

# **Cuyahoga County Child Care Quality Study**

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## **Executive Summary**

This report summarizes the results of a study conducted to assess the quality of care received by preschool-aged children in early care and education programs in Cuyahoga County. The study has two components, one focused on center-based care and the other focused on care in family child care settings.

### Center-Based Care Quality

Observation and interview data were collected from a sample of 177 classrooms for 3-to-5 year olds chosen from a stratified random sample of child care centers in Cuyahoga County, 88 private child care classrooms, 59 private preschool classrooms, and 30 Head Start classrooms. No public preschool classrooms were involved in the study. Data were collected between June and December 2006 by trained observers using two standardized assessment instruments – the *Early Childhood Environment Rating Scale – Revised* (ECERS-R) and the *Caregiver Interaction Scale* (CIS). In addition, the classroom teacher and the program director were surveyed regarding their background and the program characteristics.

- On average, classrooms scored in the medium range of quality on the ECERS-R, with a mean total score of 4.4 on the 7-point scale. Scores were higher on the Interactions factor (5.0), in the good quality range, than the Provisions for learning factor (4.2), in the medium quality range. Approximately one-third of the classrooms (32.8%) scored in the high quality range, about half (53.7%) scored in the medium quality range, and a smaller proportion (13.6%) scored in the low quality range.
- The average score on the CIS was 3.4 on a 4-point scale, indicating that teachers' interactions with children were of fairly high quality. Scores were relatively high on the Sensitivity (2.9) scale (with higher scores indicating higher quality interactions) and relatively low on the Harshness (1.4), Detachment (1.3), and Permissiveness (1.2) scales (with lower scores indicating higher quality interactions).
- Some differences by type of program were found, with Head Start and private Child Care programs having better Provisions for learning than Preschool programs. However, Preschool classrooms tended to have higher scores on Interactions. The lower scores in Preschool programs may be due to the difficulty of providing adequate amounts of time for a variety of activities in part-day programs, as delineated for developmentally appropriate practices. Preschool programs scored lower on such items, including furnishings for relaxation and comfort, gross motor equipment, art activities, block play, sand/water play, dramatic play, schedule, and free play. These may be areas to particularly focus on for quality improvement, especially as related to part-day programs.
- Classrooms in the low quality range should also be a special focus of quality improvement efforts. Resources will be needed for quality improvement programs, including professional development via training and consultation; grants for purchase of needed materials, supplies, and curricula; and/or stipend programs to entice good teachers to stay in the field. A variety of strategies have been implemented in states and communities around the country and a good deal of program information is available, although unfortunately, not yet much

evaluative information. In considering quality improvement strategies, it will be important to tailor the professional development, both in terms of content and frequency, to the varying needs of different classrooms as well as different types of programs.

- Although some recent research questions whether teacher education levels are significantly related to better use of developmentally appropriate practices, education appears to be important in this population. Higher teacher education levels were predictive of better overall classroom quality. Teachers with a 2-year or 4-year degree had, on average, better ECERS-R scores than did teachers with less education. In addition, some teacher beliefs--less traditional childrearing and more developmentally appropriate attitudes--are related to higher quality classroom scores. The results on teacher beliefs suggest that further training about appropriate practices coupled with an understanding of the reasoning behind them (based on child development and educational approaches) may be beneficial.

### Home-Based Care Quality

The quality of care in family child care homes was examined through a review of extant data on home-based quality from a previous research study, and administrative data on quality used to guide technical assistance and assess provider performance. The data from a previous research study (2001-2003) were collected on a sample of 95 homes by trained observers using two standardized assessment instruments – the *Family Day Care Rating Scale* (FDCRS) and the *Caregiver Interaction Scale* (CIS). The administrative data were collected by technical assistance staff and external consultants using the FDCRS on approximately 600-800 homes annually during 2001-2006. Data collectors in the two different efforts were well-trained, but reliability was not assessed, so comparisons should be made very cautiously.

- The quality of care in family child care homes in Cuyahoga County has generally been in the poor range and has been challenging to increase. Data from a sample of 95 homes showed care in the poor range on average in 2001-2002 (2.28 on FDCRS) and remaining in the poor range when re-assessed in 2003 (2.05 on FDCRS). The scores on the CIS at both time points showed that the providers were somewhat sensitive in their interactions with children.

- The data suggest that the quality in family child care in Cuyahoga County has potentially increased slightly in recent years. The mean FDCRS score in the 2001 sample was 3.61 and in the 2006 sample it was 4.42. The data available on higher quality providers ( $\geq 5$  on the FDCRS) is likely more reliable given the verification procedure used for this group by Starting Point. The proportion of the sample scoring in the good range on the FDCRS (5 or higher) has increased from 14.7% in 2001 to 35.6% in 2006.

- Though many home-based providers struggle with providing high quality care, the existing population of higher quality homes appears to be sufficient (~200) to provide a basis for inclusion of the home-based programs in universal pre-k planning.

## **Introduction**

This report summarizes the results of a study conducted to assess the quality of care received by preschool-aged children in early care and education programs in Cuyahoga County. Although Cuyahoga County has had a comprehensive, community-wide initiative directed at children from birth through age 5 since 1998 (the Early Childhood Initiative then followed by Invest in Children), a study of the average or typical quality of care received by the children in settings has not been conducted.

A long-term objective that resulted from the strategic planning process of Invest in Children (IIC) was for universal pre-kindergarten (pre-k) to become a reality for all children in the County who needed it. The main impetus for this study was to understand the current and projected status of the early care system in the County. To this end, IIC funded three studies of the child care system in the County – capacity, quality, and finance. This report is about the quality study, conducted by researchers at the Center on Urban Poverty and Community Development at Case Western Reserve University in conjunction with researchers at the Frank Porter Graham Child Development Institute at the University of North Carolina at Chapel Hill.

Cuyahoga County's plan to provide universal pre-k through child care centers and family child care homes required that the present quality of care in the two types of facilities be examined. Descriptions of the variations of experiences provide initial data that the County and Starting Point, the local child care resource and referral agency, can use to develop plans aimed at improving the quality of early care and education in order to meet Ohio pre-k standards.

The study was designed to answer four primary research questions about center-based care in Cuyahoga County:

- 1) What are the characteristics of the centers (e.g., extent/length of operations populations served, services provided, director characteristics,) classrooms (e.g., ratios, staffing patterns), and teachers (e.g., experience, education, salary and benefits, professional development, beliefs) serving preschool-aged children in Cuyahoga County?
- 2) Do any of the center, classroom or teacher characteristics, or teacher practices differ by type of program?
- 3) What is the nature and distribution of the quality of early care and education practices, including the environment, activities, and teacher-child interactions?
- 4) How do center, classroom, and teacher characteristics relate to the quality of practices in the classroom?

Section I of this report addresses these questions. Section II will address questions related to quality in Cuyahoga County home-based settings.

## SECTION I: Center-Based Child Care Quality

### Study Description

#### *Sample*

The initial plan for the study was to assess 200 early childhood classrooms randomly selected from among all licensed Cuyahoga County early childhood programs, including Head Start and Public Preschool. Because several important questions were related to the quality of children’s experiences in care of different types, we considered stratifying the sample based on profit status (for-profit/non-profit), whether church-sponsored or not, whether full-day or part-day, and whether or not the center was affiliated with the Early Learning Initiative (ELI). After investigating the potential sample size within each category (especially when crossed with other categories) and in consultation with community leaders, we decided to sample within type of program (Child Care, Head Start, Private Preschool, and Public School Preschool) and to sample proportional to the number of children served by each type of program. Table 1 illustrates the resulting sample. For example, 9% of Child Care programs in Cuyahoga County are Head Start programs, but they serve approximately 15% of all Cuyahoga Preschoolers, so we attempted to recruit 15% of our sample of classrooms from within Head Start.

Child Care programs are licensed by the county and usually operate full-day, year-round programs. Their funding typically comes from parent fees and child care subsidies. Head Start programs must enroll at least 90% of children whose families are below the federal poverty level. The majority of funds for Head Start programs are federal dollars, with some programs linked to other types of child care funds. Private preschools operate for 4 hours or fewer per day and can be morning-only, afternoon-only, or both (although serving different groups of children in the morning and the afternoon). Public preschools are operated by public school districts.

**Table 1. Sample Characteristics**

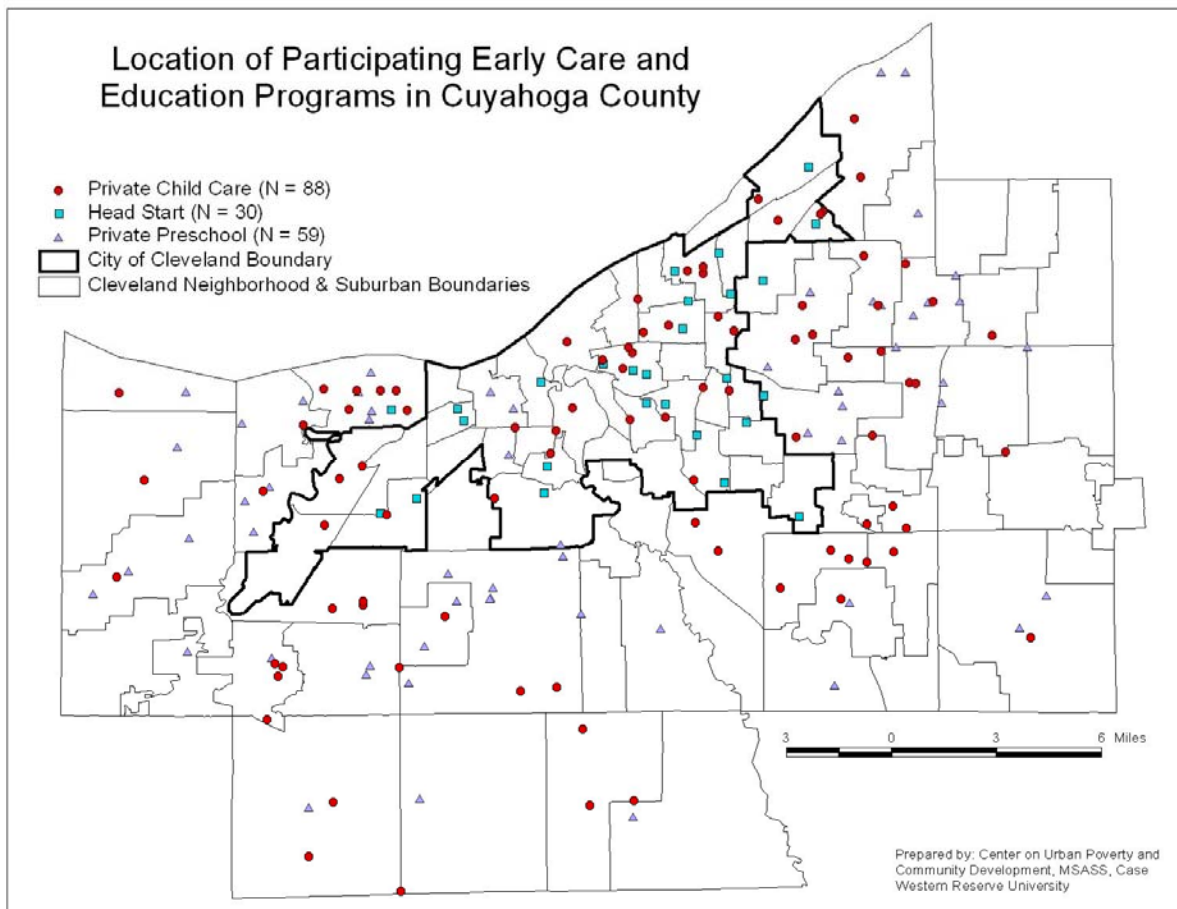
	<b>Child Care</b>	<b>Head Start</b>	<b>Private Preschool</b>	<b>Public Preschool</b>	<b>Total</b>
Percentage of Children Served (2005)	46.1%	15.2%	29.3%	9.4%	100% N=26,220
Target Sample of Classrooms	92	30	59	19	200
Actual Study Sample of Classrooms	88	30	59	0	177

Recruitment was very successful, except in the case of Public Preschools. We randomly selected programs to be contacted for their agreement to participate in the study. More than 300 of the 596 center-based programs in the county were contacted for the study. Head Start programs readily agreed to be in the study (about 80%) and Child Care and Private Preschools agreed at a rate of about 50%. Only 1 of the public school programs granted permission for the study,

resulting in too small a potential sample, so no public preschool classrooms were included. A few of the programs we contacted were no longer licensed or had such low enrollment of 3 to 5 year olds that we did not include them. For programs with both morning and afternoon classes, a given teacher could only be selected for the sample once, for either the morning or afternoon class. Classrooms that served children with special needs were included unless the majority of children enrolled had special needs.

Participating centers were fairly evenly distributed across the city of Cleveland (n=61), the inner ring suburbs (n=60), and the outer suburbs (n=56). Figure 1 shows the location of participating sites. In addition, 39% (69) of the classrooms sampled were participants in the Step Up to Quality initiative.

Figure 1



## **Methods**

### ***Procedures***

Observation and interview data were collected from a sample of 177 classrooms for 3-to-5 year olds chosen from a stratified random sample of child care centers in Cuyahoga County. Data were collected between June and December 2006 by five data collectors who were trained by study investigators on administering two standard assessment instruments (see below). Initial training for data collectors consisted of a three-day instructional component, followed by four to five practice observations of early care and education classrooms with the trainer. Following each of the visits with the trainer, the data collector and trainer met to complete inter-rater reliability. Once the data collector reached an acceptable level of reliability on the measure (see below), she attended several additional visits with other already trained data collectors to assure reliability across the team.

