Essex Infant/Toddler Quality Improvement Project (EQUIP)

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Introduction

Acknowledgements

We would like to express our deepest appreciation to all those who provided us the opportunity to complete this report. The study would not have been possible without the joint efforts of many dedicated individuals and organizations.

We are grateful to the members of the Advisory Council and the Regional Stakeholder Group who assisted with the design of the study and provided their expertise and guidance through out the project performance period and with revisions to the final report.

We wish to acknowledge Programs for Parents, the Essex County Child Care Resource and Referral agency for the collaboration and guidance provided in all aspects of the overall Essex Quality Improvement Project.

Furthermore, we would also like to acknowledge with much appreciation the participation of staff from Center-based and Family Child Care Providers programs who completed our surveys and gave us the permission to observe their work.

We are forever indebted to the centers that opened their doors to our data collectors and consultants who conducted our meetings; to the parents of the young children of Essex County and all the local Early Childhood professionals who participated in the focus groups.

Background

Substantial attention has been given to the education of 3- and 4-year-olds in New Jersey. Less attention has been devoted to understanding and supporting programs serving infants and toddlers in the state. Yet, recent learning about brain development has established its importance in the first three years of life. Moreover, the need for positive early experiences and relationships with caregivers to foster healthy development laying the foundation for later school achievement, social and emotional development, and even adult physical health. For example, the National Institute for Child Health and Development Study of Early Child Care found that "Higher quality care predicted higher cognitive–academic achievement at age 15, with escalating positive effects at higher levels of quality" (Vandell et al., 2010). Other research supports this finding and points to the importance of the quality of early care for disadvantaged children and the potential for high-quality infant/toddler care to buffer children against "toxic stress" and, conversely, for low-quality care to harm cognitive and socio-emotional development (Shonkoff, 2011).

There are more than 11 million infants and toddlers under three years old in the United States and 325,656 of them live in New Jersey. Sixty-five percent of New Jersey mothers with infants are in the labor force and 11,758 New Jersey infants and toddlers receive Child Care Development Fund (CCDF) support each month (U.S. Census Bureau, 2011).

Purpose of this Study

The goal of this study is to inform local and state stakeholders about the quality of infant/toddler care in East Orange, Irvington, Newark and Orange, New Jersey.

The Essex Infant/Toddler Quality Improvement Project (EQUIP) was part of a three tiered quality improvement project that NIEER, in collaboration with Programs for Parents, has

been implementing in the Essex County community. EQUIP was designed to have strong community participation, and was composed of three components: the community engagement, a study of quality and mini-grant distribution for quality improvement.

An advisory council developed the research questions for the quality study. The key questions addressed are as follows: What is the quality of infant/toddler care overall in Essex County? What is the quality of child care centers? What is the quality of child care homes? What is the quality of infant/toddler care in each of the four towns? What are some common strengths and weaknesses of infant/toddler care revealed by the quality study?

Family home child care is an important sector for infant/toddler care. Therefore, we have included in the project family child care providers who are independent small business owners offering child care in their homes for up to five children below the age of six years old. Depending on the ages and number of children cared for in the home a provider assistant may be required. Any home that provides paid care for more than five children must be licensed as a child care center. Registered family child care providers have their homes inspected with follow-up visits and attend trainings offered by Programs for Parents. Registered providers attend a pre-training of eight hours, and CPR training is required prior to issuance of a certificate of registration, which is good for three years. Within the three years, registered providers must attend 20 hours of in-service training. Approved providers are not registered and provide care for up to five children, two unrelated children or two related siblings. The providers and anyone in their household over the age of 14 years old receive a background check and their home is inspected.

This report is organized as follows: First, a methodology section briefly describes the sample selected, with basic demographic information on the classrooms and caregivers with quality observations. Next we present the study's findings regarding the level of quality of the

infant/toddler programs in Essex County. We will compare this quality to quality reported in other studies. We explore these findings with further analysis of specific characteristics of the classrooms and homes observed. Finally, we present recommendations and overall conclusions from the study.

Methods

Sample

In total there are 102 centers (51 Newark, 23 Irvington, 19 East Orange, and 9 Orange), 190 Registered homes (126 Newark, 23 Irvington, 35 East Orange, and 6 Orange), and 676 Approved homes (463 Newark, 67 Irvington, 106 East Orange, and 40 Orange) in the four municipalities of Essex County. At the start of data collection for EQUIP, a letter explaining the project with an enclosed consent form was sent out to 100 randomly selected center directors and 100 family child care providers notifying them about the study. Then, NIEER staff contacted them to follow up on the letter and schedule the classroom or home observation. Between spring 2012 and spring 2013, 53 centers (26 Newark, 15 Irvington, 10 East Orange, and 2 Orange) and 63 homes (Registered: 22 Newark, 7 Irvington, 9 East Orange, and 3 Orange; Approved: 16 Newark, 2 Irvington, 4 East Orange, and 0 Orange) consented to participate in the Essex Infant/Toddler Quality Improvement Project (EQUIP). For center-based programs, one or more classrooms were observed at each site (41 Newark, 25 Irvington, 21 East Orange, and 4 Orange). Each classroom and home was observed for three to four hours by a trained and reliable observer. The data was then checked for inconsistencies and entered into the SPSS database for analysis.

Demographics

We observed quality for 91 teachers caring for a minimum of 975 children (infants and toddlers) and 89 of them completed surveys. We observed quality for 63 family child care providers, and 62 completed surveys. The demographic breakdown of teachers and providers can be seen in Table 1.

