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***** Child Care and Early Education Program Participation of Infants, Toddlers, and Preschoolers *****

The care and education children receive regularly from individuals other than their parents have attracted the attention of policy makers, practitioners, and researchers. In the United States over the past few decades, the percentage of children receiving such care and education has grown to the point that most children now receive some type of nonparental care and education prior to starting first grade (West et al. 1992). Increasingly, this care and education is being provided by nonrelatives in a formal group setting rather than by relatives or nonrelatives in a private home (O'Connell and Bachu 1992; West, Germino Hausken, and Collins 1993).

This report contains the first release of information from the 1995 National Household Education Survey (NHES) on the care and educational experiences of young children who have yet to enter kindergarten. It describes infants', toddlers', and preschoolers' participation in a variety of early care and education settings, including both home-based and center-based arrangements. Characteristics of children (age and race-ethnicity) and their families (family income and mother's education and employment status) that have been found to be related to children's participation rates are examined (Dawson and Cain 1990; Hofferth et al. 1991; O'Connell and Bachu 1992).

National Data on Early Care and Program Participation

The increased interest in children's early care and education has placed more demands on the federal statistical system to supply data for monitoring children's early childhood program participation rates (Brooks-Gunn et al. 1994). Several federal household surveys collect periodic data for monitoring parents' use of and children's receipt of a range of supplemental care and education. Among these are the U.S. Bureau of the Census' Current Population Survey (CPS) and Survey of Income and Program Participation (SIPP), and the National Center for Education Statistics' National Household Education Survey (NHES). The CPS concentrates on preschool children's participation in formal education programs; the SIPP focuses on the supplemental care and education children receive while their mothers work or attend school; and, the NHES examines the care and education children receive from persons other than their parents regardless of parental activities while in care and education settings. 1

The early childhood program participation component of the NHES was developed to collect information on children's experiences in a wide range of care and education settings, including their homes, the homes of others, and formal group settings. This component was first fielded in 1991 and then repeated in 1995. Because parents are considered by definition to be their children's primary care providers, the NHES does not include parents as providers of supplemental care and education. Instead, it seeks to provide data to estimate how many children receive care and education on a regular basis from persons other than their parents.² Furthermore, no attempt is made to distinguish settings where children receive care from settings where they receive education as any such distinction would be largely artificial.

The early childhood component of the 1995 NHES differs from the 1991 NHES. In 1991, children had to be at least 3 years old to be included in the survey. But in 1995, there was no lower age limit. Consequently, estimates of the number and percentage of infants and toddlers receiving supplemental care and education can be made along with estimates for older children.

Current Participation in Nonparental Care and Education Programs

Children may receive supplemental care and education in home-based or in

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center-based settings. Home-based arrangements may take place in either a child's own home or in the home of someone else. This care may be provided by a relative (other than the child's parents) or a nonrelative. Care provided by a nonrelative in the caregiver's home is commonly called family day care. Center-based programs, on the other hand, provide children with care and education in a nonresidential setting. These programs include day care centers, nursery schools, prekindergartens, and other types of organized group programs such as Head Start.³

There are many ways of calculating children's participation rates in various child care and early education program arrangements. This report uses a prevalence rate which represents the percent of children receiving care and education in each type of arrangement. In calculating this rate, no consideration is given to either the number of hours a child spends in one setting as compared to others or a parent's activities (e.g., whether or not a child's mother works) while the child is in nonparental care. Moreover, a child may be counted under several arrangements if he or she spends time in more than one setting.

During the spring of 1995, about 6 out of every 10 children under the age of six who have yet to enter kindergarten were receiving some type of care and education on a regular basis from persons other than their parents (table 1).⁴ This translates to more than 12.9 million infants, toddlers, and preschool children receiving such care and education.

Insert Table 1 Here

The percentage of children receiving nonparental care and education increases with the age of children. Forty-five percent of children who had not reached their first birthday were reported as receiving nonparental care and education on a regular basis. This contrasts to 78 percent of four-year-olds and 84 percent of five-year-olds.

