4-year-olds	45.5	44.7	39.2	35.6

**Table III.21: Data for Figure I.28:  
Children in Poor and Near-Poor  
Married-Couple Families Have Lowest  
Rates of Preschool Participation**

Poverty category	Percent 3- to 4-year-olds participating in preschool	
	Single-parent families	Married-couple families
Poor	37.4	32.1
Near-poor	38.8	31.4
Nonpoor	44.8	45.3
All 3- 4-year-olds	40.3	43.1



# Supplementary Data Points

Tables in appendix IV provide additional data on changes in the preschool-aged population and preschool participation rates. Specifically, tables include data on changes in the at-risk population, and data on the number and percentage of 3- and 4-year-olds participating in preschool by single year of age. As a result of rounding, details may not sum to totals in all cases.

**Table IV.1: Number of 3- and 4-Year-Olds in Each Poverty Category**

Poverty category	Number of children		
	Age 3	Age 4	Age 3 and 4
Poor	720,155	716,036	1,436,191
Near-poor	255,164	254,480	509,644
Nonpoor	2,635,158	2,654,030	5,289,188
<b>Total</b>	<b>3,610,477</b>	<b>3,624,546</b>	<b>7,235,023</b>

**Table IV.2: Number of 3- and 4-Year-Olds Participating in Preschool, by Poverty Category**

Poverty category	Number of children enrolled in school		
	Age 3	Age 4	Age 3 and 4
Poor	158,408	348,717	507,125
Near-poor	53,269	118,676	171,945
Nonpoor	870,229	1,524,335	2,394,564
<b>Total</b>	<b>1,081,906</b>	<b>1,991,728</b>	<b>3,073,634</b>

**Appendix IV  
Supplementary Data Points**

**Table IV.3: Change in At-Risk  
Population, 1980 to 1990**

Poverty category by risk category	Number of Children		Percent Change 1980-90
	1980	1990	
<b>Poor</b>			
Immigrant	81,577	132,471	62.4
Linguistically isolated	110,876	153,243	38.2
Single-parent families	598,638	871,349	45.6
LTHD	471,122	565,640	20.1
In families with parents who do not work	397,031	546,464	37.6
<b>Near-poor</b>			
Immigrant	36,453	50,179	37.6
Linguistically isolated	36,226	47,999	32.5
Single-parent families	121,609	160,247	31.8
LTHD	126,527	120,974	-4.4
In families with parents who do not work	34,227	36,316	6.1
<b>Nonpoor</b>			
Immigrant	219,042	248,692	13.5
Linguistically isolated	147,348	168,759	14.5
Single-parent families	413,790	618,789	49.5
LTHD	426,337	357,687	-16.1
In families with parents who do not work	69,802	90,384	29.5

**Table IV.4: Percent of 3- and  
4-Year-Olds Participating in Preschool  
for Multiple Poverty Categories**

Poverty category	Percent of children enrolled in school	
	Age 3	Age 4
Below 100% of poverty	22.0	48.7
Above poverty, below 133% of poverty	20.9	46.6
Above 133% of poverty, below 185% of poverty	21.2	47.4
Above 185% of poverty, below 350% of poverty	28.4	53.7
Above 350% of poverty, below 500% of poverty	38.9	62.9
Above 500% of poverty	49.8	70.9

**Appendix IV  
Supplementary Data Points**

**Table IV.5: Percent of 3- and 4-Year-Olds Participating In Preschool, by Race/Ethnicity**

Poverty category by race/ethnicity	Percent of children enrolled in school	
	Age 3	Age 4
<b>Poor</b>		
White	19.4	44.4
Black	27.2	54.5
Hispanic	19.1	48.6
Other	22.2	48.0
<b>Near-poor</b>		
White	18.6	43.2
Black	29.8	54.0
Hispanic	18.5	46.8
Other	20.4	42.3
<b>Nonpoor</b>		
White	33.4	57.4
Black	37.2	61.6
Hispanic	24.8	52.3
Other	34.2	59.6
<b>All poverty categories</b>		
White	30.8	55.0
Black	32.2	58.0
Hispanic	22.2	50.4
Other	30.7	56.6

**Appendix IV**  
**Supplementary Data Points**

**Table IV.6: Percent of 3- and 4-Year-Olds Participating in Preschool, by Urban/Rural Category**

Poverty category by geographic area	Percent of children enrolled in school	
	Age 3	Age 4
<b>Poor</b>		
Large cities	23.8	51.5
Smaller cities	23.2	49.6
Small towns	22.1	49.8
Rural areas	17.7	43.5
<b>Near-poor</b>		
Large cities	23.9	50.3
Smaller cities	22.9	48.8
Small towns	19.2	45.4
Rural areas	16.5	41.6
<b>Nonpoor</b>		
Large cities	36.4	60.9
Smaller cities	36.5	60.5
Small towns	27.7	53.5
Rural areas	25.3	50.2
<b>All poverty categories</b>		
Large cities	32.5	57.9
Smaller cities	33.3	57.9
Small towns	25.4	51.8
Rural areas	23.2	48.3