Table 1. EQUIP Demographics of Infant/Toddler Teachers and Family Child Care Providers

Selected Demographic Information		**Infant/Toddler Teachers** N %	**Family Child Care Providers** N %
Education	High School or Less	24 27.00%	32 50.80%
	Some College/No Degree	20 22.50%	18 28.60%
	CDA	25 28.10%	1 1.60%
	College Degree	20 22.50%	9 14.30%
	Missing	0 0.00%	3 4.80%
Ethnicity	African American/Black	61 68.50%	41 65.10%
	Asian	1 1.10%	0 0.00%
	Hispanic/Latino	24 27.00%	20 31.70%
	Other	3 3.40%	1 1.60%
	Missing	0 0.00%	1 1.60%
Income	< $10,000	8 9.00%	27 42.90%
	$10,001 to $20,000	37 41.60%	15 23.80%
	$20,000 to $30,000	28 31.50%	9 14.30%
	">$30,001"	4 4.50%	4 6.40%
	Missing	12 13.50%	8 12.70%
Age Group	18~31	23 25.80%	5 7.90%
	32~45	28 31.50%	13 20.60%
	46~59	25 28.10%	36 57.10%
	60+	11 12.40%	7 11.10%
	Missing	2 2.20%	2 3.20%
Language	English Only	61 67.00%	41 65.10%
	Spanish Only	3 3.30%	12 19.00%

	English and Other	23 25.30%	9 14.30%
	Other Language Only	2 2.20%	0 0.00%
	Missing	2 2.20%	1 1.60%

Data Collection

For the quality evaluation, we employed two widely used observational measures of quality with demonstrated validity and reliability, the Infant-Toddler Environment Rating Scale--Revised (ITERS-R) and the Family Child Care Environment Rating Scale—Revised (FCCERS-R) (Harms, Cryer & Clifford, 2006). The ITERS-R and FCCERS-R are familiar in the field, and their reliability and validity are well established. High scores on these measures of quality are predictive of improvements in child development (Layzer & Goodson, 2006; Mashburn et al., 2008; Peisner-Feinburg et al., 2001). Of particular importance is the nature of observed interactions between teachers/providers and children as these have proven to be particularly predictive of child outcomes in recent research. Ratings on these two instruments range from 1 to 7, categorized as follows: 1=inadequate; 3=minimal; 5=good; 7=excellent.

In addition we collected Lead Teacher Surveys and Home Provider Surveys that provided basic demographic information on the caregivers that we observed. This information, provided in Table 1, provides a basic description of providers and allows us to investigate relationships between provider characteristic and quality ratings.

Observer Training

NIEER's Project Coordinator hired and trained all observers for this project. The observers hired had specific expertise and/or experience in early childhood education or a closely related field. Initial training in administering the observation protocols is described below.

- A mandatory full day training at Rutgers University in New Brunswick where the observers learned about the project, the instruments, the protocol and the nuts and bolts of data collection.
- The successful completion of an online Human Subject course in which the observer acquired at minimum an 80% passing score in order to receive the Human Subject Certificate.
- An onsite and guided data collection training focused on the ITERS-R and FCCERS-R, lead teacher and provider interviews, and the practical aspects of data collection. The first reliability observation was with an experienced and reliable observer by their side, where the observer mostly learned about scoring.
- Three separate observations of infant/toddler classrooms and/or homes alongside a trained observer to establish reliability. The scores of the observer-in-training and the reliable observer are then compared, item by item. The true score for each item is determined through discussion but is generally that of the trained observer. A reliability score for the trainee is computed by determining how many exact matches by item she/he has with the true score and how many are only one point above or below the true score. The trainee must show 80 percent reliability or above and no less than 65 percent exact agreement.

Observation Protocol

The following protocol was developed for all observations conducted. Observations should last no less than three hours and include a greeting, one meal or snack, several diapering sessions, and nap time. Observers determine if it is likely to be a typical day to do an observation by asking the center director or family child care provider if there will be field trips, assemblies

or planned absences when scheduling. For the center-based observations, the observers do not reveal which classroom will be observed. Observations are conducted only when the regular classroom teacher is present. Only the lead teacher completes the NIEER Lead Teacher Survey form; assistant teachers are not noted in the (demographic) data but are included in analysis through our observation of their interactions with the children, the parents and the lead teacher. Note some programs have co-teachers and no assistant teacher; in those cases only one teacher completes the NIEER Lead Teacher Survey form. The observers introduce themselves to the classroom or family child care provider staff and briefly explain that they will try their best not to disturb the routines of their day in order to observe what a typical day is like. Observers try to be as unobtrusive as possible, and limit conversations with teachers, providers, and children to minimize the impact of their presence.

Analysis

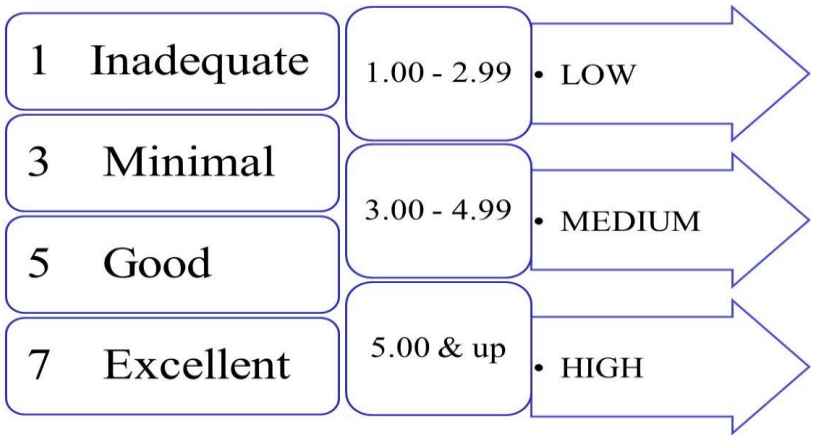
The data was analyzed according to provider type (center or home), ages served, and location of the program. In addition, the level of quality for centers was examined by whether center was public or private and how it was funded by the state in the past. For homes, we examined quality depending on whether the home was registered or approved. The data was looked at according to the ages served in the classroom or home and was grouped as either an infant group (birth to 12 months), a toddler group (13 months and up), or a mixed age group. Level of quality was also examined separately for each of the four cities in Essex County, Newark, Irvington, East Orange, and Orange.

Results

The total ITERS-R and FCCERS-R score is the average of the scores on the 39 and 38 items rated, respectively. A rating of "1" indicates *inadequate* quality, "3" indicates *minimal*

quality, “5” indicates *good* quality, and “7” indicates *excellent* quality. Based on the 91 classrooms for which the ITERS-R was completed, the aggregate average ITERS-R score is 4.09. This ITERS-R score indicates that the classrooms in these four cities are operating at the *minimal* to *good* level. Based on the 41 homes for which the FCCERS-R was completed, the aggregate average FCCERS-R score for registered family child care providers is 3.24 and for approved family child care providers it is 2.37. This FCCERS-R score indicates that these homes in these four cities are operating at the *low* to *minimal* level. For the purpose of this study, the ITERS-R and FCCERS-R scores will be grouped as follows: Low range (1.00 - 2.99), Medium range (2.00 - 4.99) and High range 5.00 and up as indicated in Figure 1 below.