Each classroom observation data collection visit lasted approximately 3-4 hours, during the morning (except for afternoon classes). Teachers received a \$25 gift card for participating in the observational component of the study. To collect additional information about the characteristics of the centers, classrooms, and teachers, data collectors left questionnaires with both the program director and the classroom teacher to be returned by mail. Directors and teachers each received a \$25 store gift card upon receipt of their survey. Eighty-four percent of directors and 85% of teachers returned their surveys.

### ***Child Care Quality Measures***

The *Early Childhood Environment Rating Scale – Revised* (ECERS-R) (Harms, Clifford, & Cryer, 1998) is a well-established measure of child care quality that assesses seven general subscale areas: personal care routines, furnishings and displays for children, language-reasoning experiences, fine and gross motor activities, creative activities, social development, and adult needs. Scores on each of 43 items can range from 1 to 7, with the overall mean score and subscale mean scores used to measure the developmental appropriateness or quality of the classroom. To be consistent with other research, the adult needs items were not included in the overall classroom quality scores. Several studies have found that items on the ECERS-R group into 2 factors, which were also used in this evaluation. The first factor, labeled Teaching and Interactions, is a composite of 11 indicators: greeting/departing, encouraging children to communicate, using language to develop reasoning skills, informal use of language, supervision of gross motor activities, general supervision of children, discipline, staff-child interactions, interactions among children, free play, and group time ( $\alpha = .86$ ). This combination of indicators portrays the teacher's style and the quality of her interaction with the children. The second factor, labeled Provisions for Learning, is a composite of 12 indicators: furniture for relaxation, room arrangement, gross motor equipment, fine motor, art, blocks, sand/water, dramatic play, nature/science, schedule, free play and group time ( $\alpha = .84$ ). This factor describes the classroom environment and the learning resources available to the children. These two factors are similar to factors found in previous factor analytic studies of the ECERS (Clifford, Rossbach, Burchinal, Lera, & Harms, 2002; Clifford, Barbarin, Chang, et al, 2005).

Observers had to meet stringent standards of reliability on the ECERS-R, based on visits with the trainer, before gathering data, including exact agreement of scores on at least 90% of the items and scores within 1 point of one another on 100% of the items.

The *Caregiver Interaction Scale* (CIS) (Arnett, 1989) specifically rates the quality of a provider's interactions with children on a scale from 1 (behavior is "not at all" evident) to 4 (behavior is "very much" evident). The CIS includes 26 items across four subscales: sensitivity (the provider is warm, attentive, engaged), harshness (the provider is critical, threatens children, is punitive), detachment (the provider is minimally interactive, minimally interested in the children), and permissiveness (provider ignores misbehavior or minimally supervises the children in her care). Observers were trained to an inter-rater agreement standard of at least 85% exact agreement.

The teacher survey was a 16-page questionnaire that included information about educational background and experience, beliefs and attitudes about children and caregiving, participation in professional development activities related to child care, and levels of stress related to work as a caregiver.

The teacher survey included the Teacher Beliefs Scale used in the FACES national study of Head Start (2000), adapted from the measure originally developed by Burts, Hart, Charlesworth, DeWolf, Ray, Manuel, & Fleege (1993). This measure includes scales about beliefs regarding developmentally appropriate practices, child-initiated activities, didactic teaching, and use of explicit rewards. Higher scores indicate stronger beliefs in that dimension.

The teacher survey also included the Job Stress Inventory adapted from Curbow, Spratt, Ungaretti, McDonnell, and Breckler (2000). This measure includes 3 subscales of Job Demands, Job Rewards (called Resources in the original), and Control. Job Demands includes questions regarding interactions with parents, dealing with children's challenging behaviors, and trying to meet many children's needs at the same time. A lower score on this factor indicates fewer demands (i.e., better working conditions) than a higher score. Job Rewards includes questions about receiving praise and respect for the work of child care and seeing that one's work makes a difference for children and parents. Job Control includes items related to availability of supplies, having a reasonable class size, and getting parents to cooperate on managing behavior. Higher scores on the Rewards and Control scales indicate more positive working conditions.

The Parental Modernity Scale (Schaefer & Edgerton, 1985) was included in the teacher survey to assess beliefs about child care and children. The scale assesses the strength of one's beliefs in a more traditional/authoritarian way of interacting with children compared to a more progressive/authoritative way of interacting.

Professional motivation was measured in the survey using items from a study by Kontos, Howes, Shinn, and Galinsky (1995). Based on factor analyses from a previous study, a subset of items was examined that assess professional or intrinsic motivation to be a child care educator, such as "I see my current position as a personal calling" vs. "I see my current position as a job with a paycheck." Items are scored so that a higher score on this scale reflects a teacher with more professional motivation.



The director survey included questions about program enrollment numbers, acceptance of child care subsidies, teacher-child ratios, staff salaries, and professional development activities paid for by the center for center teachers.

## **Results**

### ***Center and Classroom Characteristics***

Table 2 presents information about the centers that participated in the study.<sup>1</sup> Looking at the 3 different types of programs in the study, the Preschool programs have been operating longer, for an average of 32.7 years, compared to the Child Care (18.1 years) and Head Start (17.4 years) programs.<sup>2</sup> Other information about centers in Table 2 shows that one-third of the overall sample was in an urban location with Head Start programs much more likely to be urban than Child Care or Private Preschool programs. Almost 80% of the centers in the sample were non-profit agencies, with Head Start and Private Preschool programs almost all in non-profit centers and slightly over 60% of Child Care programs being non-profit. Rates of accreditation by the National Association for the Education of Young Children (NAEYC) vary widely across states and within states. Compared to other samples, this Cuyahoga sample contained a relatively high percentage of NAEYC-accredited centers, almost 15%. For example, across the state of Ohio, 8.3% of programs are NAEYC-accredited (NAEYC, 2007), and in North Carolina, around 4% of child care programs are accredited (Smart Start Team, 2003). Child Care centers were more likely to be NAEYC-accredited than Head Start or Preschool programs, but these differences were not statistically significant.

Table 2 includes data about operational hours, teacher turnover and the children served. Preschool programs are open fewer weeks per year and fewer hours per week than Child Care or Head Start programs. Teacher turnover is high, 33% in the sample as a whole. This means that a

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<sup>1</sup>All tables in this report are organized in the same way. Data in the first column are for the whole sample. Data in the next 3 columns are for the Child Care sites, the Head Start sites, and the Preschool sites. The sample size numbers reported on the top line of the table usually show a range, indicating that not all teachers or directors answered each question. The last column shows the group differences, if there were any. For example, on Table 2, in the first row of the first column, the average length of operation of child care programs in this study was 23.4 years with a standard deviation (SD) of 18.9 years. The standard deviation is a measure of the spread of the data around the mean. If all data points are close to the mean, the SD is small; if there is a large range among data points, then the SD is large.

<sup>2</sup> This seems like a large difference, but it's important to examine whether these differences are statistically significant. For example, wide distributions can result in mean differences that appear large to not be of statistical importance. We report these tests in the last column of Table 2 and of the tables that follow. In the case of years in operation, the difference between the means of the 3 groups *is* statistically significant, that is, the Preschool programs have been in operation significantly longer than the Child Care and Head Start programs. In the significance column, one asterisk (\*) indicates that the groups were different at a level that would only happen by chance less than 5 of 100 times. Two asterisks (\*\*) indicate significant differences that would only happen by chance less than 1 in 100 times. Three asterisks (\*\*\*) indicate a 1 in 1,000 chance of that difference happening by chance. When no groups are noted, none of the differences were statistically significantly different. For a characteristic such as length of operation of program, there are no important theories as to whether an older or a newer program would be of higher quality or would be better for children, so on this variable, perhaps it is of little importance that the different types of programs differ. However, there are many variables where the underlying reasons for a statistically significant difference should be further examined.

program with 9 teachers had to replace 3 positions within the past year or perhaps had to replace the same position 3 times. In comparison, recent statewide work force studies in Minnesota and California reported annual teacher turnover rates of 20% and 22%, respectively (Minnesota DHS, 2007; Whitebook, et al., 2006).

In the Cuyahoga sample, Head Start programs had the highest teacher turnover rate (43%), with turnover rates of 41% in Child Care and 18% in Preschool. Although the Preschool turnover rate is quite a bit lower than the other 2 groups, this was not a statistically significant difference, probably due to the large ranges seen in these figures. For example a few programs reported turnover higher than 100%, meaning that even some of the replacement teachers quit and had to be replaced again in the same year.

In terms of the children served, private Preschools serve significantly fewer subsidized children than Child Care centers, but they are no different in the percentage of children served with special needs or children who have difficulty with English or who are English language learners.

In terms of benefits, the Head Start programs are significantly more likely to offer all types of health and retirement benefits than Child Care or private Preschool programs. For some types of insurance (employee health, family health, and life insurance), Child Care programs are also significantly more likely to offer these than private Preschool programs. Child Care programs are significantly more likely to offer their staff free meals or reduced child care fees, benefits that might be considered “in kind.” Although they are less able or willing to fund paid benefits such as health insurance or paid vacation days, they can offer these in-kind benefits to employees.

Table 3 includes descriptive data on the classrooms in the sample. The staff-child ratio is significantly lower in Head Start than in Child Care or Preschool programs. That is, Head Start’s ratio is about 1 adult for every 5 children whereas Child Care and Preschool is about 1 adult for every 6 children. These ratios are as good as or even better than (lower than) typically recommended ratios for preschool-aged children (e.g., NAEYC recommends ratios of 1:6-1:9 for 3-year-olds and 1:8-1:10 for 4- and 5-year-olds). Class size is significantly higher in Head Start than in private Preschool which, in turn, is significantly higher than in Child Care. Head Start’s class sizes are higher, but their staff-child ratios are better, perhaps in some way compensating for the larger group size.

Across the 3 types of programs there are no significant differences in the number of children with special needs who are served. The percentage of classrooms with a paid teacher assistant is significantly greater in Head Start than Child Care. Among the classes with a paid assistant, Preschool classrooms have fewer hours per week of such assistance (21.8 hours) than do Child Care (32.2) or Head Start (37.3) classes. For the 32 classes where teachers reported the number of volunteers, the average number of volunteer hours was 10.5 per week, ranging from 9.4 hours in Preschool classrooms to 12.8 in Child Care classrooms.

**Table 2. Center Descriptive Statistics**

	<b>Overall</b> N = 92-148	<b>Child Care (CC)</b> n = 40-73	<b>Head Start (HS)</b> n = 21-26	<b>Preschool (PS)</b> n = 28-48	<b>Significant Group Differences</b>
<b>Years center has operated</b>	23.4 (18.9)	18.1 (16.5)	17.4 (11.9)	32.7 (20.1)	PS > CC*, HS*
<b>Urban, %</b>	33.3	33.8	88.2	14.0	HS > CC*** > PS*
<b>Not for profit, %</b>	78.3	61.4	94.4	96.0	CC < HS*, PS**
<b>NAEYC accredited, %</b>	14.9	20.3	11.1	8.5	NS
<b>Weeks closed per year</b>	6.0 (7.1)	1.1 (3.2)	2.6 (5.1)	14.1 (3.7)	PS > CC**, HS**
<b>Hours per week open</b>	45.5 (16.0)	56.8 (7.3)	48.4 (8.2)	27.3 (10.5)	PS < HS**, CC**
<b>Lead teacher turnover, annual percentage</b>	32.7 (68.5)	40.5 (54.9)	43.3 (140.1)	18.1 (40.3)	NS
<b>Total center enrollment</b>	64.0 (47.7)	62.8 (36.1)	69.7 (74.0)	63.8 (52.2)	NS
<b>% subsidized children in center</b>	28.3 (36.8)	49.5 (36.9)	na	4.0 (17.5)	PS < CC**
<b>% children have difficulty w/English</b>	3.4 (6.2)	2.3 (4.0)	5.5 (9.4)	4.3 (6.8)	NS
<b>% children with IEP or IFSP</b>	3.4 (9.4)	3.3 (5.5)	2.3 (2.1)	3.8 (13.9)	NS
<b>Benefits offered:</b>					
Employee health ins	64.7	74.3	100.0	39.2	HS > CC*** > PS**
Family health ins	50.4	54.3	88.9	31.4	HS > CC* > PS**
Disability insurance	40.1	40.6	70.6	29.4	HS > CC*, PS**
Retirement	54.0	52.9	94.4	41.2	HS > CC**, PS**
Life insurance	46.0	51.4	94.4	21.6	HS > CC** > PS**
Dental insurance	46.0	50.0	66.7	33.3	HS > PS*
Paid maternity leave	27.7	23.5	55.6	23.5	HS > PS*, CC**
Unpaid maternity leave	63.4	81.8	31.3	49.0	CC > HS**, PS**
Sick leave	79.0	72.5	94.4	82.4	NS
Vacation leave	71.9	88.6	100.0	39.2	PS < CC** < HS**
Reduced care fees	62.2	86.8	12.5	45.1	CC > PS** > HS*
Free meals	43.8	60.9	52.9	17.6	CC > HS** > PS*
<b>Services offered to children &amp; families:</b>					
Part-time care, %	70.8	75.7	66.7	34.7	--
Sick child care	1.5	1.4	0	2.0	
School-age care	49.3	77.1	0	28.0	
Transportation	5.1	5.8	0	6.0	
Meals for children	64.5	85.7	100	22.0	
Developmental screens	76.5	82.9	100	58.3	
Health screening	62.8	60.9	83.3	58.0	

**Table 3. Classroom Descriptive Statistics**

	<b>Overall</b> N = 92-148	<b>Child Care</b> n = 40-88	<b>Head Start</b> n = 21-30	<b>Preschool</b> n = 28-59	<b>Significant Group Diffs</b>
<b>Observed staff: child ratio</b>	0.17 (.06)	0.17 (.07)	0.22 (.05)	0.15 (.05)	HS > CC***, PS***
<b>Class size</b>	19.2 (8.0)	16.0 (5.8)	27.7 ( 8.6)	19.3 (7.3)	CC < PS* < HS**
<b>% children whose parents earn &lt; \$30K</b>	41.8	43.0	63.2	10.0	PS < CC* < HS**
<b>% children with special needs</b>	9.5	9.2	10.7	8.8	--
<b>Paid Assistant, has one %</b>	65.7	57.3	84.6	69.0	CC < HS*
<b>Paid Assistant, hrs/week</b>	29.9 (12.0)	32.2 (11.8)	37.3 (8.4)	21.8 (9.8)	PS < CC**, HS**

Teacher characteristics are presented in Table 4. Teachers in private Preschool classes tend to be older and more experienced than teachers in Head Start or Child Care, and they also have spent more time in their current centers. About one-third of teachers report planning to teach for another 10 years or more, one-third for another 5-10 years, and one-third for less than 5 years. Although the differences among groups are not statistically significant, it appears that Head Start teachers are somewhat more likely to plan to stay longer in their jobs.

