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ABSTRACT

Smart Start is North Carolina's partnership between state government and local leaders, service providers, and families to better serve children under 6 years and their families with the aim of ensuring that all children enter school healthy and prepared to succeed. This study examined child care centers in Smart Start counties, focusing on the services provided, teacher education and training, and quality. Data were gathered in 1994 and 1996 through classroom observations and interviews with child care directors. Included were both partnership-nominated centers involved in local Smart Start child care quality improvement efforts and randomly selected centers to measure overall quality of care in each partnership community and to provide a comparison with the nominated sample. The two samples were not significantly different on any child care variable so results were combined. The Early Childhood Environment Rating Scale was completed in one randomly selected preschool classroom at each center. The findings indicated that more child care centers in the pioneer partnerships were providing higher quality care in 1996 compared to 1994. Centers in the 1996 sample were also more likely to employ better educated teachers, provide developmental screenings, and enrolled children with disabilities or from low-income families, suggesting that Smart Start partnerships have improved the quality and quantity of child care services for preschoolers. However, most centers provided average or mediocre quality care. Teacher compensation and turnover rates did not change between 1994 and 1996. (Detailed information regarding child care center characteristics is appended.) (Author/KB)

Smart START

Child Care in the Pioneer Partnerships

1994 and 1996

FPG-UNC Smart Start Evaluation Team
December 1997

This report was written by Kelly Maxwell, Donna Bryant, and Kathleen Bernier. We want to thank all child care directors and providers who participated in this evaluation.

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Smart Start, the North Carolina Early Childhood Initiative, was established in 1993 as a partnership between state government and local leaders, service providers, and families to better serve young children and their families, ensuring that all children enter school healthy and prepared to succeed. Smart Start's innovative approach requires local community partnerships to plan how best to meet their own community's needs, improve and expand previous programs for children and families, and design and implement new programs. Although each partnership decides how best to meet the needs of children and families, they are *all* working to improve the quality of early childhood education, including center-based care.

Are we providing high quality child care in North Carolina? Has the quality of center-based child care in pioneer Smart Start partnerships changed over time? These questions were addressed in a Smart Start evaluation study described in an earlier report, *Effects of Smart Start on the Quality of Preschool Child Care (April 1997)*. Findings from this study suggest that child care quality has improved over time in these pioneer partnerships. From 1994 to 1996 the percentage of classes rated as providing good or better quality care increased from 14% to 25%.

The purpose of this report is to present more detailed information about the child care centers than was included in the earlier report. The April 1997 report focused mainly on overall child care quality. This report summarizes more detailed information about the characteristics, services provided, teacher education and training, quality, and other aspects of the participating child care centers. Data were gathered in 1994 and 1996 through classroom observations and interviews with child care directors. Information from both 1994 and 1996 child care samples is included in this report. The more detailed information presented in this report should be useful to partnerships in monitoring the progress of their child care initiatives and planning new

initiatives to meet the child care community's needs. Child care directors and providers may find the information helpful in understanding the characteristics of child care centers in their community and planning strategies for improving child care services.

Study Description

In the fall and winter of 1994-95, researchers visited 184 child care centers in the first 12 Smart Start partnerships (22% of the 831 licensed centers in those counties). In 1996-97, 188 child care centers from the same counties were visited (19% of the 995 licensed centers). Ninety-one (91) centers were visited in both 1994 and 1996. Of the centers invited to participate in the study, 75% agreed to do so in 1994; 64% in 1996. Some child care directors in the 1996 sample said they did not want to participate because they had participated in too much research recently or they were dissatisfied with local Smart Start decision-making. Although the participation rate dropped from 1994 to 1996, both years' participation rates were equal to or higher than participation rates in two recent child care observation studies with large samples (the Cost, Quality, and Outcomes Study in North Carolina and the National Institute of Child Health and Human Development Study of Early Child Care).

In each year of data collection, data were obtained from two samples of child care centers: a partnership-nominated sample and a random sample. The nominated sample consisted of child care centers that the 12 partnerships noted were involved in local Smart Start child care quality improvement efforts. These centers were invited to participate in 1994 and again in 1996. The nominated sample was included to study directly the effect of Smart Start on child care in centers that were confirmed to be participating. The second sample of centers was randomly selected from the 1994 and 1996 lists of licensed child care centers in the partnerships,

regardless of a center's participation in Smart Start. The random sample was included to measure the overall quality of care in each partnership community and to provide a comparison with the nominated sample. This process resulted in the selection of some centers both randomly and by nomination, a more frequent occurrence in small counties with fewer child care centers. These two samples were not significantly different on any child care variable in either 1994 or 1996, so they are combined in all further analyses presented here.