Figure 1. EQUIP Score Ranges



Scores for the seven subscales as well as the individual item level scores are presented in the report for the classrooms and homes that participated in EQUIP.

Overall Results for Center based Programs

Table 2. EQUIP ITERS-R Overall Subscale Level Scores

ITERS-R Subscales	Overall Mean N=91
Space & Furnishings *This subscale addresses the areas of indoor and outdoor space, room arrangement, organization, display, furnishings and equipment.*	3.93
Personal Care Routines *This subscale addresses practices around daily routines like greeting and departure, meals, naptime, and toileting as well as health and safety practices.*	3.46
Listening & Talking *This area addresses the classroom's formal and informal communication, language and reasoning opportunities.*	4.08
Activities *This subscale looks at the learning opportunities in each of the areas of the classroom including fine motor, art, music/movement, blocks, sand/water, dramatic play, nature/science, math/number, use of video/computer, and diversity.*	3.45
Interactions *This area addresses supervision of children, discipline, staff child interactions, and interactions among children.*	5.13
Program Structure *This area addresses classroom operations and schedule, including groupings, transitions and flexibility.*	4.06
Parents & Staff *This area addresses the program's supports for both parents and staff, including opportunities to evaluate and communicate child-related information, family involvement and professional development opportunities.*	4.08
Total Overall Average Score by Subscale	**4.09**

Table 3. EQUIP ITERS-R Overall Average by Item

ITERS-R Items	Overall Mean N=91
1. Indoor space	4.26
2 Furniture for routine care & play	4.60
3. Provision for relaxation & comfort	3.10
4. Room arrangement	4.26
5. Display for children	3.42
6. Greetings/departing	5.28
7. Meals/snacks	3.01
8. Nap	2.26
9. Diapering/toileting	2.44
10. Health practices	2.77
11. Safety practices	4.02
12. Helping children understand language	4.27
13. Helping children use language	4.47
14. Using books	3.51
15. Fine motor	3.93
16. Active physical play	3.21
17. Art	4.68
18. Music/movement	3.36
19. Blocks	3.51
20. Dramatic play	3.54
21. Sand and water play	3.59
22. Nature/science	2.78
23. Use of TV, video, and/or computer	2.46
24. Promoting acceptance of diversity	3.22
25. Supervision of play and learning	5.41
26. Peer interaction	4.90
27. Staff-child interaction	5.48
28. Discipline	4.75
29. Schedule	4.36
30. Free play	3.74
31. Group activities	4.15
32. Provisions for children with disabilities	4.00
33. Provisions for parents	5.15
34. Provisions for personal needs of staff	3.95
35. Provisions of professional needs of staff	4.33
36. Staff interaction and cooperation	5.56
37. Staff continuity	5.19
38. Supervision and evaluation of staff	5.47
39. Opportunities for professional growth	4.58
Total Average Score	**4.09**

ITERS-R Explanation of Findings

1. Space and Furnishings *(Table 2 & 3)*

The *Space and Furnishings* subscales takes into account the size and the arrangement of the physical space where the care is provided. For the most part, the indoor space size was adequate enough for the number of children in care and so was the furnishing. *Display for children* and *provision for relaxation and comfort* were two specific items that contributed to lowering this score.

2. Personal Care Routines *(Table 2 & 3)*

The *Personal Care Routines* subscale is the second lowest scored subscale in this study with an average score of 3.46. This score is heavily weighted by aspects of hygiene practices by both the children and the staff. The lowest scored item was *Nap* with an average score of 2.26 across the cities. This subscales low score is consistent with other studies that also used the ITERS-R (Marshall, et al., 2009 = 3.53, Baby Faces in 2009 (EHS) in Vogel et al., 2011 = 3.1). We cannot stress enough the importance of hand washing for this subscale. In fact, three items in this subscale can be scored a 1.00 if proper hand washing of both caregiver and child is not observed. Other basic sanitary procedures such as: sanitizing eating surfaces, infection control and some safety practices, such as during *Nap,* have also contributed to lower this score.

3. Listening and Talking *(Table 2 & 3)*

The *Listening and Talking* subscale suffered from the lack of reading materials in the classroom. The score for *Using books* was a 3.51. The classrooms that had enough children's books reading materials were either not accessible, not appropriate or varied, or simply missing.

4. Activities *(Table 2 & 3)*

The *Activities* subscale obtained the lowest score in this study with an average score of 3.45. *Use of TV and/or video* was the lowest scored item with a 2.46. Several factors contributed to this subscales low score: the lack of sensorimotor play, essential to the infant/toddler learning experience ((Prairie, 2005). The lack of opportunity for active physical play, sand and water play, nature/science, inappropriate use of television for children under 24 months, and the lack of promotion of cultural awareness. Most programs did not have a space for outdoor play and among those that have a space some mostly did not use it during the winter and spring. Another issue made apparent was the improper use of music which at times was on too loud or was improper in language. There were instances when age appropriate music was used but not necessarily as a teaching tool that could help to promote language, ease transition times, or to enhance physical activities/active play even indoors.

5. Interactions *(Table 2 & 3)*

The *Interactions* subscale was the only subscale that scored in the high range with a mean of 5.13. The highest score for this item was a 5.63 (East Orange) and the lowest a 4.50 (Irvington). This is consistent with other studies (Marshall et al., 2009). The high score in the *Interactions* subscale meant the care provided for those items were at a *good* to *excellent* level. As a matter of fact, *Supervision of play and learning, Peer interactions, Staff-child interactions* and *Discipline* were all scored close to above a 5.00 in the majority of the cities.

6. Program Structure *(Table 2 & 3)*

The most significant trends observed in *Program Structure*, with an average score of 4.06, included the lack of individualized care, the lengthy wait time between routines, such as toddlers waiting too long for lunch or snack, and sleepy children being over stimulated so

everyone can take their nap together. Lack of individualization of care can refer to everyone in the classroom being changed at the same time and participating in group activities at the same time. Overall, most programs were too structured for infants and toddlers.

7. Parents and Staff *(Table 2 & 3)*

The *Parents and Staff* subscale scored the second highest in the overall study, with a mean of 4.88. It's important to note that this item mostly relies on teacher's report. A closer look at the score speaks volumes about the teachers' satisfaction in the field. Are the teachers reporting discontentment with how their job meets their personal needs and the kind of opportunities they have for growth?