The ethnicity of the teachers is significantly different across the three groups ( $p < .001$  Fisher's exact test) but many small cell sizes suggest caution in these interpretations. It appears that Head Start teachers are more likely to be African American and Preschool teachers are more likely to be White.

The education level of teachers differs across the groups. Private Preschool teachers are much more likely to have a college degree than teachers in the other two types of programs—71% have a BA compared to 34% in Child Care and 35% in Head Start. Head Start teachers are more likely to have a CDA (Child Development Associate) credential.

As would be expected based on the hours and months that programs of different types are open (Table 3), private Preschool teachers are paid to work fewer hours per week and fewer months per year than teachers in the other groups. Salary information was quite difficult to obtain and the sample sizes for these data are quite small, but it appears that Head Start and private Preschool teachers earn about the same on an hourly basis (about \$13/hour) and earn significantly more than Child Care teachers (slightly more than \$10/hour). Bureau of Labor Statistics data from May, 2006, indicate that the median hourly wages of “child care workers” were \$8.48 and the median hourly wages of “preschool teachers” were \$10.91. The child care worker category includes about 33% family child care providers, so the better benchmark is preschool teacher. In the 2006 California workforce study (Whitebook et al., 2006), child care teachers with a Bachelors degree earned between \$14.00 and \$16.50 per hour.

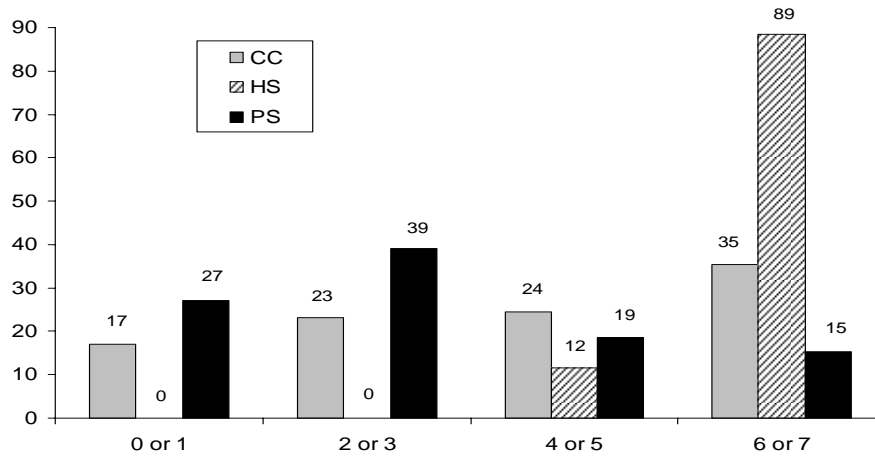
Vacation and paid sick leave are benefits received by most of the teachers, although certainly not all of them. Health insurance for themselves and participation in a retirement plan are benefits offered to only about half of the teachers. Head Start teachers are most likely to receive all the various benefits. Other benefits the teachers reported were paid days to attend professional meetings, paid tuition or school expenses, and health insurance for their family members. In all, teachers reported on 7 benefits. Twenty percent (20%) of teachers reported receiving all 7 of these benefits whereas 6% reported receiving none (see Figure 2 for 3-group distribution). The mean number of benefits received was 4.1 ( $sd = 2.3$ ). Head Start teachers received an average of 6.5 benefits, child care teachers 4.1, and Preschool teachers 3.0.

The number of benefits received was significantly related to a teacher's report of how much longer she was likely to teach young children. Teachers who intended to continue to teach for less than a year reported receiving an average of 2.4 benefits whereas teachers who intended to teach for longer (1-2 years, 3-4 years, 5-10 years, and > 10 years) received an average of 4 or more benefits.

**Table 4. Teacher Characteristics**

	Overall N = 122-150	Child Care n = 66-73	Head Start n = 18-26	Preschool n = 34-52	Significant Group Differences
<b>Age</b>	41.7 (11.8)	36.9 (11.1)	41.7 (11.6)	48.7 (9.2)	PS > CC**, HS**
<b>Ethnicity, %</b>					[see text]
<b>White</b>	66	58	38	92	
<b>African-American</b>	28	36	58	2	
<b>Latino</b>	3	3	4	4	
<b>Other/Mixed</b>	3	4	0	2	
<b>Total years exp. in child care</b>	14.0 (8.4)	12.0 (7.5)	14.7 (9.0)	16.5 (8.8)	PS > CC**
<b>Total years teaching</b>	12.9 (8.0)	11.1 (7.0)	13.7 (8.9)	15.1 (8.3)	PS > CC**
<b>Years at current center</b>	6.4 (6.2)	4.9 (5.6)	4.8 (5.2)	9.2 (6.7)	PS > CC**, HS**
<b>Years Plan to Teach</b>					NS
< 5 years, %	29.3	31.7	11.5	33.9	
5-10 years, %	34.1	32.9	46.2	30.5	
> 10 years, %	36.5	35.4	42.3	35.6	
<b>Highest Educ Level, %</b>					PS > CC**, HS**
< AA degree	27.5	43.9	15.4	10.2	
AA	25.1	22.0	50.0	18.6	
BA	47.3	34.1	34.6	71.2	
<b>CDA certificate, %</b>	14.0	16.4	34.6	1.7	PS < CC*, HS**
<b>Paid hrs work/week</b>	33.9 (10.0)	38.2 (5.7)	39.2 (4.1)	24.5 (10.9)	PS < CC**, HS**
<b>Months worked/year</b>	10.9 (1.3)	11.7 (.7)	10.8 (1.0)	9.4 (.8)	PS < HS** < CC**
<b>Benefits, % receive:</b>					
Paid vacation	73.5	91.5	92.3	39.7	PS < CC**, HS**
Paid sick leave	84.3	74.4	100.0	91.4	CC < PS**, HS**
Retirement plan	50.3	49.4	96.2	69.0	CC < PS* < HS**
Health ins, self	56.4	63.0	96.2	29.3	PS < CC** < HS**
<b>Own dollars spent on classroom materials (past month)</b>	\$29.19 (30.7)	\$30.86 (32.3)	\$37.75 (35.0)	\$20.94 (22.6)	NS
<b>Have another paid job</b>	31.7	17.5	38.5	48.3	CC < HS*, PS**

Figure 2. Number of Teacher Benefits by Auspice



Over 75% of teachers report spending their own money on supplies and materials for their classrooms. The average amount spent is \$29.19 per month (including the 24% who reported spending nothing) and the groups do not differ significantly by type. Almost 1/3 of the teacher sample had another paying job, in addition to their teaching job. Because they teach fewer hours per week, Preschool teachers are significantly more likely to have another paying job than Child Care teachers (48% versus 18%). Head Start teachers are also more likely to have another paid job than Child Care teachers (39% versus 18%), most likely in the summer when many Head Start programs are closed.

Data on teacher professional development are presented in Table 5. Over one-third of the sample teachers overall belong to the leading early childhood professional association, NAEYC (National Association for the Education of Young Children). Head Start teachers are significantly more likely than Child Care teachers to belong to this organization. Annual hours of required staff development (as reported by the directors) ranged from 10-16 hours across the groups, with Preschool requiring fewer hours than Child Care. Teachers reported training hours for the past 2 years, which ranged from 19-37 hours (or the equivalent for one year of 9.5 – 18.5 hours). Head Start and Preschool teachers report participation in training hours approximately equal to the requirements that their directors reported, but Child Care teachers reported taking less than required (9.3 taken vs. 14.6 required). Preschool teachers are required to take significantly fewer hours of professional development training than Child Care, but remember that Preschool teachers have, in general, higher levels of education and more experience. On-site consultation is a professional development model that many agencies use to provide quality enhancement services to early education programs and about half of the sample teachers had received consultant visits in the past 2 years, with no significant differences in participation across the 3 groups.

Data on teacher beliefs are summarized in Table 6. Most of the measures show very few differences among teachers in Child Care, Head Start, and Private Preschool. The childrearing beliefs scale is one in which a higher score represents a more traditional, adult-oriented view of teaching young children, while a lower score represents a more progressive child-oriented view, which is more preferable for early childhood. The teachers in this Cleveland-area sample scored in the same range as 150 teachers in a recent study of professional development in 5 other states (the Quality Interventions for Early Care and Education (QUINCE) study being conducted by FPG staff). The professional motivation score (Kontos) does not differ among teachers in the three auspices and is somewhat lower than scores recently obtained in the QUINCE study. The scores on the FACES scale of beliefs in developmentally appropriate teaching and child-initiated activities are comparable across the Child Care, Head Start and Preschool groups. In the FACES study of Head Start (USDHHS, 2003), these scores were significantly correlated with several classroom quality measures. Job stress and control were the areas showing differences by program type, with Preschool teachers reporting significantly lower stress on the job demand subscale and significantly more job control and rewards.

Director characteristics are presented in Table 7. Directors had approximately 9 years of experience as a center director, and the groups did not differ on this variable. Across the groups, over 65% of directors had a BA degree or higher, but directors in the Head Start group were more likely to have lower levels of education than directors in Child Care and Preschool (Fisher's exact test  $p < .001$ ). The ethnicity of directors was also significantly different across groups, with Head Start having more African-American directors than the other groups.

Directors are paid to work about 36 hours a week across groups, with Child Care and Head Start directors working significantly more hours per week than Preschool directors. The annual salary reflects differences in hours worked. Like teachers, many Directors have another paid job. Additional employment is much more likely among Preschool directors (44%), who are not paid to work 40 hours a week, than it is among Child Care directors. However, Head Start directors are paid to work almost 40 hours a week, yet 39% of them report having another job, possibly in the summer when their program is closed. The number and types of benefits directors receive and the group differences in benefits are very similar to teachers. In terms of their own professional development, directors have attended from 22-37 hours of professional development training over the past 2 years, and 41% of them are members of a national early childhood professional organization.



**Table 5. Teacher Professional Development**

	<b>Overall</b> N = 122-150	<b>Child Care</b> n = 66-73	<b>Head Start</b> n = 18-26	<b>Preschool</b> n = 34-52	<b>Significant Group Diffs</b>
<b>NAEYC member, %</b>	34.1	27.2	53.8	35.1	HS > CC**
<b>Staff Development</b> Annual required hours (director-reported)	13.0 (10.7)	14.6 (10.5)	16.2 (15.6)	9.7 (8.1)	PS < CC*
<b>Staff Devel past 2 years: Teacher-</b> reported hours	22.5 (23.5)	18.6 (21.3)	36.6 (34.5)	20.8 (16.7)	HS > PS*, CC**
<b>Consultant visited in</b> past 2 years, % yes (teacher report)	47.9	49.4	57.7	41.4	NS
<b>Consultant visited in</b> past 2 years, % yes (director report)	65.9	78.3	77.8	43.8	PS < HS*, CC**

**Table 6. Teacher Beliefs**

	<b>Overall</b> N = 122-150	<b>Child Care</b> n = 66-73	<b>Head Start</b> n = 18-26	<b>Preschool</b> n = 34-52	<b>Significant Group Diffs</b>
<b>Traditional Childrearing Beliefs</b> (Schaefer & Edgerton)	38.0 (9.7)	39.2 (9.4)	38.5 (10.1)	36.0 (9.9)	NS
<b>Professional Motivation</b> (Kontos)	3.29 (.33)	3.32 (.33)	3.26 (.31)	3.25 (.34)	NS
<b>Developmentally Appropriate Beliefs</b> (FACES)	7.50 (1.42)	7.45 (1.66)	7.15 (1.35)	7.75 (1.03)	NS
<b>Job Stress (Curbow)</b> <b>Job Demand Stress</b>	2.82 (.69)	3.13 (.69)	2.84 (.57)	2.38 (.47)	PS < CC**, HS**
<b>Job Control</b>	2.98 (1.09)	2.43 (.89)	3.03 (1.05)	3.70 (.93)	CC < HS* < PS**
<b>Job Rewards</b>	4.21 (.62)	4.05 (.64)	4.32 (.54)	4.39 (.58)	CC < PS**

**Table 7. Director Characteristics**

	<b>Overall</b> N = 119- 140	<b>Child Care</b> n = 66-71	<b>Head Start</b> n = 17-18	<b>Preschool</b> n = 36-44	<b>Significant Group Diff</b>
<b>Years experience</b>	9.4 (7.7)	10.1 (8.4)	7.8 (5.3)	8.9 (7.3)	NS
<b>Highest Educ Level, %</b>					<i>The odds of having a lower education are significantly greater for HS than for CC or PS</i>
< AA degree	9.3	9.9	16.7	5.9	
AA	25.0	25.4	50.0	15.7	
BA	65.7	64.8	33.3	78.4	
<b>Ethnicity, %</b>					[Significance not tested - see text]
White	74	67	28	100	
African-American	25	32	72	0	
Other/Mixed	1	1	0	0	
<b>Paid hrs. work/week</b>	35.8 (12.4)	40.6 (8.5)	37.1 (8.7)	28.1 (14.8)	PS < CC**, HS**
<b>Annual Salary</b>	\$32,175.00 (17,254)	\$37,785.00 (16,838)	\$30,838.00 (12,813)	\$24,076.00 (16,346)	PS < CC**
<b>Has another job, %</b>	27.5	12.9	38.9	44.0	CC < PS**, HS*
<b>Training hours in the past 2 years</b>	25.7 (23.4)	24.7 (20.1)	36.9 (39.7)	22.4 (17.5)	NS
<b>NAEYC member, %</b>	41.0	46.5	33.3	36.0	NS