At each center, data collectors completed the Early Childhood Environment Rating Scale (ECERS, Harms & Clifford, 1980) in one randomly selected preschool classroom. The ECERS is a well-established measure of child care quality that assesses seven general areas: personal care routines, furnishings and display for children, language-reasoning experiences, fine and gross motor activities, creative activities, social development, and adult needs. Scores on each of 37 items can range from 1 to 7 with the overall mean score obtained by averaging all items typically used as a global measure of the developmental appropriateness or quality of the classroom. An overall score from 1 to 3 is considered poor; scores from 3 to 5 are considered medium; and scores of 5 or greater are considered good. Data collectors also interviewed center directors to obtain information about center characteristics and services, including a checklist of 14 different Smart Start improvement activities the center or center staff might have participated in during the past year. The child care providers in the observed classrooms were asked to provide basic demographic information about themselves.

Summary of Child Care Findings From All Pioneer Smart Start Partnerships

Observed Quality

In 1994, only 14% of the child care centers provided "good" quality care. In 1996, 25% of the centers provided "good" quality care. This increase in observed quality of care was also evident in the 91 child care centers that were visited in both 1994 and 1996.

Licensing

The percentage of centers licensed at the higher AA level was greater in the 1996 sample than in the 1994 sample. Of the 91 child care centers that were visited in both years, the percent of AA-licensed centers rose from 37% to 52%. The increase in AA-licensed centers is additional evidence that the quality of child care is improving in these Smart Start counties.

NAEYC Accreditation

The percent of centers voluntarily accredited by the National Association for the Education of Young Children (NAEYC) as providing high quality care remained the same across both the 1994 and 1996 samples (6%). This suggests that although child care quality is improving, many centers do not yet meet the highest standards of quality.

Group Size and Teacher-Child Ratios

Children's care is more likely to be developmentally appropriate if there are fewer children in the class (i.e., smaller group sizes) and more teachers per children (i.e., better teacher-child ratios). Group sizes for infants and

preschoolers were slightly smaller in the 1996 sample than in the 1994 sample. The median class size for infants in 1994 (8) and 1996 (7) met the infant class size recommended by NAEYC (8). Teacher-child ratios were the same in the 1994 and 1996 samples.

Teacher Education

Teachers with more education generally provide more appropriate care for children (Whitebook, Howes, & Phillips, 1989). More child care teachers in the 1996 sample had some college or community college coursework than did teachers in the 1994 sample (59% and 48%, respectively), and fewer teachers in 1996 had a high school education or less. This improvement in teacher education was also evident in the sample of 91 centers visited both years.

Compensation

Although teachers in the 1996 sample were better educated, they were not generally better compensated. Teachers in 1996 earned an average of $6.00 an hour, compared to $5.77 earned by teachers in 1994. The percent of centers offering retirement benefits did not change over time. The percent of centers offering health insurance was slightly higher in 1996 than in 1994.

Teacher Turnover

Keeping teacher turnover low is key to providing high quality care. Having warm relationships with consistent caregivers fosters children's development. When caregivers change frequently, they cannot get to know each child and his or her unique learning styles. The average (mean) turnover rate for lead

teachers across all centers was approximately the same in both the 1994 and 1996 samples (29% and 32%, respectively). Notably, some child care centers did not have *any* teachers leave during the previous year. In 1994, 34% of the centers had no lead teacher turnover in the previous year. In 1996, 39% had no lead teacher turnover. In the child care centers that experienced turnover, the average turnover rate for lead teachers was 47% in 1994 and 54% in 1996. These turnover rates are similar to those reported in a 1990 national survey of child care centers (Kisker, Hofferth, Phillips, & Farquhar, 1991) and are much higher than the 10% turnover rate among public school teachers.

Poor Children Served

More centers in the 1996 sample than in 1994 served children who received government subsidies, providing opportunities for more children from low-income families to participate in preschool programs. The increased number of centers serving children who receive government subsidies was also seen in the sample of 91 centers. The median percent of subsidized children per center was similar in both the 1994 and 1996 samples (38% vs. 40%).