EQUIP ITERS-R Overall Distribution of Scores

Figure 2. EQUIP ITERS-R Overall Distribution of Scores

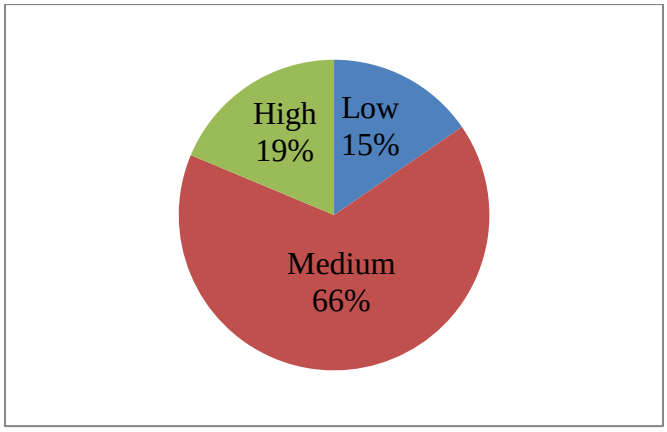


Figure 2 shows that the overall average scores by item revealed that 19 percent of the teachers were rated in the high range, 66 percent were in the medium range, and 15 percent in the low range. By ITERS-R standards, 15% of the teachers observed for this study were providing *inadequate* to *minimal* care to children.

EQUIP ITERS-R Results by Specific Characteristics

Several other studies have shown that staff characteristics are associated with program quality (Marshall et al., 2009, Hayes et al. 1990; Howes, Smith, and Galinsky 1995). To better understand quality in the classroom we looked at the following lead teacher attributes to uncover their association with the score level: education level, teaching experience, income, language, ethnicity, and age. Furthermore, we looked at the classroom type and centers funding sources, noted respectively in Tables 4 and 5.

Results by Classroom Type

Table 4. EQUIP ITERS-R Subscale Scores by Classroom Type

ITERS-R Subscales	Class Type*		
	Infant	Toddler	Mixed
Space & Furnishings	3.05	4.11	3.70
Personal Care Routines	2.90	3.83	2.83
Listening & Talking	3.75	4.29	3.73
Activities	2.18	3.88	2.80
Interaction	5.06	5.20	5.03
Program Structure	3.33	4.37	3.56
Parents & Staff	4.50	5.08	4.55
Total Average Score	**3.46**	**4.35**	**3.67**

It appears that the quality of care for infants is the lowest and the quality is also lower in the mixed age classroom compared to the quality in the toddler classrooms. When we take a closer look at the subscales we find that the scores are lower for infant care in almost all the items. Subscales such as *Interactions* and *Listening & Talking* that have the higher scores are not the most important for achieving high-quality infant care. The fact that those subscales (*Interactions* and *Listening & Talking*) scored the highest and the most important subscales

(Activities and Personal Care Routines) for achieving high-quality infant care scored the lowest could be related to the lack of individualized care.

* For the purpose of this study, class type refers to children age groups categorized as follows: Infant: from 0 to 12 months old; Toddler: 13 months old and up; Mixed: both groups.

Percentage by Classroom Type

Table 5. EQUIP ITERS-R Percentage by Class Type

Class Type	**% Low** 1.00 - 2.99	**% Med** 3.00 - 4.99	**% High** 5.00+
Infant	25	75	0
Mixed	20	73.3	6.7
Toddler	12.3	61.4	26.3

Class types with higher percentages of classrooms that scored low and lower percentages of classrooms that scored high have better ITERS-R scores *(Table 5)*. This is the case for the infant classrooms that scored the lowest in the overall study. The opposite is also true: class types with lower percentages of classrooms that scored low and higher percentages of classrooms that scored high have higher ITERS-R scores. This is the case for the toddler classrooms that have the highest ITERS-R scores in the overall study, with 12.3 percent of the toddler classrooms scoring low and 26.3 percent scoring high.

Results by Funding Sources

Table 6. EQUIP ITERS-R Subscale Scores by Funding Source

ITERS-R Subscales	Funding Definition								
	Federal agency including Early Head Start & other Federal Funds			State Funding including Abbott Funds			Private		
	N*	Mean	SD	N*	Mean	SD	N*	Mean	SD
Space & Furnishings	16	4.59	.52	18	4.21	.63	57	3.66*	.95
Personal Care Routines	16	5.16***	.77	18	3.56	.89	57	2.95	1.08
Listening & Talking	16	5.04***[a]	.98	18	4.33	1.13	57	3.74	1.22
Activities	16	4.57	.68	18	3.86	1.15	57	3.01**	1.07
Interaction	16	6.06**[a]	.59	18	5.18	1.09	57	4.86	1.36
Program Structure	16	4.92**[a]	1.10	18	4.30	1.33	57	3.74	1.42
Parents & Staff	16	5.87***	.76	18	5.20	1.01	57	4.50	1.13
Total ITERS	**16**	**5.14***[b]	**.47**	**18**	**4.36**	**.78**	**57**	**3.71**	**.93**

*N refers to the number of classrooms

a "Federal agency including Early Head Start & other Federal Funds" is different from "Private"

b "Early Head Start/Federal agency other than Head Start" is different from "Private"; "State Funding including Abbott & Vouchers" is different from "Private"; "Federal agency including Early Head Start & other Federal Funds" is different from "State contract/Other State agency"

Table 6 shows that scores are affected by the funding source. The 16 federally funded classrooms observed scored significantly higher than the State and privately funded classrooms. The privately funded classrooms scored the lowest of all. Note, there could be more birth to three-year-old classrooms and less State funded since any center that received funding from the State was reported as receiving State funds despite the fact that they might have this funding for their preschool classrooms and not for their infant and toddler classrooms.

Results by City

Table 7. EQUIP ITERS-R Subscale Scores by City

ITERS-R Subscales	All Classrooms	East Orange	Newark	Orange	Irvington
Space & Furnishings	3.93	4.45	4.01	3.55	3.42
Personal Care Routines	3.46	3.96	3.76	3.15	2.60
Listening & Talking	4.08	4.62	4.18	4.50	3.41
Activities	3.45	3.98	3.67	2.71	2.76
Interactions	5.13	5.63	5.27	5.06	4.50
Program Structure	4.06	4.65	4.30	3.67	3.22
Parents & Staff	4.88	5.38	5.14	4.50	4.08
Total Average Score	**4.09**	**4.61**	**4.29**	**3.74**	**3.36**

- East Orange, the city with the highest ITERS-R average score of 4.61, did not score at a *high* level. Irvington scored the lowest with a 3.36.
- *Interactions* displayed the highest overall subscale score of 5.13 *(Table 1)* for this study and it was the only subscale that was scored in the *high range*.
- *Activities* displayed the lowest overall subscale score almost consistently for all the cities besides Irvington whose lowest overall subscale score was in *Personal Care Routines*.