Hispanic children are less likely to receive supplemental care and education than either white or black children.⁵ About 46 percent of Hispanic children, compared with 62 percent of white children and 66 percent of black children, receive care and education regularly from persons other than their parents.

Children's participation in nonparental care and education also increases as household income increases. Only 50 percent of children living in households with incomes of \$10,000 or less receive care and education from persons other than their parents, in comparison to 77 percent of children living in households with incomes in excess of \$75,000.

In general, children's participation in nonparental care and education arrangements increases with mother's education. Children whose mothers did not complete high school or earn a GED are less likely to receive supplemental care and education (38 percent) than children whose mothers graduated from college or earned a graduate degree (70 percent and 79 percent, respectively).

Children are also more likely to receive supplemental care and education when their mothers work. Nearly 88 percent of children whose mothers work full-time (35 hours or more per week) and 75 percent of children whose mothers work part-time (less than 35 hours per week) regularly receive care and education from a nonparent caregiver. In contrast, only 32 percent of children whose mothers are not in the work force regularly receive care and education from persons other than their parents.

Participation in Different Types of Care and Education Programs

Figure 1 shows the percentages of children under the age of 6 who receive

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home-based care from relatives and nonrelatives as well as the percentage of children who attend a center-based program. For this group of children as a whole, the participation rates in both the relative and nonrelative home-based arrangements (21 percent and 18 percent, respectively) are significantly lower than the participation rate in center-based programs (31 percent).

Insert Figure 1 Here

The setting in which children receive supplemental care and education is related to children's age (table 1). Children under the age of two are more likely to be cared for by a relative in a private home or a nonrelative in a private home than in a center-based setting. Roughly one-fourth (24 percent) of children under the age of one receive care and education from a relative in a private home, and 17 percent receive this care and education from a nonrelative in a private home. In contrast, only 7 percent of these infants are cared for in center-based settings. The participation rates for one-year-olds follow a similar pattern. However, starting with two-year-olds, the setting in which children receive care and education begins to change noticeably. Two-year-olds are about equally likely to receive care and education in home-based settings, from relatives or nonrelatives (19 percent and 20 percent, respectively), and in center-based settings (19 percent). But, three-, four-, and five-year-old preschoolers are more likely to receive care and education in center-based programs than in either of the two home-based settings. In comparison to the dramatic increase in preschool children's center-based program participation, the participation rates in relative and nonrelative home-based arrangements look quite stable.

The participation rates for white and black children under the age of 6 in center-based programs are the same (33 percent). Hispanic children participate at a lower rate than both of these groups (17 percent). White children (21 percent) are more likely to receive care and education from a nonrelative in a private home than children of any other racial-ethnic group. Black children (31 percent), on the other hand, are more likely than white or Hispanic children to receive care and education from a relative in a private home.

Children's participation in center-based programs increases with household income and mother's education. Similarly, children are more likely to receive care and education from a nonrelative in a private home as household income and mother's education increase. For relative care arrangements, the relationship of household income and mother's education to children's participation is, however, less clear. Children whose mothers work full-time or part-time are more likely to attend a center-based program than children whose mothers are not in the work force (39 percent and 35 percent v. 22 percent). With regards to home-based care arrangements, relatively few children whose mothers are not in the labor force receive care and education from relatives (7 percent) or nonrelatives (6 percent). Care by a nonrelative is also used infrequently (4 percent) by mothers who are looking for work. For these women and their children, relative care is the more widely used home-based arrangement (16 percent).

Location of Home-Based Arrangements

Children may receive nonparental care and education in their own homes or in the homes of others, and in both settings this care may be provided by relatives or nonrelatives. Care provided by a nonrelative in a caregiver's own home is commonly called family day care, while care provided by a nonrelative in a child's own home is usually referred to as care by a sitter or nanny. Relative care in a child's own home or in a caregiver's home may be provided by an older sibling, grandparent, aunt, or uncle.