**Appendix IV  
Supplementary Data Points**

**Table IV.7: Percent of 3- and 4-Year-Olds Participating in Preschool, by Immigrant Status**

Poverty category by immigrant status	Percent of children enrolled in school	
	Age 3	Age 4
<b>Poor</b>		
Immigrant	18.8	45.1
Nonimmigrant	22.3	49.1
<b>Near-poor</b>		
Immigrant	19.4	46.2
Nonimmigrant	21.0	46.7
<b>Nonpoor</b>		
Immigrant	28.0	53.6
Nonimmigrant	33.3	57.6
<b>All poverty categories</b>		
Immigrant	24.2	50.1
Nonimmigrant	30.3	55.2

**Table IV.8: Percent of 3- and 4-Year-Olds Participating in Preschool, by LI Status**

Poverty category by LI status	Percent of children enrolled in school	
	Age 3	Age 4
<b>Poor</b>		
Linguistically isolated	18.6	47.0
Not linguistically isolated	22.4	48.9
<b>Near-poor</b>		
Linguistically isolated	18.5	46.3
Not linguistically isolated	21.1	46.7
<b>Nonpoor</b>		
Linguistically isolated	23.1	51.1
Not linguistically isolated	33.4	57.6
<b>All poverty categories</b>		
Linguistically isolated	20.6	48.8
Not linguistically isolated	30.5	55.3

**Appendix IV  
Supplementary Data Points**

**Table IV.9: Percent of 3- and 4-Year-Olds Participating in Preschool, by Family Type**

Poverty category by family type	Percent of children enrolled in school	
	Age 3	Age 4
<b>Poor</b>		
Married-couple	18.9	45.4
Single-parent	24.0	50.9
<b>Near-poor</b>		
Married-couple	18.6	44.5
Single-parent	26.0	51.3
<b>Nonpoor</b>		
Married-couple	33.1	57.5
Single-parent	32.3	56.7
<b>All poverty categories</b>		
Married-couple	30.8	55.5
Single-parent	27.3	53.1

**Table IV.10: Percent of 3- and 4-Year-Olds Participating in Preschool, by Education Status of Parents**

Poverty category by education status of parents	Percent of children enrolled in school	
	Age 3	Age 4
<b>Poor</b>		
LTHD	18.8	45.6
High school diploma	21.1	48.3
Some college or more	27.9	53.7
<b>Near-poor</b>		
LTHD	17.4	43.8
High school diploma	18.4	44.5
Some college or more	25.2	50.3
<b>Nonpoor</b>		
LTHD	17.9	44.2
High school diploma	22.3	48.1
Some college or more	38.2	62.0
<b>All poverty categories</b>		
LTHD	18.3	44.9
High school diploma	21.6	47.8
Some college or more	36.7	60.7

**Appendix IV  
Supplementary Data Points**

**Table IV.11: Percent of 3- and 4-Year-Olds Participating in Preschool, by Employment Status of Parents**

Poverty category by employment status of parents	Percent of children enrolled in school	
	Age 3	Age 4
<b>Poor</b>		
Two full-time	22.7	47.3
One full-time	19.9	46.3
Part-time	22.8	49.2
No parent worked	22.3	49.5
<b>Near-poor</b>		
Two full-time	20.8	48.2
One full-time	19.9	45.6
Part-time	22.6	48.2
No parent worked	20.2	47.6
<b>Nonpoor</b>		
Two full-time	34.5	57.9
One full-time	34.2	58.7
Part-time	29.9	54.8
No parent worked	22.8	48.9
<b>All poverty categories</b>		
Two full-time	34.2	57.7
One full-time	32.3	57.0
Part-time	26.5	52.0
No parent worked	22.2	49.3

**Appendix IV  
Supplementary Data Points**

**Table IV.12: Geographic Distribution of  
3- to 4-Year-Olds**

<b>Poverty category by geographic area</b>	<b>Percent of 3- to 4-year-olds</b>
<b>Poor</b>	
Large cities	24.32
Smaller cities and suburbs	41.70
Small towns	11.26
Rural areas	22.72
<b>Near-poor</b>	
Large cities	20.07
Smaller cities and suburbs	40.50
Small towns	10.58
Rural areas	28.85
<b>Nonpoor</b>	
Large cities	18.88
Smaller cities and suburbs	48.54
Small towns	7.31
Rural areas	25.27
<b>All poverty categories</b>	
Large cities	20.04
Smaller cities and suburbs	46.62
Small towns	8.33
Rural areas	25.02



**Appendix IV**  
**Supplementary Data Points**

**Table IV.13: Percent of 3- to 4-Year-Olds Participating in Preschool, by Employment Status of the Parents and Family Type**

Poverty category by employment status of parents and family type	Percent of 3- to 4-year-olds enrolled in school	
	Single-mother families	Married-couple families
<b>Poor</b>		
Two full-time	NA	35.3
One full-time	40.4	31.1
Part-time	39.5	32.2
No parent worked	36.1	34.0
<b>Near-poor</b>		
Two full-time	NA	34.9
One full-time	41.0	30.7
Part-time	41.2	32.3
No parent worked	33.8	32.6
<b>Nonpoor</b>		
Two full-time	NA	46.3
One full-time	48.1	46.3
Part-time	43.9	41.8
No parent worked	35.0	36.8
<b>All poverty categories</b>		
Two full-time	NA	46.0
One full-time	46.2	44.5
Part-time	41.2	38.1
No parent worked	35.8	34.2

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