Percentages by City

Table 8 below explains in what range classrooms scored across cities.

Table 8. EQUIP ITERS-R Percentage across Cities

City	Low %	Medium %	High %
East Orange	4.8	61.9	33.3
Newark	7.3	68.3	24.4
Orange	0	100	0
Irvington	40	60	0

Table 8 shows that in the city of East Orange, 4.8 percent of classrooms scored in the low range; 61.9 percent in the medium range and 33.3 percent in the high range. Compared with the city of Irvington, 40 percent of classrooms scored in the low range; 60 percent in the medium range and 0% in the high range. This data set was then analyzed at a more in depth level using the demographic information obtained from lead teacher surveys in order to get more clarification.

Overall Results for Family Child Care Provider Homes

Table 9. EQUIP FCCERS-R Overall Subscale Level Scores

FCCERS-R Subscales	Registered Homes Mean N=41	Approved Homes Mean N=22
Space & Furnishings *This subscale addresses the areas of indoor and outdoor space, room arrangement, organization, display, furnishings and equipment*	3.08	2.19
Personal Care Routines *This subscale addresses practices around daily routines like greeting and departure, meals, naptime, and toileting as well as health and safety practices.*	2.77	2.33
Listening & Talking *This area addresses the classroom's formal and informal communication, language and reasoning opportunities.*	3.68	2.89
Activities *This subscale looks at the learning opportunities in each of the areas of the classroom including fine motor, art, music/movement, blocks, sand/water, dramatic play, nature/science, math/number, use of video/computer, and diversity.*	2.35	1.78
Interactions *This area addresses supervision of children, discipline, staff child interactions, and interactions among children.*	5.53	4.42
Program Structure *This area addresses classroom operations and schedule, including groupings, transitions and flexibility.*	3.23	2.07
Parents & Staff *This area addresses the program's supports for both parents and staff, including opportunities to evaluate and communicate child-related information, family involvement and professional development opportunities.*	4.02	2.30
Total Overall Average Score by Subscale	**3.24**	**2.37**

Table 10. EQUIP FCCERS-R Overall Average by Item for Registered and Approved Homes

FCCERS-R by Items	Registered Homes Mean N=41	Approved Homes Mean N=22
1. Indoor space	4.05	3.29
2 Furniture for routine care, play, and learning	3.49	1.90
3. Provision for relaxation and comfort	2.90	2.81
4. Arrangement of indoor space	3.34	2.10
5. Display for children	2.24	1.29
6. Space for privacy	2.44	1.76
7. Greetings/departing	4.88	4.76
8. Nap/rest	2.54	1.29
9. Meals/snacks	1.46	2.24
10. Diapering/toileting	1.68	1.76
11. Health practices	2.44	1.48
12. Safety practices	3.61	2.43
13. Helping children understand language	3.80	3.52
14. Helping children use language	4.07	3.43
15. Using books	3.17	1.71
16. Fine motor	2.66	1.76
17. Art	3.17 N=36*	2.56
18. Music/movement	2.51	2.14
19. Blocks	2.06 N=35*	1.50
20. Dramatic play	2.76	2.00
21. Math/number	2.22	1.24

22. Nature/science	2.34	1.71
23. Sand and water play	1.76 N=33*	1.50
24. Promoting acceptance of diversity	2.20	1.62
25. Use of TV, video, and/or computer	1.59 N=39*	1.24
26. Active physical play	2.73	2.33
27. Supervision of play and learning	5.32	4.24
28. Provider-child interaction	6.37	5.19
29. Discipline	4.85	3.90
30. Interactions among children	5.53 N=32*	3.33
31. Schedule	3.34	2.38
32. Free play	3.07	1.86
33. Group time	3.41 N=27*	1.20
34. Provisions for children with disabilities	1.50 N=4*	N=0*
35. Provisions for parents	3.73	1.95
36. Balancing personal and caregiving responsibilities	4.78	3.71
37. Opportunities for professional growth	3.46	1.62
38. Provisions for professional needs	4.10	1.90
Total Average Score	**3.24**	**2.37**

*A change in N refers to an item not required or the provider has reported not using this material or not having this issue.

FCCERS-R Explanation of Findings

1. Space and Furnishings *(Table 9 & 10)*

The *Space and Furnishings* subscales takes into account the size and the arrangement of the physical space where the care is provided. Registered homes scored an average of 3.08 and Approved homes 2.19. For the majority of homes observed, the indoor space size was not adequate for the number of children in care; the same was true for the furnishings available in the home. The two lowest scoring items that contributed in lowering this subscales score for Registered and Approved homes was *Display for children* with means of 2.24 and 1.29 respectively and *Provision for relaxation and comfort* with means of 2.44 and 1.76 respectively.

2. Personal Care Routines *(Table 9 & 10)*

The *Personal Care Routines* subscale is one of the lowest scored subscales in this study with an average score of 2.77 for Registered homes and 2.33 for Approved homes. This score is heavily weighted by aspects of hygiene practices for both the children and the staff. The lowest scored item for Registered homes was *Meals/snacks* with a 1.46 and for Approved homes it was *Nap* with a 1.49. We cannot stress enough the importance of hand washing in this subscale, as well as washing and sanitizing eating surfaces. In fact, three items in this subscale can be scored a 1.00 if proper hand washing of both caregiver and child is not observed. For *Nap* it is important that no child under 1 year of age be put to sleep on his or her stomach.

3. Listening and Talking *(Table 9 & 10)*

The lack of children's books in the homes observed played a big role in lowering this score. The scores for *Using books* were 3.17 for Registered homes and 1.71 for Approved homes. Several Approved providers have stated the parents read to their children so their books stay at home. In the majority of cases, the children cared for by an Approved provider bring their own toys and changing materials but it does not seem that books are regular items in the diaper bags. Some

providers from both groups had reading materials that were not accessible for children's independent use and some of the books were not age appropriate or varied enough.