Children with Disabilities

More centers in 1996 than in 1994 served children with disabilities, suggesting that there are more opportunities in the community for young children with disabilities to be served in settings with typically developing children. Directors reported more resources and supports available for staff who serve children with disabilities, particularly training and resource materials about

children with disabilities.

Screening Services

More child care centers in the 1996 sample provided vision, hearing, dental, and speech/language screenings to children compared to the 1994 sample. Sixty-seven percent (67%) of the centers provided some type of developmental screening in 1994. In 1996, 79% of the centers provided some type of screening. The increase in center-based screening was also evident in the sample of 91 centers visited in both years. The increased number of child care center screening programs may be due to local Smart Start efforts to improve local screening efforts to identify and treat children's problems as early as possible.

Participation in Smart Start

The percent of centers in the sample participating in one or more Smart Start quality improvement efforts remained approximately the same in 1996 as in 1994. However, more centers in the 1996 sample received on-site technical assistance and more centers received funds to move to a higher licensing level. More center directors in 1996 than in 1994 also reported using a Smart Start-sponsored lending library. The increased participation in on-site technical assistance and use of lending libraries were also evident in the sample of centers visited in both 1994 and 1996.

Conclusions

More child care centers in the pioneer partnerships were providing care of higher quality for young children in 1996 compared to 1994. Child care centers in the 1996 sample were also more likely to employ better educated teachers, provide developmental screenings to children, and to enroll children with disabilities as well as children from low income families. These findings suggest that Smart Start partnerships have been successful in improving the quality and quantity of child care services for preschoolers.

However, most child care centers in this study provided care of an average or even mediocre quality that generally does not create the responsive learning environment needed to maximize children's development and help ensure that they enter school prepared to succeed. Teacher compensation and turnover rates—two factors important in providing high quality care—also did not change between 1994 and 1996. These data suggest that child care for many preschoolers in North Carolina is still not of high quality.

North Carolina demonstrated its commitment to young children by creating Smart Start in 1993. Since then, the first set of partnerships have worked hard to improve the quality of child care as a way of ensuring that *all* children enter school prepared to succeed. The data from this report suggest that these partnerships have been successful in improving the quality of child care and should be encouraged to continue their child care quality improvement efforts. The Smart Start evaluation team will continue to monitor the quality of child care in these partnerships by visiting preschool classrooms and gathering data again from child care centers in the fall of 1998.

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Appendix A

Child Care Data From All Pioneer Partnerships

1994 and 1996

Appendix A contains tables of detailed information summarized in the main body of the report. The first table includes the number of centers visited in each partnership in 1994 and 1996. The remaining tables present information describing multiple aspects of the child care centers, staff, and services provided in the overall sample of child care centers from the 12 pioneer partnerships. Not all types of data could be gathered from each center, so the total number of centers (or staff) included in each analysis is presented at the top of each table.

Number of Centers Visited in 1994 and 1996

	1994	1996	Number Visited Both Years
Burke	16	17	10
Caldwell	13	14	8
Cleveland	11	14	6
Cumberland	28	27	11
Davidson	18	17	11
Halifax	8	11	5
Hertford	9	7	4
Jones	2	3	1
Mecklenburg	24	25	8
Orange	15	19	10
Stanly	14	7	7
Region A	26	27	10
Overall	***184***	***188***	***91***

Type of Facility

Variable	1994 Sample N = 166	1996 Sample N = 187
Church Sponsored	34 20%	41 22%
Developmental Day Care	5 3%	0 0%
Franchise	4 2%	7 4%
Head Start	19 11%	29 16%
Independent	79 48%	79 42%
Other	18 11%	26 14%
Public Preschool	7 4%	5 3%

Type of License

Variable	1994 Sample N = 184	1996 Sample N = 188
A	101 55%	84 45%
AA	70 38%	92 49%
GS Exempt	9 5%	8 4%
Other	4 2%	4 2%

Child Care Center Characteristics

Variable	1994 Sample N = 101-165*	1996 Sample N = 110-187*
Centers accredited by NAEYC	10 6%	12 6%
Centers in NAEYC accreditation process	21 13%	28 15%
Not for profit centers	94 57%	111 59%
Median[1] lead teacher turnover rate (range)	18% (0%-250%)	20% (0%-240%)
Median assistant teacher turnover rate (range)	8% (0%-450%)	14% (0%-600%)
Median monthly fee for infants (Birth - 11 mos.) (range)	$275 ($160-$600)	$300 ($160-$760)
Median monthly fee for toddlers (12 - 35 mos.) (range)	$260 ($156-$563)	$282 ($152-$650)
Median monthly fee for preschoolers (36 - 60 mos.) (range)	$240 ($138-$550)	$260 ($120-$622)

[1]The median is the middlemost score in a distribution below which half the scores fall. When the data contain at least 1 extreme score, as do these, the median is more appropriate to report than the mean (arithmetic average) because it is less influenced by the extreme score(s).