## Description of Classroom Quality

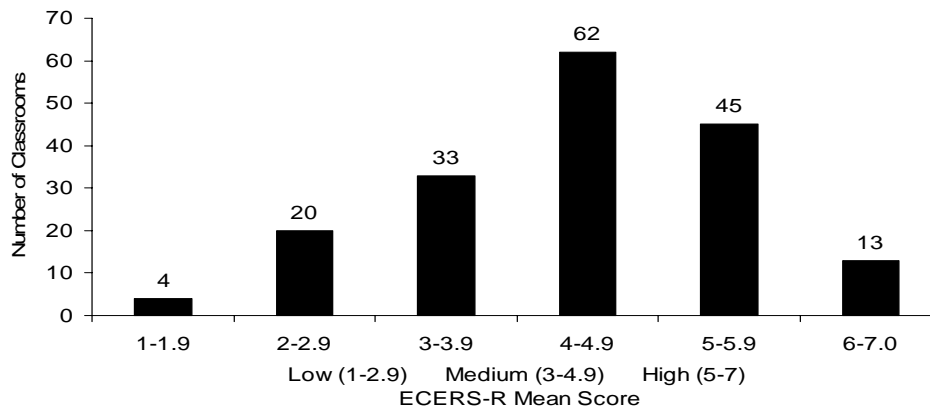
### ECERS-R

Overall sample On average, classrooms in our sample scored in the medium range of quality on the *Early Childhood Environment Rating Scale-Revised* (ECERS-R), a measure of the global quality of the classroom environment across multiple domains. As shown in Table 8, the mean total score on the ECERS-R was 4.4, considered to be in the medium range of quality. Scores of 1-3 on the ECERS-R indicate very low quality, programs that are potentially even harmful for children. Scores in the 5-7 range on the measure are considered to represent good to excellent quality, programs with warm and responsive teachers and a wide range of learning activities and experiences. A score of 4.4 is in the middle 3-5 range, generally safe for children with some good teaching and activities, but programs that may not be providing activities that are optimal for children’s development.

Considering the two ECERS-R factors, scores were higher on the Interactions factor (5.0), which was in the good quality range, than the Provisions for learning factor (4.2), which was in the medium quality range.

The distribution of total scores on the ECERS-R is shown in Figure 3. Approximately one-third (32.8%; 58) of the classrooms scored in the high quality range, about half (53.7%; 95) scored in the medium quality range, and a smaller proportion (13.6%; 24) scored in the low quality range.

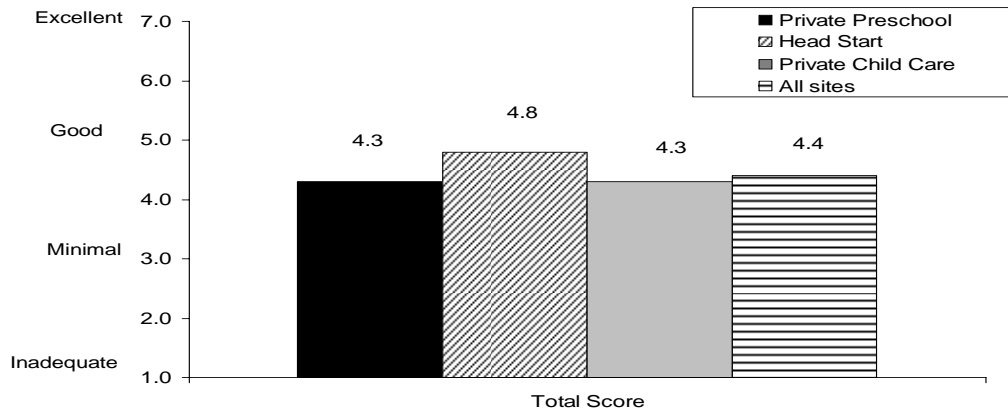
Figure 3. ECERS-R Distribution-Total Sample  
N = 177



At the subscale level (see Table 8), average scores were in the high range for one subscale, Interactions (mean=5.0). Scores were in the medium range for the five remaining subscales: Program structure (mean=4.6), Space/furnishings (mean=4.5), Language/reasoning (mean=4.5), Personal care routines (mean=4.2), and Activities (mean=3.9). It is notable that none of the subscales had average scores in the low quality range (i.e., mean scores less than 3.0).

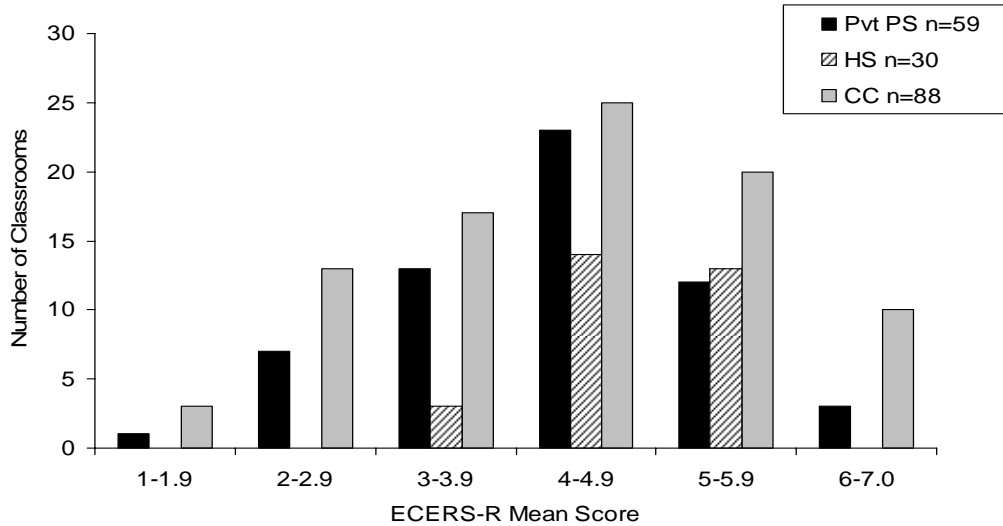
Differences by type of program. The total mean ECERS-R scores by program type (Child Care, Head Start, and Preschool) are shown in Figure 4 and Table 8. There were no differences by program type in ECERS-R total scores or on the Interactions factor. On the Provisions for learning factor, Child Care and Head Start programs scored significantly higher than Private Preschool programs (see Table 8).

Figure 4. ECERS-R Total Score by Groups & Overall



The distribution of ECERS-R total scores by type of program is shown in Figure 5. Head Start classrooms had the highest proportion in the high quality range, while Preschools had the lowest proportion. For Head Start classrooms, 43.3% (13) scored in the high quality range and 56.7% (17) scored in the medium quality range, with none scoring in the low quality range. For the Child Care classrooms, 34.1% (30) had total scores in the high quality range, 47.7% (42) had scores in the medium range, and 18.2% (16) had scores in the low quality range. For the Preschool classrooms, 25.4% (15) had total scores in the high quality range, 61.0% (36) had scores in the medium quality range, and 13.6% (8) had scores in the low quality range.

Figure 5. ECERS-R Distributions of Classrooms by Center Type



Subscale scores by program type are shown in Table 8 and Figures 6-8. Head Start classrooms scored higher on Space/furnishings and Personal care routines. Private Preschool classrooms scored higher on the Interactions subscale, but lower on Program structure. For the remaining two subscales (Language/reasoning, Activities), there were no differences by program type. In looking at the level of quality at the subscale level, the mean scores on the Interactions subscale were in the high quality range for each program type. Head Start classrooms also had average scores in the high quality range for Program structure and Personal care routines, while average scores were in the medium quality range on these subscales for Child Care and Preschool classrooms. Average scores were in the medium quality range for Space/furnishings, Language/reasoning, and Activities for each program type. None of the average subscale scores were in the low quality range.

Figure 6. ECERS-R Mean Subscale Scores

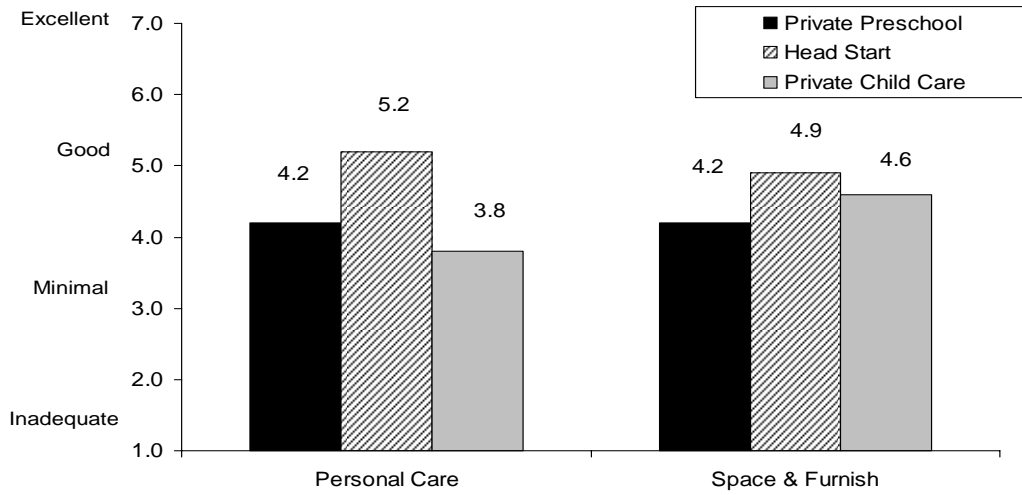


Figure 7. ECERS-R Mean Subscale Scores

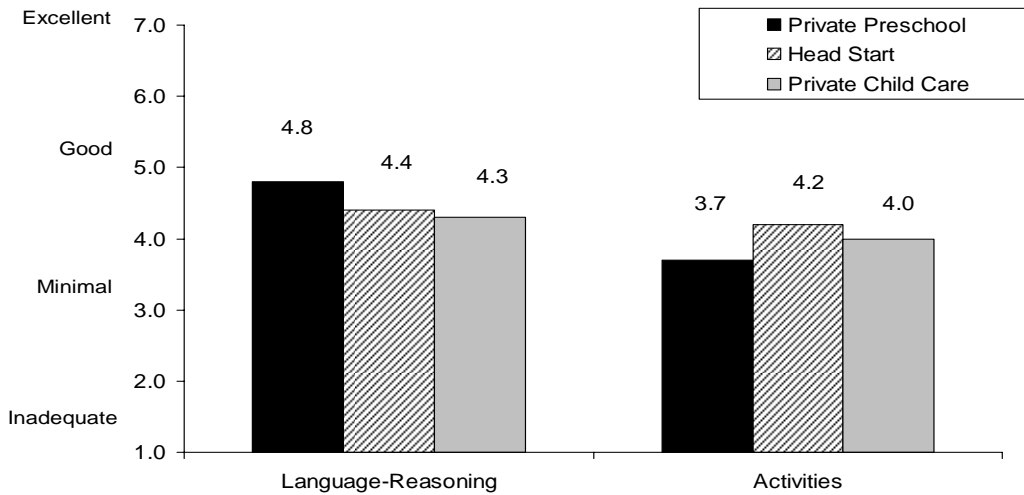
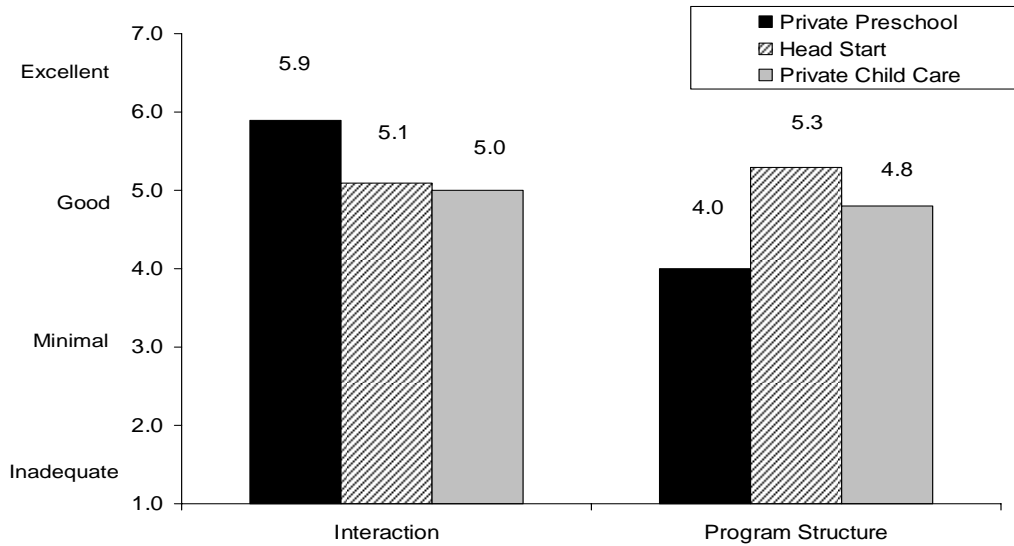
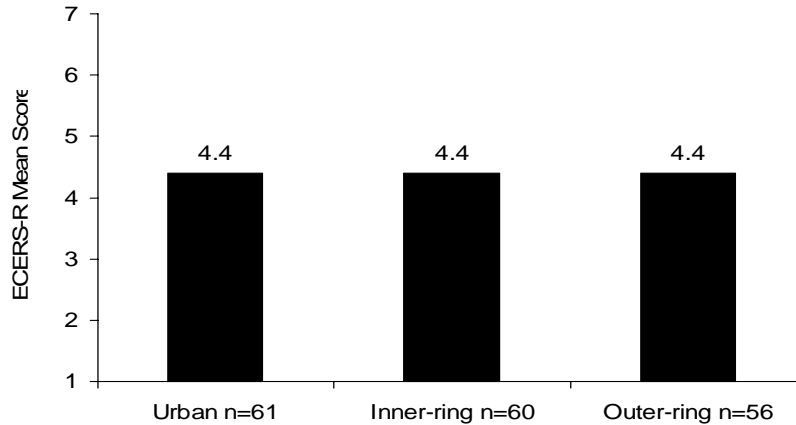


Figure 8. ECERS-R Mean Subscale Scores



Differences by geographic location We also examined ECERS-R scores by geographic location (urban vs. suburban) and found that there were no significant differences (see Figure 9).