4. Activities *(Table 9 &10)*

The *Activities* subscale obtained the lowest score in this study with a mean of 2.35 for Registered and 1.78 for Approved homes. Several of the same factors that have contributed to these low scores for center based programs are also true for the homes we observed. However, there are more issues in the homes than at the centers. For instance, some centers did not have a television set at all and those that did were more likely to use educational or child related materials unlike the home providers who just have their TVs on. No teachers were found watching their favorite TV shows while children are present, while some home providers had the TV on for their entertainment, exposing the children to inappropriate material from daytime shows.

5. Interactions *(Table 9 & 10)*

The highest scored subscale for both groups was the *Interaction* subscale where Registered homes scored in the high range with a 5.53 and Approved homes in the medium range with a 4.42. As a matter of fact, *Supervision of play and learning, Peer interactions, Staff-child interactions* showed much warmth, hugs and kisses between the children and providers, and kindness among the children. However, *Discipline* for both groups did not score high; no harsh punishment or improper forms of discipline were observed but the providers in most cases were unable to prevent issues that would require appropriate disciplinary actions. Most providers failed to verbally acknowledge children behaving nicely to provide positive reinforcement for their behavior. Approved providers scored only a 3.33 for *Interactions among children*, due to the lack of interestingly engaging activities and number of toys in the home. This caused children to fight over toys and in turn affected the providers' disciplining of them.

6. Program Structure *(Table 9 & 10)*

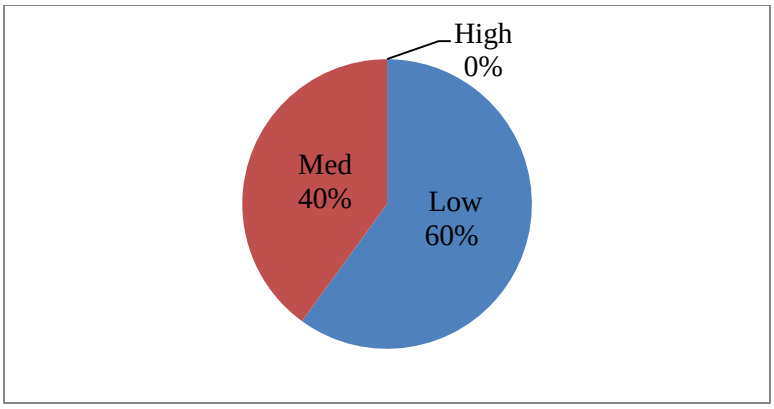
The most significant trends observed in *Program Structure* included the lack of individualized care and lengthy wait times between routines. Registered homes scored at a mean of 3.23 and Approved homes at 2.07. For example, individualization of care can refer to everyone participating in a group activity at the same time, as in being forced to participate in a book reading with the whole group. Lengthy wait times between routines can refer to toddlers waiting too long for lunch or snack because of official nutrition regulations or sleepy children being over stimulated so everyone can take their nap at the same time. Overall, most homes were too structured for infants and toddlers and not suitable for children with disabilities. No Approved providers reported they had children with a disability or that they had a provision in case they would serve one. On the contrary, during our improvement grant training with the registered providers, there were several questions about how to approach parents when there are developmental red flags. Some Registered providers have children receiving specialized services with therapists in their homes.

7. Parents and Staff *(Table 9)*

The *Parents and Staff* subscale relied mostly on provider's report. Registered providers scored in the medium range with a 4.02 while Approved providers scored in the low range with a 2.30.

EQUIP FCCERS-R Overall Distribution of Scores

Figure 3. EQUIP FCCERS-R Overall Distribution of Scores



EQUIP FCCERS-R Results by Specific Characteristics

Table 11. EQUIP FCCERS-R Subscale Scores by Home Type

FCCERS-R Subscales	Infant	Toddler	Mixed
Space & Furnishings	2.02	2.58	3.28
Personal Care Routines	2.38	2.65	2.72
Listening & Talking	3.10	3.20	3.80
Activities	1.42	2.07	2.53
Interaction	5.55	4.90	5.43
Program Structure	2.29	2.68	3.09
Parents & Provider	3.07	2.99	3.98
Total Average Score	2.52	2.76	3.30

Table 12. EQUIP FCCERS-R Percentages by Home Type

Home Type	**% Low 1.00 - 2.99**	**% Med 3.00 - 4.99**	**% High 5.00+**
Infant	100.0	0	0
Mixed	40	60	0
Toddler	67.7	32.3	0

As seen in Table 11, the infant homes scored the lowest compared to toddler and mixed-age settings, with a 2.52 average score in the study. Looking at FCCERS-R scores by home type (Table 12), 100 percent of the infant homes scored low, with 0 percent scoring medium or high.

EQUIP FCCERS-R Subscale Scores Across Cities

Table 13. Approved Homes by City

FCCERS-R Subscales	**All Homes N=22 Mean**	**Newark N=16 Mean**	**Irvington N=2 Mean**	**E. Orange N=4 Mean**	**Orange N=0 Mean**
Space & Furnishings	2.19	2.24	2.17	2.00	-
Personal Care Routines	2.33	2.24	2.75	2.42	-
Listening & Talking	2.89	2.91	2.83	2.83	-
Activities	1.78	1.78	1.86	1.76	-
Interactions	4.42	4.47	3.88	4.52	-
Program Structure	2.07	2.00	2.50	2.13	-
Parents &Staff	2.30	2.55	1.50	1.75	-
Total Average Score	2.37	2.39	2.36	2.29	-

Table14. Registered Homes by City

FCCERS-R Subscales	**All Homes N=41 Mean**	**Newark N=22 Mean**	**Irvington N=7 Mean**	**East Orange N=9 Mean**	**Orange N=3 Mean**
Space & Furnishings	3.08	3.19	2.79	3.24	2.44
Personal Care Routines	2.77	3.02	2.52	2.48	2.33
Listening & Talking	3.68	3.79	3.62	3.70	3.00
Activities	2.35	2.55	1.84	2.48	1.65
Interaction	5.53	5.58	5.83	5.40	4.83
Program Structure	3.23	3.34	2.57	3.46	3.33
Parents & Provider	4.02	4.11	4.11	3.75	3.92
Total Average Score	3.24	3.39	2.98	3.22	2.77