*The number of respondents (N) is low for some variables because some of the centers did not enroll infants or toddlers, and some centers did not have assistant teachers.

Services Provided by Centers

Variable	1994 Sample N = 162-166	1996 Sample N = 185-187
Centers providing weekend care	2 1%	2 1%
Centers providing evening care	9 5%	13 7%
Centers providing 24 hour care	2 1%	3 2%
Centers providing part-time care	81 49%	110 59%
Centers providing before/after school care	86 52%	99 53%
Centers providing sick child care	3 2%	5 3%
Centers providing transportation	87 53%	104 56%
Centers providing meals	151 91%	177 95%
Centers providing vision screening	82 51%	111 60%
Centers providing hearing screening	77 47%	120 64%
Centers providing dental screening	50 31%	87 47%
Centers providing speech/language screening	96 59%	127 68%
Centers providing developmental screening/assessment	96 59%	106 57%

Children Served

Variable	1994 Sample N = 166	1996 Sample N = 187
Centers serving at least 1 child with a disability	66 40%	87 47%
Centers serving children who receive government subsidies	148 89%	172 92%
Median[1] percent of subsidized children per center (range)	38% (1%-100%)	40% (1%-100%)

Director Education

Variable	1994 Sample N = 166	1996 Sample N = 187
Directors who have a Bachelor's Degree or higher	65 39%	79 42%

Lead Teacher Education

Variable	1994 Sample N = 968	1996 Sample N = 1057
Teachers with a Bachelor's Degree or higher	134 14%	165 16%
Teachers with some college or community college coursework (but without a Bachelor's Degree)	468 48%	623 59%
Teachers with a high school education or less	366 38%	269 25%

[1]The median is the middlemost score in a distribution below which half the scores fall. When the data contain at least 1 extreme score, as do these, the median is more appropriate to report than the mean (arithmetic average) because it is less influenced by the extreme score(s).

Training Activities for Center Staff

Variable	1994 Sample N = 1817-1821	1996 Sample N = 2128-2136
Staff who participated in on-site workshops or technical assistance	1246 68%	1633 77%
Staff who attended workshops in the county	1343 74%	1515 71%
Staff who attended workshops outside the county	523 29%	690 32%
Staff who attended county-level professional organization meetings	348 19%	470 22%
Staff who attended courses in a community college	576 32%	608 29%
Staff who attended courses in a four-year college	96 5%	151 7%

Participation in T.E.A.C.H. (Teacher Education and Compensation Helps)

Variable	1994 Sample N = 166	1996 Sample N = 187
Centers with at least 1 staff member participating in T.E.A.C.H.	69 42%	85 45%

Teacher Compensation & Benefits

Variable	1994 Sample N = 157-166	1996 Sample N = 179-187
Median[1] Typical Hourly Wage for Teachers (range)	$5.77 ($4.25-$16.77)	$6.00 ($3.75-$15.00)
Centers offering paid maternity leave	32 19%	38 21%
Centers offering paid sick/personal leave	111 67%	138 74%
Centers offering reduced child care fees	110 66%	128 72%
Centers offering extra pay/time off for meetings outside work hours	113 68%	144 77%
Centers offering extra pay/time off for training	117 70%	145 78%
Centers covering full/partial cost of training	141 85%	174 93%
Centers offering yearly cost of living raise	103 62%	103 56%
Centers paying full/partial cost of retirement plan	55 33%	69 37%
Centers paying full/partial cost of life insurance	67 41%	92 50%
Centers paying full/partial cost of dental insurance	33 20%	47 26%
Centers paying full/partial cost of health insurance	85 52%	113 61%
Centers paying full/partial cost of disability insurance	47 28%	66 36%

[1]The median is the middlemost score in a distribution below which half the scores fall. When the data contain at least 1 extreme score, as do these, the median is more appropriate to report than the mean (arithmetic average) because it is less influenced by the extreme score(s).

