

Appendix D

Early Childhood and Child Care Study Non-Response Analysis

The **Early Childhood and Child Care Study** used a multi-stage sampling design, comprising (1) a representative sample of states; (2) a representative sample of sponsors within these states; (3) a representative sample of providers within each sponsoring agency; and (4) a representative sample of children within each provider. All selected states participated. Sponsors and providers were stratified by mode of child care (Head Start centers, other child care centers, and family child care homes).⁶⁶ Each participating provider was assigned a target week during the field period, during which a menu survey, observations of meals consumed in child care, and dietary recall interviews with parents all took place. In addition, a household interview was conducted with the parents of participating children during this week or at a later time. Although the response rates at most stages of sample selection were reasonable, the cumulative response rate was only 41 percent overall for the 24-hour recall interviews (Glantz *et al.*, 1997). This resulted mainly from an inability to reach parents during the two days following the meal observations, rather than parents' refusing to complete the interview. In addition, many family child care homes declined to participate in the meal observations.

Fortunately, some information on non-respondents is available. Basic characteristics of sponsors were obtained in the process of constructing the sample, and some information was obtained from most non-respondent providers. Furthermore, both household interview and observational data are available for some children who were observed in care. These data permit an analysis of non-response bias at the various stages of the sample. All comparisons except those between observed children with and without 24-hour recall data are done using **unweighted** data, because weights were not calculated for non-respondents.

Respondent and Non-Respondent Sponsors

Of the 1,190 sponsors selected, 990 responded by supplying lists of child care providers under their aegis. Respondent sponsors tended to sponsor similar numbers of providers as all sponsors if they were selected into the family child care homes or Head Start center strata (Exhibit D.1). If they were selected into the "other" (non-Head Start) center stratum, however, they tended to sponsor smaller numbers of centers. Respondent sponsors were distributed among regions similarly to all sponsors.

Respondent and Non-Respondent Providers

Of the 456 providers selected from the sponsors' lists for meal observations, 336 were cared-for children who were ultimately observed. Respondents were similar to all providers with regard to

⁶⁶ Although agencies can sponsor multiple types of providers, they were selected into the sample based on a particular provider type.

mean enrollment and percent self-sponsoring (Exhibit D.2). They were somewhat less likely than all providers to be located in the West.

Exhibit D.1

Characteristics of Respondent and Non-Respondent Sponsors (unweighted)

	Respondent Sponsors	Non-Respondent Sponsors	All Sponsors
Mean number of providers			
For sponsors of family child care homes	497.6	378.0	480.0
For sponsors of Head Start centers	9.9	11.7	10.2
For sponsors of other centers	3.4	19.1	5.5
Region			
Northeast	16.3%	7.0%	14.7%
Southeast	34.7	25.0	31.3
Midwest	32.2	27.0	33.0
West	16.9	41.0	20.9
Number of sponsors	990	200	1,190
Universe comprises eligible sponsors selected from state lists. Respondent sponsors are those that supplied lists of providers.			

Exhibit D.2

Characteristics of Respondent and Non-Respondent Child Care Providers (unweighted)

	Respondent Providers	Non-Respondent Providers	All Providers
Mean enrollment			
Homes	9.7	8.6	9.2
Head Start centers	73.6	81.6	74.6
Other centers	80.7	83.2	81.3
Percent of self-sponsoring providers	14.9%	16.7%	15.4%
Region			
Northeast	18.2%	28.3%	20.8%
Southeast	34.8	27.5	32.9
Midwest	32.4	20.0	29.2
West	14.6	14.6	17.1
Number of providers	336	120	456
Universe comprises eligible providers selected for meal observations. Respondent providers are those in which children were observed.			

Observed and Non-Observed Children

Of the 2,354 children selected from provider lists to be observed at meal and snack time, 1,359 were observed eating meals and snacks in care. Provider characteristics for children who were observed were similar to provider characteristics for all selected children (Exhibit D.3).

Exhibit D.3

Provider Characteristics for Observed and Non-Observed Children (unweighted)

	Observed Children	Non-Observed Children	All Selected Children
<i>Provider's mean enrollment</i>			
Homes	10.3	11.2	10.6
Head Start centers	70.9	86.6	77.9
Other centers	77.5	84.5	80.7
Percent of self-sponsoring providers	15.4%	15.3%	15.3%
<i>Region</i>			
Northeast	19.1%	14.5%	17.1%
Southeast	36.6	43.8	39.6
Midwest	33.4	24.1	29.5
West	11.0	17.6	13.8
Number of providers	1,359	995	2,354
Universe comprises children selected for meal observations. Observed children were observed eating at least one meal or snack in care.			