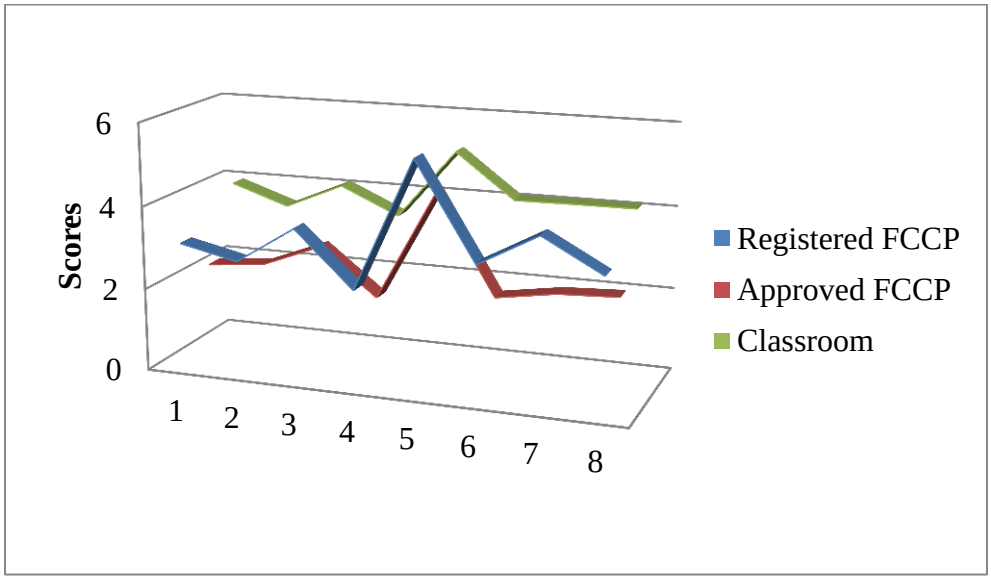
Table 15. Percentages of All Homes by City

City	Low %	Medium %	High %
East Orange	61.5%	38.5%	0.0%
Newark	57.9%	42.1%	0.0%
Orange	66.7%	33.3%	0.0%
Irvington	66.7%	33.3%	0.0%

EQUIP Scoring Patterns

The scoring pattern for Registered and Approved providers are basically similar to the center-based classroom scores (see Figure 4). However, the teachers in the classrooms scored higher than the Registered providers who scored slightly higher than the Approved providers.

Figure 4. Family Child Care Providers and Teachers Scoring Patterns



EQUIP ITERS-R and Other Studies

The following tables and figures compare data from EQUIP and previous studies.

Table 16. First Steps and EQUIP ITERS-R*

Center	First Steps Pre Test Average	First Steps Post Test Average	EQUIP Average	Range	Comments
Center 1	2.80	6.40	4.09	Medium	Loss
Center 2	1.70	2.30	1.67	Low	Loss
Center 3	2.40	5.40	4.50	Medium	Loss
Center 4	3.10	5.11	3.86	Medium	Loss
Center 5	1.14	5.60	2.93	Low	Loss
Center 6	4.90	6.40	5.57	High	Loss
Center 7	2.00	4.76	4.40	Medium	Slight Loss*
Center 8	2.70	5.97	5.21	High	Slight Loss
Center 9	5.20	5.50	5.22	High	Slight Loss
Center 10	3.74	5.83	5.22	High	Slight Loss
Center 11	3.30	4.70	4.72	Medium	Sustained Gain
Center 12	1.80	3.10	3.92	Medium	Sustained Gain