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Table 2 contains estimates of the percentage of children under the age of 6 who receive relative or nonrelative care by the location where the care is provided. Whether the care children receive is provided by a relative or by a nonrelative, it is more likely to be provided in a home other than their own. The difference in the percentage of children receiving care in their own homes versus the home of someone else is larger for nonrelative than for relative care arrangements. Approximately 14 percent of children under the age of 6 receive nonrelative care in a home other than their own compared with 4 percent who receive care from a nonrelative in their own homes. For relative care, the comparable percentages are 14 and 9 percent, respectively.

Insert Table 2 Here

For children ages one through five, both relative and nonrelative care and education are less likely to be provided in a child's own home, with the differences being more pronounced for nonrelative care. For example, 16 percent of 1- and 2-year-olds receive care from a nonrelative in the caregiver's home, while 4 and 5 percent, respectively, receive care from a nonrelative in their own homes. For children who are cared for by a relative, 16 percent of 1-year-olds and 12 percent of 2-year-olds are cared for outside of their own homes, while 10 and 9 percent, respectively, receive care in their own homes.

White and black children are more likely to receive care and education outside of their own homes, regardless of whether the care is provided by a relative or a nonrelative. For Hispanic children, there is no difference in the percentages who receive care from a relative in their own homes versus another's home. However, the pattern for nonrelative care is the same as that of white and black children.

With the exception of the most affluent group of children, the percentage of children receiving nonrelative care in a home other than their own is larger than the percentage receiving care in their own homes. Similarly, relative care is usually provided in a home other than the child's, except for those children living in households with incomes under \$10,000 or over \$75,000 where the percentages of children receiving relative care in and out of their own homes are nearly the same.

The patterns of care provided by relatives in children's own homes and in the homes of others by mother's education look much like those observed for household income. A notable exception is the children whose mothers have completed a graduate or professional degree. This group of children are unlikely to receive care from a relative, and those who do are as likely to receive it in their own homes (9 percent) as in the homes of someone else (9 percent).

Women who work, whether they work full-time or part-time, are more likely to use home-based care that is provided outside of their own homes. This pattern is the same for both relative and nonrelative care. Very few children of women who are looking for work receive care from a nonrelative in a home-based setting. Those children who do are more likely to receive it in a home other than their own. For care received from relatives, women who are looking for work are equally likely to use home-based care in and outside of their own homes. Children of women who are not in the labor force are as likely to receive care in their own homes as in the home of someone else whether that care is given by a relative or a nonrelative.

Summary

In general, more and more children receive nonparental care and education on a regular basis as they grow older, and more children receive this care

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and education in center-based programs than in either relative or nonrelative home-based arrangements. Children's participation in center-based programs also increases with household income and mother's education. With regard to mother's employment status, children whose mothers work full-time or part-time are more likely to attend a center-based program than children whose mothers are not in the work force.

For home-based arrangements, the differences in participation rates between relative and nonrelative care vary depending on the characteristics of children and their families. Children who are very young, who are members of a racial-ethnic minority group, who are in lower income households, or who have mothers who did not graduate from college are more likely to be cared for by relatives while their counterparts are more likely to be cared for by nonrelatives. Nevertheless, infants, toddlers, and preschoolers in home-based arrangements are, in general, more likely to be cared for in a home other than their own regardless of their relationship to their non-parental caregiver.

Methodology and Technical Notes

Survey Methodology

The National Household Education Survey (NHES) is a random-digit-dial (RDD) telephone survey conducted by Westat, Inc. for the National Center for Education Statistics (NCES). It collects data on high priority topics on a rotating basis using computer-assisted telephone interviewing (CATI) technology. The sample is drawn from the civilian, noninstitutionalized population in households with telephones in the 50 states and the District of Columbia.

Data collection for the NHES:95 took place between January and April of 1995. A Screener interview was conducted with an adult member of the household and was used (1) to determine whether any children of the appropriate ages lived in the household, (2) to collect information on each household member, and (3) to identify the parent/guardian most knowledgeable about the care and education of each sampled child. If more than two eligible children resided in a household, two children were sampled as interview subjects. Children who were enrolled in transitional kindergarten, kindergarten, and prefirst grade were assigned a higher probability of selection.