Observed Children With and Without 24-Hour Recall Data

Finally, 24-hour recall data were obtained for 954 of the 1,359 children who were observed eating meals and snacks in care. Although respondents were similar to non-respondents with regard to age distribution, provider enrollment, percent of self-sponsoring providers, and region, there were large differences in household income (Exhibit D.4). Observed children without 24-hour recall data were substantially more likely to reside in households with incomes at or below 185 percent of the federal poverty level. This is undoubtedly due to the greater time stresses experienced by low-income working families with children, which, as shown elsewhere in this report, are substantially more likely than higher-income working families to include only one adult.

On the other hand, respondent and non-respondent children were quite similar with regard to the meals and snacks they were observed to eat in care. Meal patterns and food energy consumption at each eating occasion differed little between the two groups (Exhibit D.5).

Exhibit D.4**Characteristics of Observed Children with 24-Hour Recall Data and with Observation Data Only (weighted)**

	Children with Recall and Observation Data	Children with Observation Data Only
<i>Child's age at last birthday</i>		
1-2 years	14.2%	12.8%
3-5 years	78.3	79.8
6-12 years	7.6	7.4
<i>Household income</i>		
At or below 185% of poverty	59.9%	80.1%
Over 185% of poverty	40.1	19.9
<i>Provider's mean enrollment</i>		
Homes	10.4	10.0
Head Start centers	70.2	72.2
Other centers	79.1	73.7
Percent of self-sponsoring providers	15.6%	14.8%
<i>Region</i>		
Northeast	20.8%	15.1%
Southeast	34.7	41.0
Midwest	33.9	32.4
West	10.7	11.6
Number of children (unweighted)	954	405

Universe comprises children who were observed eating meals and snacks in care. Respondent children are those with at least one 24-hour recall.

Exhibit D.5**Meal Patterns and Percent of REA for Food Energy Consumed by Observed Children with 24-Hour Recall Data and with Observation Data (weighted)**

	Children with Recall and Observation Data	Children with Observation Data Only
<i>Meal combinations consumed in care^a</i>		
2 meals and 1 snack	34.3%	36.0%
2 snacks or 1 snack and 1 meal	17.5	17.3
1 snack	14.2	15.7
2 meals	10.7	11.8
2 meals and 2 snacks or more	10.6	8.8
1 meal and 2 snacks	7.8	5.1
1 meal	4.9	5.3
<i>Percent of 1989 REA for food energy consumed in CACFP meals and snacks</i>		
Breakfast:		
Ages 1-2	16.2%	12.7%
Ages 3-5	14.3	14.6
Ages 6-10	17.9	13.7
All ages	14.9	14.2
Lunch:		
Ages 1-2	23.5%	21.6%
Ages 3-5	22.8	22.5
Ages 6-10	24.4	27.9
All ages	23.0	22.6
Morning snack:		
Ages 1-2	12.0%	9.6%
Ages 3-5	9.8	11.3
Ages 6-10 ^b	14.8	4.8
All ages	10.4	10.6
Afternoon snack:		
Ages 1-2	11.2%	10.9%
Ages 3-5	10.2	10.9
Ages 6-10 ^b	12.0	10.1
All ages	10.7	10.7
Number of children ^c (unweighted)	943	400

Universe comprises children who were observed eating meals and snacks in care. Respondent children are those with at least one 24-hour recall.

a Meals include breakfast, lunch, and dinner/supper. Evening snacks were rare and are excluded from this analysis.

b Sample sizes are very small for both groups ($n < 6$).

c Some children were missing information on the specific meals and snacks consumed in care (five with recalls and three with observations only). In addition, two children over age 10 in each group, and four Head Start children with recall data whose ages were over 5, were excluded.

Summary

The ECCCS was designed to be nationally representative of children in CACFP care. Sampling weights were adjusted at each stage to correct for non-response based on selected observed characteristics. Nonetheless, a high non-response rate raises concern about the validity of generalization from the sample to the CACFP population as a whole, particularly if there is reason to believe that non-respondents differ systematically from respondents.

The two most striking aspects of the comparisons above are that sponsors and providers from the West were relatively less likely to participate, and that families with incomes up to 185 percent of poverty whose children were observed in child care were less likely to provide 24-hour recall data. Weights have been used to correct for these discrepancies to the extent possible. The similarity in two key outcome measures between groups of observed children for whom 24-hour recall data are and are not available suggests that the description of the program based on respondents alone is not greatly distorted.