Classroom Information: Group Size and Ratios

Variable	1994 Sample N = 65-160*	1996 Sample N = 73-179*
Median[1] class size for infants (Birth - 11 mos.) (range)	8.0 (2.0-23.0)	7.0 (2.0-14.0)
Median class size for toddlers (12 - 35 mos.) (range)	9.3 (3.5-26.3)	9.0 (3.5-30.5)
Median class size for preschoolers (36 - 60 mos.) (range)	15.0 (4.5-31.0)	14.0 (5.0-35.0)
Median teacher:child ratio for infants (range)	1:4 (1:1-1:9)	1:4 (1:2-1:8)
Median teacher:child ratio for toddlers (range)	1:6 (1:2-1:12)	1:6 (1:2-1:12)
Median teacher:child ratio for preschoolers (range)	1:9 (1:3-1:18)	1:9 (1:2-1:18)

[1]The median is the middlemost score in a distribution below which half the scores fall. When the data contain at least 1 extreme score, as do these, the median is more appropriate to report than the mean (arithmetic average) because it is less influenced by the extreme score(s).

*The number of respondents (N) is low for some variables because some of the centers visited did not enroll infants or toddlers.

Classroom Information: Observed Quality

Variable	1994 Sample N = 177-180	1996 Sample N = 185-188
Total ECERS score[1]--Mean (range)	4.3 (2.5-6.3)	4.5 (3.0-6.3)
ECERS Personal Care --Mean (range)	4.5 (2.0-6.8)	4.5 (2.0-6.6)
ECERS Furnishings & Display -- Mean (range)	4.2 (2.4-7.0)	4.5 (2.8-7.0)
ECERS Language & Reasoning -- Mean (range)	4.1 (1.5-6.8)	4.5 (1.8-6.5)
ECERS Fine/Gross Motor--Mean (range)	4.5 (3.0-6.2)	4.7 (3.2-6.5)
ECERS Creative Activities--Mean (range)	4.3 (2.4-6.6)	4.7 (2.4-6.6)
ECERS Social Development--Mean (range)	3.8 (1.8-6.7)	4.3 (2.2-6.5)
ECERS Adult Needs--Mean (range)	4.2 (1.8-7.0)	4.7 (2.0-7.0)

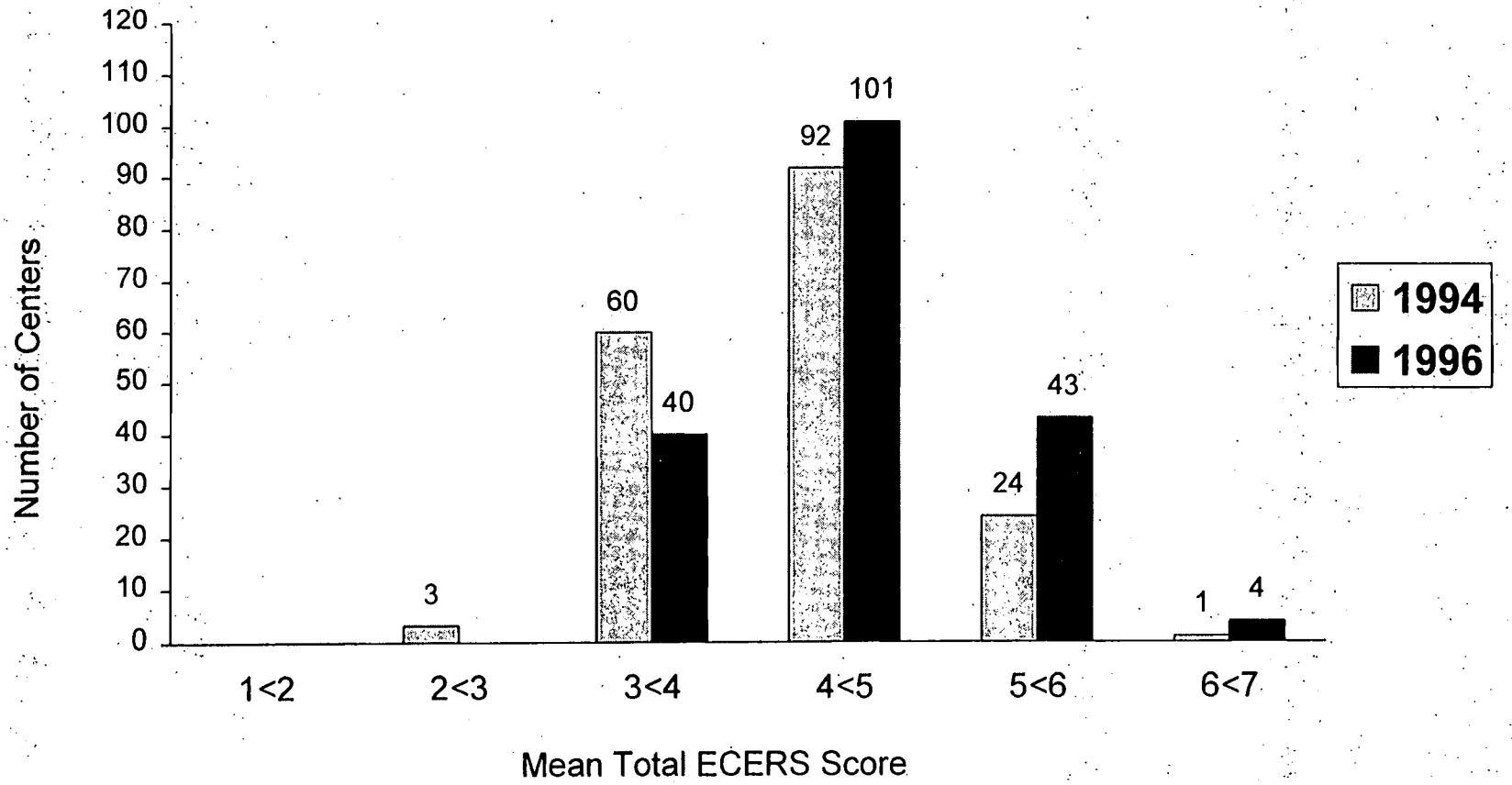
[1]This score is based on ECERS items 1-32, not including adult needs items.