The Early Childhood Program Participation (ECP) component of the NHES:95 sampled 0- to 10-year-olds who were not yet in fourth grade. Since the sample for the ECP interviews was drawn from households with telephones, the estimates were adjusted using control totals from the Census Bureau's Current Population Survey (CPS) so that the totals were consistent with the total number of civilian, noninstitutionalized persons in all (telephone and nontelephone) households. 6

Response Rates

The NHES:95 completed screening interviews with 45,465 households, of which 11,042 contained at least one child eligible for the ECP component of the survey. The response rate for the Screener was 73.3 percent. The completion rate for the ECP interview was 90.4 percent, or 14,064 interviews. Thus, the overall response rate for the ECP interview was 66.3 percent (the product of the Screener response rate and the ECP completion rate). This report is based on children under 6 years old not yet enrolled in kindergarten. The number of interviews included in this analysis is 7,557.

The item nonresponse (the failure to complete some items in an otherwise completed interview) was less than two percent for all of the items used in this report (except for income which has an item nonresponse rate of 14 percent). Missing responses to all items were imputed, and imputations

were done using a hot-deck procedure.

Data Reliability

Estimates produced using data from surveys 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:95, efforts were made to prevent such errors from occurring and to compensate for them where possible. These efforts included the use of focus groups and cognitive laboratory interviews when designing the survey instruments, extensive testing of the CATI system, and a two-phase pretest with approximately 870 households (759 in the first phase and 111 in the second phase).

An important nonsampling error for a telephone survey is the failure to include persons who do not live in households with telephones. About 90 percent of all 0- to 5-year-olds live in households with telephones. Estimation procedures were used to help reduce the bias in the estimates associated with children who do not live in telephone households.

Sampling Errors. The sample of telephone households selected for the NHES:95 is just one of many possible samples that could have been selected. Therefore, estimates produced from this 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.

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 Taylor Series approximation. 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.

The standard errors found in the table can be used to produce confidence intervals. For example, an estimated 20 percent of children whose mothers did not finish high school or earn a GED are cared for by a relative. This figure has an estimated standard error of 1.6. Therefore, the estimated 95 percent confidence interval for this statistic is approximately 16.9 to 23.1 percent.

The significance of differences cited in this report for the percentage of children who receive each type of care were tested using Student's t statistic. All the differences cited in this report are significant at the 0.05 level of significance with a Bonferroni adjustment procedure used to correct the significance tests for multiple comparisons.

Endnotes

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1 For a more detailed discussion of the different federal surveys that collect data on children's supplemental care and education, see West, J. & Germino Hausken, E. (1994). Different Approaches to Counting Early Childhood Program Participation. Proceedings of the Annual Meetings of the American Statistical Association, Social Statistics Section. Washington, D.C.: American Statistical Association.

2 Throughout this report, parents represent natural and adoptive parents as well as stepparents and guardians.

3 Some Head Start programs are offered in home-based, rather than center-based, settings. The NHES:95 survey instrument does not permit identification of this distinction.

4 The term "regular basis" was not defined for respondents; however, they were instructed not to include occasional babysitting. Analysis of the NHES:95 data shows that of children receiving care and education in a center-based setting, 99 percent receive it on a weekly basis. For relative and nonrelative care, the percentages are 96 percent and 99 percent, respectively.

5 If an interviewer contacted an individual who preferred to conduct the interview in Spanish, a Spanish speaking interviewer and survey instrument were used. Also, in this report, the terms "white" and "black" are used to describe "white, non-Hispanic" and "black, non-Hispanic" children.

6 Additional information pertaining to the ECPP survey component will be provided in the NHES:95 Early Childhood Program Participation Data File User's Manual (Brick et al. forthcoming).

References

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The Child Care and Early Education Program Participation of Infants, Toddlers, And Preschoolers brief contains 2 tables that are formatted in Wordpert 5.1 and 1 figure formatted in Excell 5.0. All the tables and the figure for this brief have been compressed into one file with a

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