Figure 9. ECERS-R Scores by Geographical Location



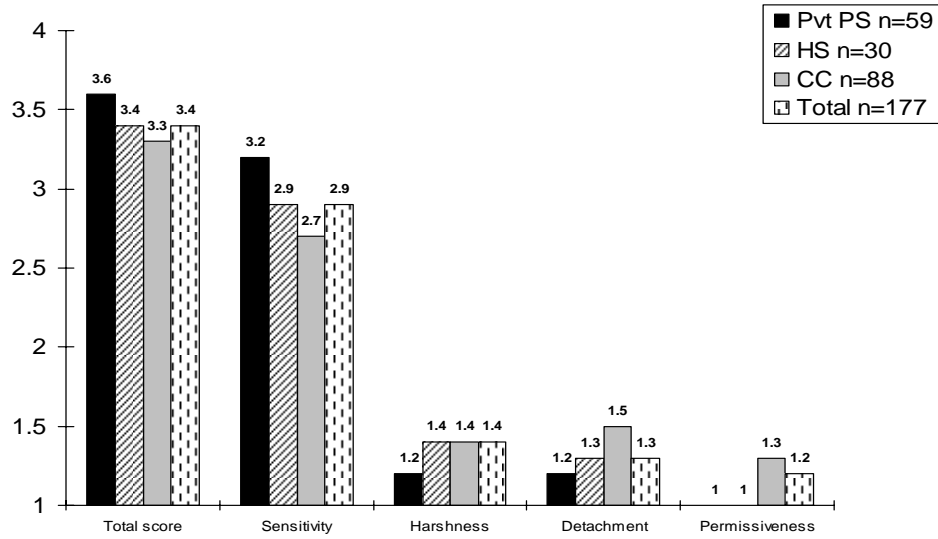
### *CIS*

Overall sample As seen in Table 9, the overall mean on the *Caregiver Interaction Scale* (CIS) was 3.4 on 1-4 scale (from low to high quality), indicating that teachers' interactions with children were of fairly high quality. Scores were relatively high on the Sensitivity (2.9) scale (with higher scores indicating higher quality interactions) and relatively low on the Harshness (1.4), Detachment (1.3), and Permissiveness (1.2) scales (with lower scores indicating higher quality interactions).

Differences by type of program As shown in Table 9 and Figure 10, teacher-child interactions tended to be of higher quality in Preschool classrooms than other settings. Private Preschool classrooms had higher scores than Child Care and Head Start classrooms on the CIS total and the Sensitivity scale and lower scores on the Permissiveness scale, all indicating higher quality interactions. Similarly, scores were lower in Preschool classrooms compared to Child Care classrooms on the Harshness and Detachment scales.



Figure 10. CIS Total and Subscale Means



Differences by geographic location There were also some differences in CIS scores by geographic location. Caregiver sensitivity was better in suburban than urban settings, with higher scores on the CIS total (3.5 vs. 3.3) and Sensitivity (3.1 vs. 2.7), and lower scores on Harshness (1.2 vs. 1.5).

Table 8. ECERS-R Classroom Quality Scores by Program Type

ECERS-R Item	Overall N=177 M(sd)	Child Care n=88 M(sd)	Head Start n=30 M(sd)	Preschool n=59 M(sd)	Significant Differences by Program Type <sup>3</sup>
<b>Total Score (child items)</b>	4.39 (1.13)	4.31 (1.28)	4.75 (0.67)	4.33 (1.04)	NS
<b>Interactions Factor (F1)</b>	5.03 (1.40)	4.87 (1.57)	5.01 (1.18)	5.28 (1.19)	NS
<b>Provisions for Learning Factor (F2)</b>	4.22 (1.34)	4.40 (1.47)	4.54 (0.64)	3.80 (1.31)	CC*, HS* > PS
<b>Space/Furnishings Subscale</b>	4.52 (1.15)	4.58 (1.36)	4.91 (0.64)	4.23 (0.95)	HS>PS*
Indoor space	4.68 (1.99)	4.20 (2.23)	5.03 (1.65)	5.22 (1.58)	---
Furniture for routine care, play, and learning	6.31 (1.20)	6.13 (1.50)	6.53 (0.51)	6.47 (0.88)	---
Furnishings for relaxation and comfort	3.78 (1.95)	4.07 (2.02)	4.00 (1.08)	3.24 (2.09)	---
Room arrangement for play	5.34 (1.71)	5.14 (1.77)	6.17 (1.34)	5.24 (1.67)	---
Space for privacy	4.40 (1.90)	4.53 (2.03)	4.07 (1.11)	4.37 (2.02)	---
Child-related display	4.05 (1.57)	4.06 (1.72)	4.43 (1.10)	3.85 (1.53)	---
Space for gross motor play	3.67 (1.88)	3.95 (1.83)	4.87 (1.43)	2.63 (1.66)	---
Gross motor equipment	3.92 (2.27)	4.55 (2.31)	4.17 (2.05)	2.85 (1.95)	---
<b>Personal Care Routines Subscale</b>	4.18 (1.54)	3.81 (1.45)	5.21 (1.20)	4.21 (1.58)	HS > CC**, PS**
Greeting/departing	5.45 (2.24)	5.81 (2.06)	5.47 (1.87)	4.93 (2.57)	---

<sup>3</sup> Note: NS = not significant. Individual scale items were not tested for significance, as indicated by “---”.

ECERS-R Item	Overall N=177 M(sd)	Child Care n=88 M(sd)	Head Start n=30 M(sd)	Preschool n=59 M(sd)	Significant Differences by Program Type <sup>3</sup>
Meals/snacks	3.10 (2.33)	2.64 (2.16)	5.30 (2.09)	2.67 (2.08)	---
Nap/rest	2.73 (1.96)	2.50 (1.86)	5.13 (1.64)	2.71 (1.70)	---
Toileting/diapering	4.44 (2.33)	3.77 (2.43)	5.53 (1.57)	4.90 (2.21)	---
Health practices	3.90 (2.34)	3.93 (2.26)	4.00 (2.36)	3.80 (2.46)	---
Safety practices	4.66 (2.28)	4.30 (2.45)	5.63 (1.75)	4.71 (2.13)	---
<b>Language/Reasoning Subscale</b>	4.46 (1.38)	4.30 (1.52)	4.37 (1.15)	4.76 (1.24)	NS
Books and pictures	3.97 (1.45)	4.18 (1.60)	3.73 (0.64)	3.76 (1.49)	---
Encouraging children to communicate	5.05 (1.71)	5.03 (1.66)	4.93 (1.57)	5.12 (1.88)	---
Using language to develop reasoning skills	3.75 (2.08)	3.41 (2.13)	3.57 (1.52)	4.36 (2.14)	---
Informal use of language	5.10 (1.86)	4.58 (1.89)	5.23 (1.85)	5.80 (1.58)	---
<b>Activities Subscale</b>	3.91 (1.18)	3.95 (1.29)	4.22 (0.64)	3.70 (1.20)	NS
Fine motor	4.73 (1.67)	4.75 (1.81)	4.30 (1.02)	4.92 (1.70)	---
Art	3.99 (1.94)	4.40 (2.07)	3.87 (1.07)	3.44 (1.96)	---
Music/movement	3.29 (1.72)	3.16 (1.48)	4.87 (1.74)	2.68 (1.58)	---
Blocks	3.20 (1.77)	3.14 (1.85)	4.03 (1.03)	2.86 (1.84)	---
Sand/water	4.25 (1.84)	4.51 (1.89)	4.97 (1.03)	3.51 (1.86)	---

ECERS-R Item	Overall N=177 M(sd)	Child Care n=88 M(sd)	Head Start n=30 M(sd)	Preschool n=59 M(sd)	Significant Differences by Program Type <sup>3</sup>
Dramatic play	3.92 (1.32)	4.09 (1.28)	4.03 (0.93)	3.61 (1.50)	---
Nature/science	3.81 (2.11)	3.89 (2.15)	3.17 (1.05)	4.03 (2.39)	---
Math/number	4.50 (1.82)	4.56 (1.98)	3.77 (0.63)	4.78 (1.90)	---
Use of TV, video, and/or computers	3.78 (2.24)	3.27 (2.10)	5.21 (1.32)	3.80 (2.74)	---
Promoting acceptance of diversity	3.67 (1.65)	3.61 (1.63)	4.20 (1.30)	3.47 (1.79)	---
<b>Interactions Subscale</b>	5.29 (1.59)	4.96 (1.74)	5.07 (1.37)	5.89 (1.28)	PS > CC**, HS*
Supervision of gross motor activities	4.61 (1.46)	4.49 (1.49)	4.42 (1.03)	5.07 (1.68)	---
General supervision of children	5.33 (1.88)	4.92 (2.10)	5.50 (1.59)	5.86 (1.50)	---
Discipline	5.21 (1.94)	4.84 (2.22)	5.53 (1.33)	5.59 (1.66)	---
Staff-child interactions	5.52 (2.12)	5.14 (2.30)	4.77 (2.10)	6.47 (1.45)	---
Interactions among children	5.49 (1.82)	5.40 (1.92)	4.97 (1.35)	5.88 (1.80)	---
<b>Program Structure Subscale</b>	4.61 (1.78)	4.78 (1.90)	5.26 (1.13)	4.04 (1.74)	CC*, HS** > PS
Schedule	3.96 (2.37)	4.20 (2.39)	5.23 (1.59)	2.95 (2.29)	---
Free play	4.39 (2.15)	4.92 (2.08)	4.83 (1.34)	3.37 (2.25)	---
Group time	5.38 (2.11)	5.16 (2.35)	5.73 (1.28)	5.54 (2.05)	---
Provisions for children with disabilities	5.61 (1.67)	5.38 (1.71)	5.67 (1.03)	6.00 (2.00)	---

**Table 9. CIS Classroom Quality Scores by Program Type**

<b>CIS Item<sup>4</sup></b>	<b>Overall N=177  M(sd)</b>	<b>Child Care n=88  M(sd)</b>	<b>Head Start n=30  M(sd)</b>	<b>Preschool n=59  M(sd)</b>
Total	3.40 (0.48)	3.26 (0.53)	3.37 (0.38)	3.62 (0.37)
Sensitivity Subscale	2.92 (0.69)	2.74 (0.72)	2.85 (0.60)	3.24 (0.58)
Harshness Subscale	1.35 (0.49)	1.44 (0.56)	1.39 (0.41)	1.19 (0.38)
Detachment Subscale	1.33 (0.48)	1.47 (0.56)	1.28 (0.41)	1.15 (0.28)
Permissiveness Subscale <sup>5</sup>	1.15 (0.35)	1.26 (0.45)	1.03 (0.10)	1.04 (0.15)

<sup>4</sup> Note: For Total and Sensitivity subscale scores, higher scores indicate better quality interactions; for Harshness, Detachment, and Permissiveness subscale scores, lower scores indicate better quality interactions.

<sup>5</sup> Note: For overall sample, n=176; for Child care, n=87.

### *Characteristics Related to Classroom Quality*

Correlation results We examined whether differences in classroom or lead teacher characteristics were significantly related to differences in the level of classroom quality scores. The correlations of various classroom and teacher characteristics with classroom quality scores (ECERS-R total and factor scores and CIS total) are shown in Table 10. These correlations indicate whether there is a simple association between a classroom quality score and a single classroom or teacher characteristic; they only look at the relation between two variables at a time. Positive correlations indicate that classroom quality scores are higher when the particular classroom/teacher characteristic is higher (e.g., higher classroom quality is associated with better staff-child ratios) while negative correlations indicate that classroom quality scores are higher when the particular classroom/teacher characteristic is lower (e.g., higher classroom quality is associated with lower teacher turnover rates). Statistically significant correlations are indicated with asterisks (see table for more information).

As shown in Table 10, higher teacher turnover rates at the center level and higher proportions of low-income children in the classroom were associated with lower scores on both the ECERS-R (interactions factor and/or total) and the CIS. Greater job stress as reported by teachers was also associated with lower CIS scores. Teachers with higher staff-child ratios in their classrooms, greater amounts of training, higher levels of education, higher salaries, and greater proportion of children with special needs in the classroom had higher ratings on the ECERS-R (for some or all of the scores). Teacher beliefs were also strongly related to classroom quality scores, with teachers reporting less traditional childrearing beliefs and more developmentally appropriate attitudes scores having better quality classrooms based on the ECERS-R and CIS.