ECERS Scores for Overall Sample of Child Care Centers

FPG-UNC Smart Start Evaluation

N = 180 for 1994 Data

N = 188 for 1996 Data



Availability of Resources and Supports for Serving Children with Special Needs

Variable	1994 Sample N = 165	1996 Sample N = 185-186
Centers reporting the availability of training focusing on children with disabilities	106 64%	142 77%
Centers reporting the availability of on-site consultation from specialists	117 71%	140 75%
Centers reporting the availability of resource materials	99 60%	140 75%
Centers reporting the availability of financial incentives	36 22%	53 28%

Difficulties Serving Children With Special Needs

Variable	1994 Sample N = 165	1996 Sample N = 187
Inadequate staff training	62 38%	56 30%
Class sizes are too large	54 33%	54 29%
Resistance among families of currently enrolled children	8 5%	15 8%
Resistance among staff	19 12%	22 12%
Initial staff uncertainty in abilities	51 31%	49 26%
Special resources/services not available	20 12%	12 6%
Modifications would have to be made to facility and/or program	42 25%	50 27%
Characteristic of child with disability presents problem (e.g., disability too severe)	51 31%	54 29%

Family Involvement

Variable	1994 Sample N = 165	1996 Sample N = 187
Centers that have an advisory group or board of directors	98 59%	117 63%
Median[1] percent of parent representatives on advisory group or board of directors (range)	29% (0%-100%)	23% (0%-100%)

[1]The median is the middlemost score in a distribution below which half the scores fall. When the data contain at least 1 extreme score, as do these, the median is more appropriate to report than the mean (arithmetic average) because it is less influenced by the extreme score(s).

Smart Start Participation

Variable	1994 Sample N = 166	1996 Sample N = 187
Centers receiving any type of Smart Start benefit	158 95%	175 94%
Centers receiving training workshops	136 82%	156 83%
Centers receiving on-site technical assistance	67 40%	108 58%
Centers receiving higher subsidy rate (in general)	73 44%	66 35%
Centers receiving higher subsidy rate because they meet higher standards	45 27%	55 29%
Centers receiving funds to improve quality by purchasing new equipment or renovating	118 71%	131 70%
Centers receiving funds to improve quality by purchasing educational materials	106 64%	117 63%
Centers receiving funds to achieve a higher level of licensing	25 15%	48 26%
Centers receiving funds to achieve NAEYC accreditation	15 9%	25 13%
Centers receiving funds to improve services for children with disabilities	18 11%	21 11%
Centers using teacher substitute pool	30 18%	38 20%
Centers using transportation services	35 21%	34 18%
Centers using lending library	51 31%	95 51%

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