Regression results In order to examine whether key classroom or teacher characteristics predict the level of classroom quality, we conducted separate regression analyses for the ECERS-R total and the CIS total scores. These analyses take into account multiple characteristics at a time and examine whether differences in each characteristic relate to differences in classroom quality scores after accounting for differences in the other characteristics. In order to include as many classrooms as possible in these analyses (i.e., to minimize the number of excluded classrooms due to missing data), we used a subset of the above variables.<sup>6</sup> The following characteristics were included in these analyses: 1) staff-child ratio, 2) percentage of children with special needs in the classroom, 3) lead teacher education level (1=less than High School, High School diploma, some college; 2=2-year degree; 3=4-year degree), 4) teacher ratings of job stress (based on the Curbow job demands score), 5) lead teacher level of traditional childrearing beliefs (based on the Schaefer & Edgerton traditional childrearing beliefs score), and 6) lead teacher developmentally appropriate attitudes scores (based on the FACES developmentally appropriate attitudes score)<sup>7</sup>.

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<sup>6</sup> Because the total sample size became too small due to missing data, we excluded some characteristics that were correlated with quality scores, including total training hours, proportion of low-income children, and teacher salary. Given the relatively uneven distribution for NAEYC membership (almost two-thirds reported not belonging), this characteristic was also excluded from the analyses.

<sup>7</sup> A series of regression models was fitted for each quality score. First, we examined whether the effects of classroom or teacher predictors were different for the different program types (child care, Head Start, preschool) using ANCOVA models to test the moderating interactions between program type and predictor. None of these interactions were significant, so they were dropped from the final model. The final model controlled for program

As seen in Table 11, some teacher characteristics were related to the level of classroom quality, after adjusting for all other factors in the model. For the ECERS-R, classroom quality was higher for teachers with 2- or 4-year degrees than those with lower levels of education. Scores were also higher for teachers with more developmentally appropriate attitudes toward teaching practices and less traditional childrearing beliefs. There were no differences on the basis of staff-child ratios, proportion of children with special needs, or ratings of job stress.

The same pattern of results was found for the CIS, with higher quality teacher-child interactions found for teachers with 2- or 4-year degrees than those with lower levels of education, for teachers with more developmentally appropriate attitudes toward teaching practices, and for teachers with less traditional childrearing beliefs. Higher quality interactions were also found for teachers reporting lower levels of job stress. There were no differences on the basis of staff-child ratios or proportion of children with special needs.

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type using an ANOVA approach. Effect sizes were calculated by standardizing the predictors and outcomes in order to obtain an estimate of the standardized regression coefficients for significant variables.

**Table 10. Correlations of Classroom Quality Variables with Selected Center, Classroom, and Teacher Characteristics**

	N	ECERS-R Total Score	ECERS-R Interactions Factor	ECERS-R Provisions for Learning Factor	CIS Total Score
<b><u>Center</u></b>					
Lead teacher turnover	137	-.15	-.21*	-.08	-.24**
<b><u>Classroom</u></b>					
Staff-child ratio	177	.22**	.16*	.22**	.03
Low-income proportion	103	-.19*	-.25*	-.10	-.39***
Special needs proportion	142	.12	.17*	.09	.15
<b><u>Teacher</u></b>					
Total training hours	140	.23**	.22**	.21*	.13
Education level <sup>8</sup>	151	.20*	.20*	.12	.31***
Teacher experience in child care	150	.09	.14	.02	.16
Salary	78	.22*	.15	.17	.07
Job demands stress	150	-.08	-.14	.03	-.29***
Traditional childrearing beliefs score <sup>9</sup>	151	-.34***	-.37***	-.30***	-.41***
Developmentally appropriate attitudes score <sup>10</sup> (FACES)	151	.36***	.39***	.30***	.37***
NAEYC membership	151	.36***	.26**	.27***	.25**

<sup>8</sup> Education is based on a 3-level variable: 1 = less than HS diploma, HS diploma, some college, and 1-year degree;

2 = 2-year degree; 3 = 4-year degree

<sup>9</sup> Scored 1-8, low to high.

<sup>10</sup> Scored 0-8, low to high.



**Table 11. Relation of Teacher and Classroom Characteristics to Classroom Quality (regression results)**

Predictor / Covariate	ECERS-R Total	CIS Total
<b>Center Type</b>	ns	ns
HS	4.61(.20)	3.33(.08)
CC	4.51(.12)	3.35(.05)
PS	4.11(.18)	3.50(.07)
<b>Staff-child ratio</b>	ns	ns
<b>Proportion special needs</b>	ns	ns
<b>Teacher Education</b>	*	*
	HS+ < 2-yr	HS+ < 2-yr
< HS, HS, some college	4.06(.18)	3.26(.08)
2-year degree	4.69(.16)	3.50(.07)
4-year degree	4.47(.13)	3.43(.06)
<b>Job demand stress</b>	ns	ns
<b>Traditional childrearing beliefs</b>	-.22*	-.23**
<b>Developmentally appropriate attitudes</b>	.22**	.17*

## **Discussion**

This discussion section is organized in three parts, beginning with the implications that arise from the results about the overall quality of early care and education programs in Cuyahoga County; then implications from the significant classroom and teacher characteristics we found to be predictive of quality; and finally, implications from examination of the many other center, classroom, and teacher characteristics that were measured in this evaluation.

### ***Classroom Quality and Implications for Quality Improvement***

Quality improvement programs often use a score of 5 on the ECERS-R as the benchmark for quality—directors and teachers are urged to have classrooms reach a score of 5 or above, as an indicator of developmentally appropriate practices. Using that benchmark, early childhood programs in Cuyahoga County are near the goal, based on this large sample. Although they are, on average, in the middle or medium range of quality, with concerted efforts in some domains including adequate resources for quality improvement, it should be possible to move toward an average score in the good quality range.

Although the overall Cuyahoga County mean score is not yet at the accepted standard for developmentally appropriate practice, many programs have already exceeded the benchmark quality score of 5 on the ECERS-R and with good effort, many others could join them. In some areas, for example interactions among staff and children, average scores are already in the developmentally appropriate range. In many other areas, for example, general provisions for learning, as well as scores specifically related to program structure and scheduling, facilities (space and furnishings), language and reasoning activities and materials, creative and gross motor activities and materials, and personal care routines, average scores were in the medium quality range. It is notable that *none* of the average scores were in the low quality range where one might worry about the basic health and safety needs of children.

There is, however, a great deal of variation across individual classrooms, with nearly one-third scoring in the high quality range, about half in the medium quality range, and the rest (14%) in the low quality range. Classrooms in the low range should be a special focus of quality improvement efforts. Resources are needed for quality improvement programs, including professional development via training and consultation; grants for purchase of needed materials, supplies, and curricula; and/or stipend programs to entice good teachers to stay in the field. A variety of strategies have been implemented in states and communities around the country and a good deal of program information is available, although unfortunately, not yet much evaluative information.

In this Cuyahoga sample, we found some differences by type of program, with Head Start and Child Care programs having better provisions for learning than Preschool programs. However, Preschool classrooms tended to have higher scores on interactions. One possible explanation for the lower scores in Preschool programs may be related to the length of the child care day, with these programs being part-day rather than full-day programs. It may be more difficult to provide adequate amounts of time for a variety of activities in part-day programs, as delineated for developmentally appropriate practices. For some items with such time requirements, Preschool programs did tend to score somewhat or substantially lower than other programs: furnishings for

relaxation and comfort, gross motor equipment, art activities, block play, sand/water play, dramatic play, schedule, and free play. These may be areas to particularly focus on for quality improvement, especially as related to part-day programs. However, there were also other areas where the Preschool programs looked similar to other types (space for privacy, books and pictures, and fine motor activities) and some where they scored somewhat higher (nature/science and math/number activities). There seem to be fewer differences by program type for these items more directly related to academic learning and greater differences related to the equally important areas of interactions and creative activities, as well as facilities and program structure.

### ***Significant Predictors of Classroom Quality and Implications for Quality Improvement***

Although two recent papers have reported results that question whether teacher education levels are significantly related to developmentally appropriate practices (Early, Bryant et al., 2006; Early, Maxwell et al., 2007), in this sample we found that a higher teacher education level was indeed predictive of better overall classroom quality. Teachers with a 2-year or 4-year degree had, on average, better ECERS-R scores than did teachers with less education. While teacher education is not consistently found as a predictor in other studies, it appears to be important in this population.

We also found that some teacher beliefs--less traditional childrearing and more developmentally appropriate attitudes--are related to higher quality classroom scores (both ECERS-R and CIS), adjusting for other characteristics and program type. The results on teacher beliefs suggest that further training about appropriate practices coupled with an understanding of the reasoning behind them (based on child development and educational approaches) may be beneficial.

In considering quality improvement strategies, it will be important to tailor the training, both in terms of content and frequency, to the varying needs of different classrooms. Individual classrooms, as well as different types of programs, will have different professional development needs.

### ***Other Characteristics of Cuyahoga County Early Childhood Programs and Implications for Quality Improvement***

As noted above, teacher education and teacher beliefs were significantly related to classroom quality in the Cuyahoga sample, providing support for early childhood leaders to place a particular focus on these dimensions when planning for and implementing quality improvement programs. Other teacher, classroom, and program characteristics also yielded some interesting findings that should be considered in planning quality programs. While we were not able to explore their direct associations with the measures of classroom quality (because of skewed distributions or missing data), there are important implications from this study as well as from other studies.

#### *NAEYC accreditation*

Obtaining NAEYC accreditation is an indicator that an early childhood program has attained a level of quality deemed by the professional community to be of high quality (Whitebook, Sakai, & Howes, 1997). An NAEYC-accredited program is one that provides appropriate care and learning environments for young children and support for their parents. NAEYC provides

validation that a program is, indeed, of high quality. The proportion of NAEYC accredited centers in this Cuyahoga random sample is high, relative to the rest of the state and relative to samples in other studies. This likely reflects the extensive efforts that have been made in Cuyahoga County by resource and referral agencies and the cross-agency initiatives such as Invest in Children. With the need to find increasing numbers of child care placements to expand the pre-kindergarten program, these centers will be a good resource. However, the entire NAEYC accreditation process was revamped 2 years ago and more data are needed about the efficacy of this new process. It is likely that NAEYC accreditation status will continue to represent the high end of child care quality, but until new results about the process are published, we would be cautious about relying solely on NAEYC accreditation as a primary strategy for Cuyahoga County. It is an important indicator, but not the only indicator, of a high-quality program and other factors should be considered.

*Teacher turnover/wages/other jobs*

The level of teacher turnover is high, 33% across all types of programs and particularly high in Child Care and Head Start programs. For example, studies in other states have found lower turnover rates, such as 20% in Minnesota (Minnesota Department of Human Services, 2007), 22% in California (Whitebook et al, 2006) and 24% in North Carolina (Child Care Services Association, 2003). Turnover creates administrative challenges for directors, not to mention disruptions in interpersonal relationships between teachers and children. When teachers leave a center for a job outside the early childhood field, the resources that have been spent on their professional development are also lost. We do not know the cause of the 33% teacher turnover among this sample, and it may be reflective of broader social and economic trends in this region, trends that are difficult to counteract. Higher turnover may be related to stress and certainly the teachers in this sample reported some degree of stressfulness related to their challenging work. Sometimes, even an acknowledgement of this situation accompanied by appreciation for the valuable job that early childhood teachers and directors perform is an effective antidote to stress.

In addition, from other studies we know that higher turnover is related to lower wages; in this sample we have evidence that a teacher's expectation of leaving the field soon is significantly higher if she receives few benefits from her employment. As in any low-paying job category, improving wages and/or benefits would reduce the turnover rates and would also be an ethical step towards improving the value and professional standing of child care workers. Wage and salary supplement model programs have been implemented in other communities to reward teachers for obtaining more education and/or remaining in their current position for another year of teaching. Group buying allows some communities to obtain benefits for teaching staff at lower costs than individual centers would incur. We strongly encourage Cuyahoga County to increase the amount of resources provided for such wage and benefit programs.

The proportion of teachers and directors who reported having another paying job seems high at 32%, and it is indeed higher than the best comparison data we could find—a recent workforce study in Minnesota that reported 20% of teachers having another paid job for an average of 14 hours a week (Minnesota, 2007). However, this variable has different meaning depending on the type of program. Because Preschool teachers are paid to work about 25 hours a week, holding another job, as almost half do, may not be overly taxing. However, the average Child Care teacher is paid to work 38 hours a week, yet 17.5% reported having another job. These rates of

other employment complicate the provision of professional development, which often needs to occur during hours outside of the child care workday (e.g. evenings or Saturdays).

*Children with Special Needs and English Language Learners*

Although the numbers of children being served in Cuyahoga County early childhood programs who are from non-English speaking homes is still relatively low (3.4% overall in this sample), for those programs already serving such children and for teachers with even one such child in their classroom, there may be challenges. It would be useful to identify expert local resources for providing pre-service or in-service training to teaching staff to help them better serve children and families who are just learning English. This is a growing issue nationwide so Cuyahoga County should be able to learn about approaches that have been successfully tried in other communities. Many classrooms in the sample served at least one child with special needs and the average classroom serves between 2 and 3 children with some sort of disability. This too creates greater training needs, especially for new teachers who have never taught classes where children with special needs are integrated into a class with typically developing children.

Comparing the services offered to children in different types of programs, the Preschool group was lagging behind the other 2 groups in developmental screenings. These programs operate only half-days, so the presumption may be that children are in other environments where the screenings could be obtained or may have parents with greater means to obtain screenings elsewhere. Nevertheless, this is one area where some focused attention and relatively little additional work could increase the screening rate considerably. Providing screening measures and trainings on the measures would give the teaching staff the tools to conduct screenings and provide feedback to parents. Developing a monitoring or reporting system to document screenings would be another useful improvement.

*Staff-child ratios and group sizes*

Cuyahoga County classroom ratios (number of staff to children) meet or are better than those recommended by NAEYC. Although Head Start programs had the most optimal ratios, they had the largest group sizes, averaging 27.7 children per classroom. We are not sure if these relatively large group sizes are due to the spaces available or for some programmatic reason, but it would be worth investigating whether smaller group sizes could be configured while still keeping the good ratios.

*Teacher education/professional development*

The need for professional development opportunities – from workshops to consultation to credit-bearing continuing education at community colleges or universities – is related to the strengths and experiences of the current workforce. The education level of the teachers in the Preschool programs is significantly higher than the other 2 groups (71% had BA degrees). This characteristic may explain (or justify) their lower numbers of professional development hours, both hours required of them by their program and hours taken. It also points to the need to examine the different types or content of professional development that may be appropriate for teachers in Preschool compared to teachers in Child Care or Head Start. Access to group-based professional development is challenging because of teachers' schedules and other jobs, as noted

above. A variety of times and dates should be offered for mandatory trainings. Increasingly, translators will need to be provided for professional development.

Both teachers and directors reported that consultants have been in the classrooms and at centers over the past year, providing some type of quality enhancement assistance, information about children's special needs, and other types of consultation. The range of services was extensive. Although child care consultation is a growing service, our field has little data to guide us on the types, content, or duration of consultation that has been proven effective in improving quality or increasing children's readiness for school. Buysse and Wesley (2005) summarized the important characteristics of high quality professional development via consultation--that it be sustained over some period of time, individualized, data-based and responsive to the teachers' needs and interests, and delivered by a knowledgeable, well-trained consultant. Several studies are underway and results can be expected in the next few years, although that does not provide much help to planners of current consulting initiatives. With limited quality enhancement dollars, however, it will be important to require programs that deliver quality enhancement services to document and evaluate their outcomes. Teachers and directors have limited time for professional development, and they want their time to be well spent and having some type of accountability system in place will facilitate the provision and usefulness of such services.

## **SECTION II: Home-Based Child Care Quality**

The interest in the quality of care experienced by preschoolers in Cuyahoga County extended beyond center-based programs to care provided through the County's network of family child care homes (FCCH). These family homes are regulated by the County as Type B facilities and eligible families can use child care vouchers in these settings just as they can in center-based care. Based on data from 2005, approximately 10% of the full-day slots available to preschoolers in Cuyahoga County were located in family child care homes (Fischer, Nelson, Mikelbank, & Coulton, 2006). Therefore, home-based providers are a small subset of the care available for preschoolers; however, in regard to maintaining diversity of settings and locations for care, these providers represent an important niche in the child care market.

### **Methods**

Because the quality of caregiving in family child care homes was assessed recently as a part of the Early Childhood Initiative (ECI, now called Invest in Children), data from the prior evaluation along with ongoing assessment data provided by Starting Point was used to describe the quality of caregiving provided by home-based providers in Cuyahoga County.

As a part of the previous evaluation study, quality data from a stratified random sample of 95 family child care homes were collected during 2001 and 2002 (Pearlmutter, Grayson, & Fernando, 2005). Quality was assessed using the *Family Day Care Rating Scale* (FDCRS) and the *Caregiver Interaction Scale* (CIS). The FDCRS, a measure similar to the ECERS-R but developed specifically for use with FCCH, includes 32-items and assesses characteristics of the physical environment as well as personal care routines, provider needs, and the language and reasoning, social, and learning experiences of the children in care. As with the ECERS-R, scores range from 1 (inadequate) to 7 (excellent) (Harms & Clifford, 1989). The *Caregiver Interaction Scale* (Arnett, 1989) specifically rates the quality of a provider's interactions with children on a scale from 1 (behavior is "not at all evident") to 4 (behavior is "very much" evident). The CIS includes 26-items across four subscales: sensitivity (the provider is warm, attentive, engaged), harshness (the provider is critical, threatens children, is punitive), detachment (the provider is minimally interactive, minimally interested in the children) and permissiveness (provider ignores misbehavior or minimally supervises the children in her care). Observers were trained to an inter-rater agreement standard of at least 85% exact agreement.

In addition to the external evaluation data, administrative data were provided by Starting Point, the regional child care resource and referral agency. The administrative data included FDCRS scores for providers who participated in the Care for Kids quality enhancement program. As a part of Care for Kids, providers received an initial FDCRS assessment visit that was used by a technical assistant to develop strategies to help child care providers improve caregiving. Home-based providers were assessed every six months after the initial assessment as long as they continued to participate in Care For Kids.

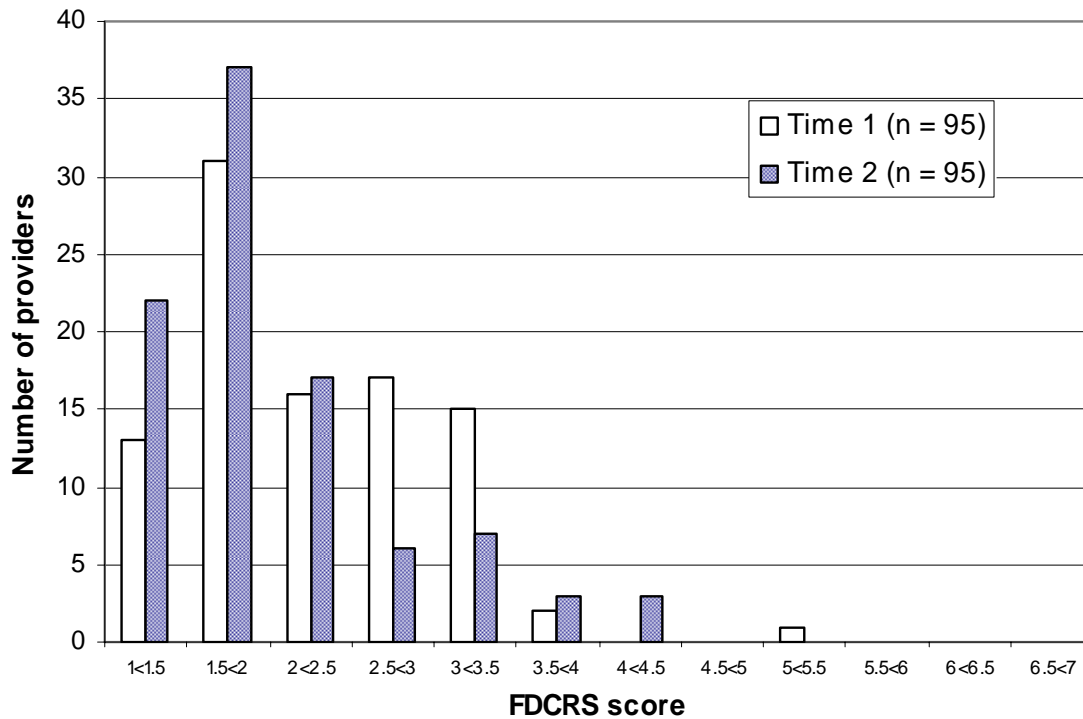
## Findings

The findings are summarized according to the two aspects of the study: (1) the review of extant data on home-based quality from a previous research study, and (2) data from administrative sources used to guide technical assistance and assess provider performance.

### Evidence from Prior Study (2001-2003)

The earlier study of FCCH included observational data on a voluntary sample of home-based providers enrolled in technical assistance. The study was specifically intended to examine whether the intervention was related to the quality of care in the sample of family child care homes. The data also provide a snapshot of the quality of care in the sample at two points in time (2001 and 2002-2003). The overall quality of child care in the sample of 95 family child care homes as rated in the FDCRS was in the poor range with an average rating of 2.28 in 2001 and 2.05 in 2003. Figure 11 shows the distribution of *FDCRS* scores for the 95 family child care providers at both time points.

**Figure 11. Quality Scores in Sample of Homes at Two Time points**



Source: Observer data. Analysis of data by the Center on Urban Poverty and Community Development.

Scores for specific subscales of the *FDCRS* are shown in Table 12. A review of the subscales that pertain to the direct provision of child care (i.e., all subscales except Adult Needs), reveals that the subscale with the highest score is Social Development. Three items comprise this subscale: Tone, Discipline, and Cultural Awareness. Scores from both observations suggest that



while this area is stronger, the overall quality of the social environment for children is poor. The subscale with the lowest scores is Basic Care. Items in the Basic Care subscale focus on the provider’s attention to children’s diapering, safety, meals and snacks, naps and resting, and health.

**Table 12. Subscale Scores from the FDCRS at Two Time points**

	Time 1 Mean (SD) (n = 95)	Time 2 Mean (SD) (n = 95)
<b>FDCRS Subscales</b>		
Space & Furnishings	2.25 (0.70)	2.05 (0.69)
Basic Care	1.84 (0.78)	1.50 (0.66)
Language & Reasoning	2.50 (0.96)	2.42 (1.12)
Learning Activities	2.31 (0.91)	2.03 (0.82)
Social Development	2.78 (1.10)	2.57 (1.19)
Adult Needs	3.31 (1.25)	3.14 (1.19)

Source: Observer data. Analysis of data by the Center on Urban Poverty and Community Development.

Overall, the scores showed that the quality of care was poor in this sample of homes and the Basic Care subscale remained the area of lowest quality. Approximately 1% (1 of 95 homes) of the sample scored in the Good range on the FDCRS quality measure.

A primary criterion for many parents looking for “good child care” is that the caregiver be warm and caring (Kontos, Howes, Shinn & Galinsky, 1995). Caregivers who are neither harsh nor detached but are instead sensitive to the needs of the children meet this criterion. It is these interaction qualities between providers and children that the *CIS* assesses. Observers rated aspects of provider sensitivity, harshness, detachment, and permissiveness on a 4-point scale where 1 corresponds to “not at all (true)”, 2 corresponds to “somewhat (true)”, 3 corresponds to “quite a bit (true)”, and 4 corresponds to “very much (true)”.<sup>11</sup>

Table 13 presents the *CIS* ratings from the two observations. At both time points, results from the *CIS* reveal that providers as a group were “somewhat” sensitive in their interactions with children ( $M=2.85$  at time 1 and  $2.68$  at time 2). Subscale scores suggest that providers were somewhat low in sensitivity; fairly low in harshness, i.e., not overly harsh; moderately low in detachment; and moderately low in permissiveness.

<sup>11</sup> Higher scores on the sensitivity subscale and low scores on the harshness, detachment, and permissiveness subscales indicate better quality interactions. For the *CIS* total score, scores on the latter three subscales are reversed so that higher total scores represent better interactions.

**Table 13. Quality of Provider Interactions with Children Based on the Caregiver Interaction Scale**

	Time 1 Mean ( <i>SD</i> ) ( <i>n</i> = 95)	Time 2 Mean ( <i>SD</i> ) ( <i>n</i> = 95)
<b>C/S Total Score (Range 1.0-4.0)</b>	2.85 (.46)	2.68 (.52)
<b>C/S Subscales</b>		
Sensitivity	2.32 (.62)	2.07 (.65)
Harshness	1.68 (.52)	1.72 (.64)
Detachment	1.99 (.74)	1.96 (.71)
Permissiveness	1.96 (.56)	1.93 (.68)

Source: Observer data. Analysis of data by the Center on Urban Poverty and Community Development.

Evidence from Administrative Data

The second data source for the quality of care in home-based settings was administrative data maintained by the regional resource and referral agency, Starting Point. As part of its quality enhancement efforts Starting Point recruited and enrolled family child care providers in a voluntary technical assistance program (called Care For Kids). Home-based providers in this program were offered in-home technical assistance visits and periodic quality assessment visits using the FDCRS. Limited data are available on the characteristics of the home-based providers for which FDCRS assessments were collected over the period 2001-2006 (see Table 14). Assessment data are available on 600 to nearly 800 FCCHs each year.

Approximately three-quarters of these homes were located in the City of Cleveland and one-fifth were in the inner –ring suburbs. Approximately, 85% of providers possess at least a high school diploma or GED. For more than one-half of providers this was their highest education level, while one-quarter had at least some post-secondary training. In regard to the care provided by these homes, approximately two-thirds offered only full-time care, and one-fifth offered full-time and part-time. Additionally, substantial subgroups offered before school (15-20%) and after school (20%) care. The mean and median years as a certified family child care provider have increased over time reflecting the increasing tenure of the homes participating in the quality enhancement program, from a median of 1.0 years in 2001 to a median of 6.1 years in 2006.

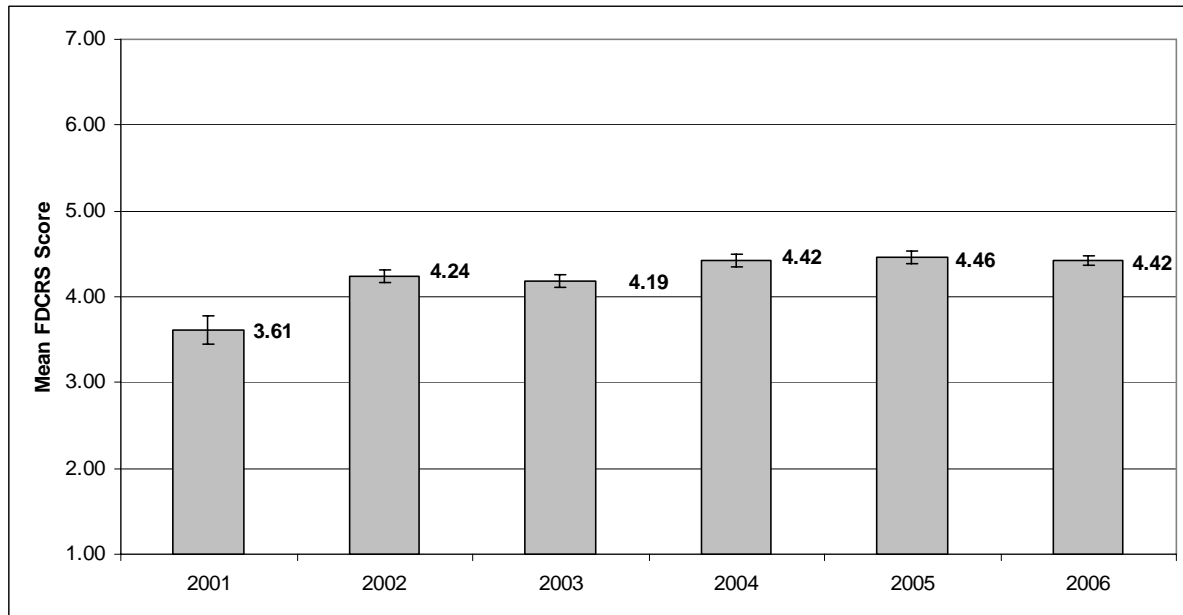
**Table 14. Characteristics of Home-Based Providers involved in Quality Enhancement (with assessment scores available), 2001-2006**

	2001	2002	2003	2004	2005	2006
N	784	675	724	666	666	601
Provider Location						
City of Cleveland	77.0%	76.1%	80.6%	82.5%	74.2%	74.2%
Inner ring suburbs	18.9%	20.3%	16.3%	16.6%	22.1%	21.8%
Outer ring suburbs	3.8%	3.6%	3.1%	1.0%	3.8%	4.0%
Provider Education Level						
< High School	1.3%	1.8%	1.8%	1.6%	0.9%	1.3%
Some High School	12.1%	12.3%	13.1%	13.5%	14.9%	13.1%
High School diploma or GED	55.4%	55.7%	57.7%	59.3%	57.8%	54.7%
Some College	25.9%	25.6%	22.4%	20.1%	20.6%	19.8%
Associates Degree	2.6%	2.2%	2.5%	2.8%	3.4%	3.3%
Bachelors Degree	2.2%	1.8%	1.5%	1.9%	1.8%	1.8%
Graduate School	0.3%	0.3%	0.6%	0.2%	0.2%	0.5%
Shifts Offered (not mutually exclusive)						
Full-time and part-time	21.7%	16.3%	18.1%	18.3%	18.8%	19.2%
Full-time only	57.1%	63.7%	63.1%	64.4%	63.9%	63.6%
Part-time only	0.1%	0.2%	-	-	-	-
24 Hour care	2.4%	0.9%	0.4%	0.2%	0.2%	0.2%
Before school	19.8%	14.4%	15.6%	15.9%	15.5%	15.5%
After school	22.4%	17.8%	19.8%	19.3%	18.3%	18.2%
Number of years as certified provider						
Mean	1.8	2.8	4.0	5.2	6.1	6.9
Median	1.0	2.0	3.1	4.1	5.0	6.1

Figure 12 summarizes the mean FDCRS rating scores for homes enrolled in Care For Kids that received assessment visits. This figure suggests that there has been a modest increase in the mean quality scores over time among the population of family child care providers. This is particularly true between 2001 and 2002, with very stable scores over the years 2004-2006.

When the underlying data were examined in order to follow the experiences of individual home-based providers enrolled in 2006, two observations emerged. First, among homes that were continuously enrolled in the quality enhancement program for five or six years (n=225), the FDCRS scores increased approximately 0.8 points (from 4.0 to 4.8). This compares to gains of approximately 0.35 on the FDCRS among homes that were enrolled for two to four years (n=135). Second, across home based providers approximately half of the gains in the FDCRS scores occurred during the first year of participation in quality enhancement. These results suggest that sustained participation in quality enhancement activities is associated with increased ratings of quality using the FDCRS.

**Figure 12. Mean Quality Scores (FDCRS) of Home-Based Providers by Year (providers enrolled in quality enhancement program only)**

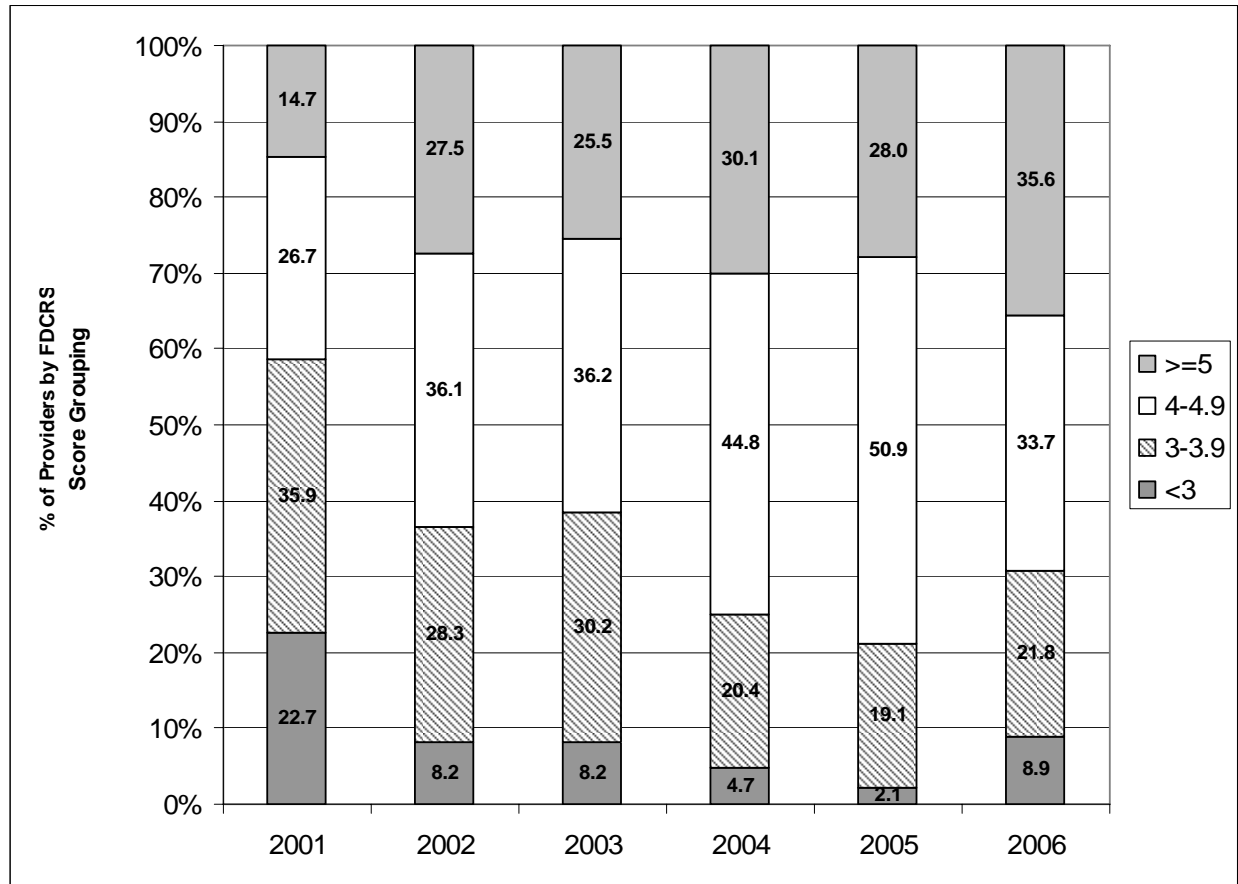


It must be noted that these FDCRS scores are substantially higher than the scores found in the research study described in the previous section (approximately 4.2 versus 2.2). The divergence in scores between the two sources is a concern and may be due to a range of factors, two of which are highlighted here. First, the observational ratings conducted by the technical assistance providers were done as a diagnostic rather than as a truly objective assessment of quality. Thus, these ratings may be somewhat inflated compared to the ratings collected for the research study. Second, providers participating in the quality enhancement program were likely not representative of the general population of providers due to a variety of issues.

The full distribution of FDCRS scores for each year is shown in Figure 13. This clearly shows the growing proportion of homes in “good” range (scoring 5 and above) and a declining proportion scoring below 3. The figure also partially explains how the mean FDCRS scores have remained stable in 2006. Even though the percentage of homes with scores above 5 has increased, so has the share of homes with scores under 3, somewhat balancing each other in the calculation of the mean scores.

The distribution of FDCRS scores is of note due to a practice used by the regional child care resource agency to refer homes scoring at 5 or above for a verification assessment. Home-based providers who reached a 5 on the FDCRS were designated as “gold star” providers and qualified for an increase in their child care voucher per diem amount. In order for this to occur, a home’s quality score on the FDCRS had to be verified by an independent early care consultant hired by the regional agency. Given this secondary procedure, the growing proportion of homes scoring in the “good” range is likely reflecting reality, rather than simply score inflation. In addition, over time the technical assistance providers likely improved their scoring practices on the FDCRS, which would also contribute to some increases in the reliability of these scores. Despite this, these scores should be seen as illustrative of a possible improvement rather than as clear evidence that quality was in fact improved.

**Figure 13. Distribution of Quality Scores (FDCRS) of Home-Based Providers by Year (providers enrolled in quality enhancement program only)**



**Conclusions**

- In general the data suggest that the quality in family child care in Cuyahoga County has increased slightly in recent years.
- The data available on higher quality providers ( $\geq 5$  on the FDCRS) are likely more reliable given the verification procedure used for this group by Starting Point.
- Though many home-based providers struggle with providing high quality care, the existing population of higher quality homes is sufficient (~200) to provide a basis for inclusion of the setting in universal pre-k planning.

## References

- Arnett, J. (1989). Caregivers in child care centers: Does training matter? *Journal of Applied Developmental Psychology, 10*, 541-552.
- Bureau of Labor Statistics. (May 2006). *National employment and wage data from the Occupational Employment Statistics*. Available at: <http://www.bls.gov/news.release/ocwage.t01.htm>
- Burts, D. C., Hart, C. H., Charlesworth, R., DeWolf, D. M., Ray, J., Manuel, K., & Fleege, P. O. (1993). Developmental appropriateness of kindergarten programs and academic outcomes in first grade. *Journal of Research in Childhood Education, 8*, 23-31.
- Buyse, V., & Wesley, P. W. (2005). *Consultation in early childhood settings*. Baltimore: Paul H. Brookes.
- Child Care Services Association (2003). *Working in child care in North Carolina*. Available at [http://www.fpg.unc.edu/~NCNR\\_Assessment/](http://www.fpg.unc.edu/~NCNR_Assessment/)
- Clifford, R. M., Barbarin, O., Chang, F., Early, D. M., Bryant, D., Howes, C., Burchinal, M., & Pianta, R. (2005). What is pre-kindergarten? Characteristics of public pre-kindergarten programs. *Applied Developmental Science, 26*(3), 126-143.
- Clifford, R., Rossbach, H., Burchinal, M., Lera, M., & Harms, T. (2002). Factor structure of the early childhood environment rating scale (ECERS): An international comparison.
- Curbow, B., Spratt, K., Ungaretti, A., McDonnell, K., & Breckler, S. (2000). Development of the Child Care Worker Job Stress Inventory. *Early Childhood Research Quarterly, 15*(4), 515-536.
- Early, D. M., Bryant, D., Pianta, R., Clifford, R., Burchinal, M., Ritchie, S., et al. (2006). Are teachers' education, major, and credentials related to classroom quality and children's academic gains in prekindergarten? *Early Childhood Research Quarterly, 21*, 174 – 195.
- Early, D. M., Maxwell, K. L., Burchinal, M., et al. (2007). Teachers' education, classroom quality, and young children's academic skills: Results from seven studies of preschool programs. *Child Development, 78*(2), 558-580.
- Fischer, R., Nelson, L., Mikelbank, K., & Coulton, C. (2006). *Cuyahoga County Early Care & Education Capacity Report*. Cleveland, OH: Mandel School of Applied Social Sciences, Case Western Reserve University. October.
- Harms, T., & Clifford, R. M. (1989). *Family day care rating scale*. New York: Teachers College Press.
- Harms, T., Clifford, R. M., & Cryer, D. (1998). *Early Childhood Environment Rating Scale: Revised Edition*. New York: Teachers College Press.

- Kontos, S., Howes, C., Shin, M., & Galinsky, E. (1995). *Quality in family child care and relative care*. New York: Teachers College Press.
- Minnesota Department of Human Services. (June 2007). Child care workforce in Minnesota: 2006 statewide study of demographics, training and professional development summary. Available at: [www.wilder.org/download.0.html?report=1985&summary=1](http://www.wilder.org/download.0.html?report=1985&summary=1)
- National Association for the Education of Young Children (NAEYC). Accessed August 2007 at <http://www.naeyc.org/>
- Pearlmutter, S., Grayson, L., & Fernando, M. (2005). Increasing capacity and enhancing quality in Cuyahoga County's family child care system. Ch. 5 in Cuyahoga County Early Childhood Initiative Evaluation: Phase II Final Report. Center on Urban Poverty & Community Development, Case Western Reserve University (Cleveland, OH).
- Schaefer, E.S. & Edgerton, M. (1985). Parent and child correlates of parental modernity. In I.E. Sigel (Ed.), *Parental belief systems – The psychological consequences for children*, (pp.287-317). Hillsdale, NJ: Erlbaum.
- Smart Start Team (2003). *North Carolina Needs and Resources Assessment*. Available on-line at [http://www.fpg.unc.edu/~ncnr\\_assessment/](http://www.fpg.unc.edu/~ncnr_assessment/)
- U.S. DHHS (May 2003). *Head Start FACES 2000: A Whole-Child Perspective on Program Performance, Fourth Progress Report*.
- Whitebook, M., Sakai, L., & Howes, C. (1997). *NAEYC accreditation as a strategy for improving child care quality: An assessment. Final report*. Washington, DC: Center for the Child Care Workforce.
- Whitebook, M., Sakai, L., Kipnis, F., Lee, Y., Bellm, D., Almaraz, M., & Tran, P. (2006). *California early care and education workforce study: Licensed child care centers. Statewide 2006*. Berkeley, CA: Center for the Study of Child Care Employment.