*Slight Loss: not significant; likely due to difference in scoring

Figure 5. First Steps Pre and Post Test

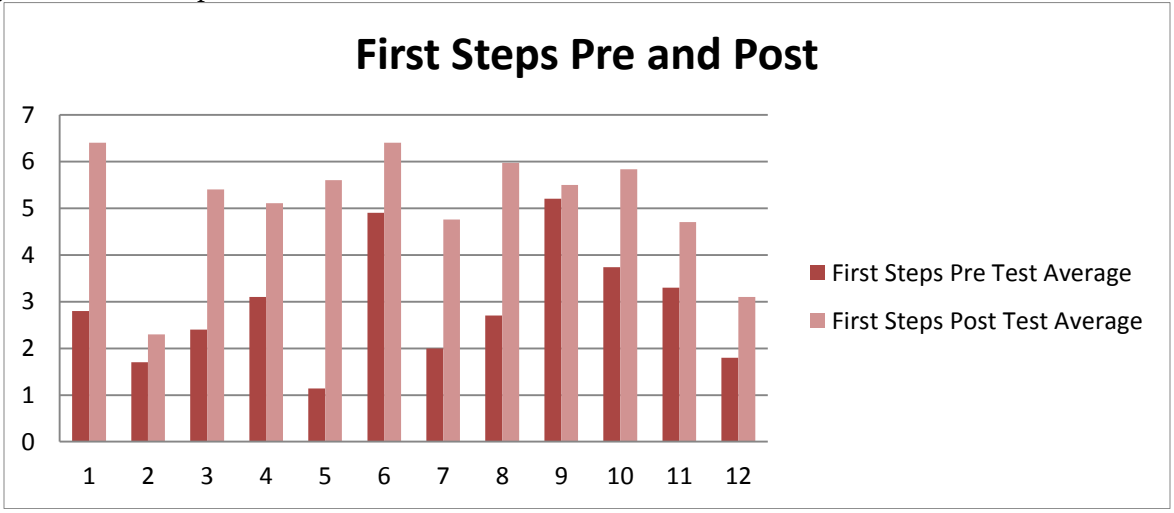


Figure 6. First Steps Pre Test and EQUIP

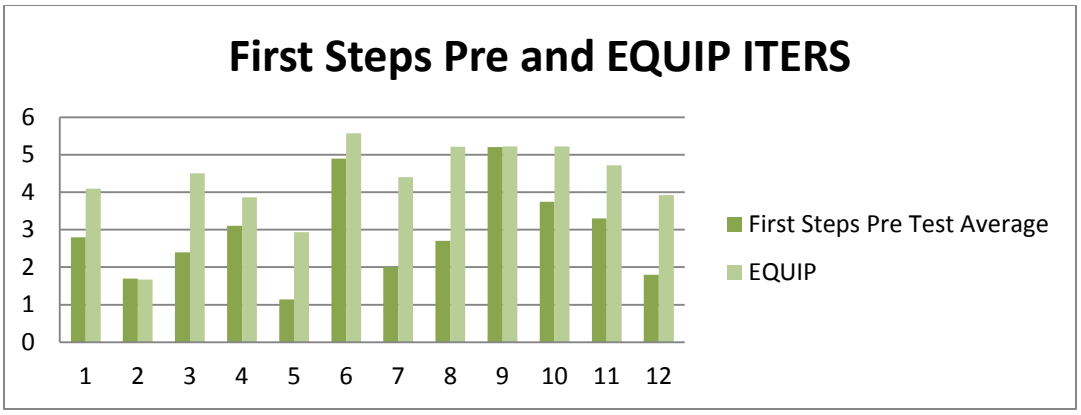
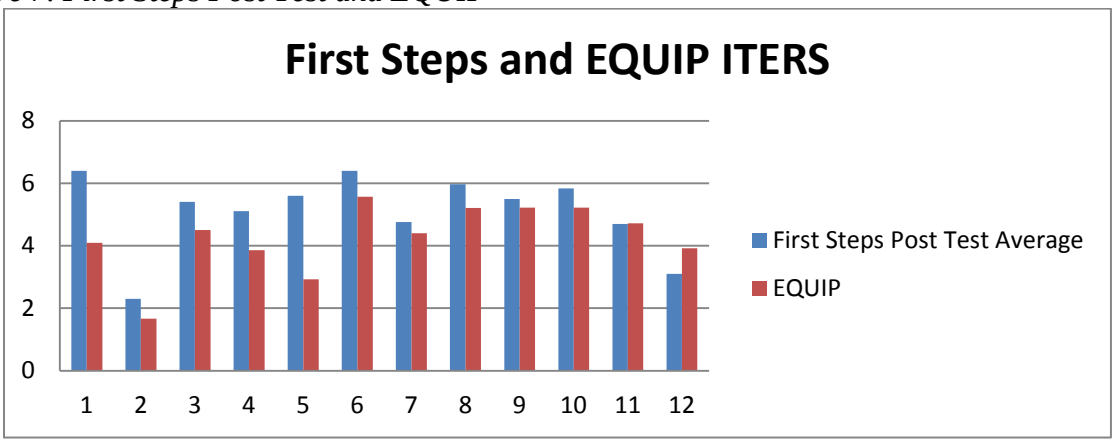
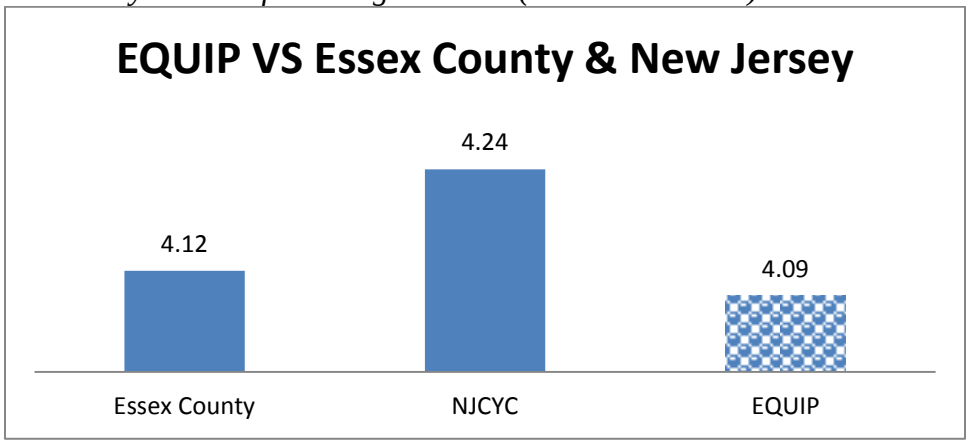


Figure 7. First Steps Post Test and EQUIP



**First Steps data provided by Programs for Parents.*

Figure 8. New Jersey Council for Young Children (NJCYC ITERS-R) and Essex County



There is not a significant difference between NJCYC, Essex County and EQUIP ITERS-R.

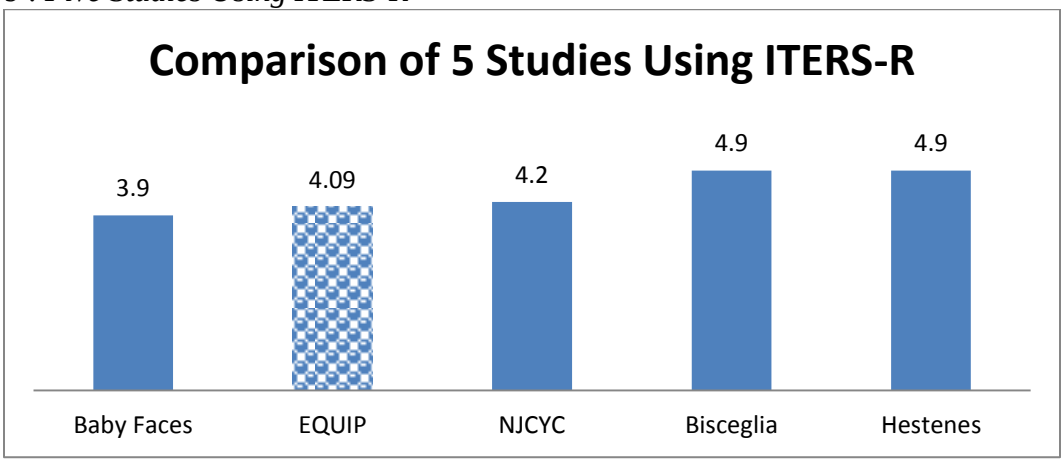
Table 17. Four Studies Using ITERS-R

Study	EQUIP	NJCYC	Baby Faces*	Bisceglia et al.	Hestenes et al.

Year	2013	2013	2009	2008	2004
Area	East Orange, Irvington, Newark, Orange, NJ	New Jersey	National EHS	Colorado	North Carolina
Age Range	Under 36 months	Under 36 months	10 to 15 months	Under 30 months	
XITERS-R Score	4.09	4.2	3.9	4.9	4.9

*Vogel et al, 2009

Figure 9 . Five Studies Using ITERS-R



Conclusion

The most general question addressed about the state of infant and toddler care in the cities of Newark, Irvington, East Orange, and Orange is what is the quality of that care. Now we know the answer to this question is that overall these cities have *low* to *medium* quality infant/toddler child care.

Center-based programs scored higher than did family child care homes. The quality of infant care is lower than the quality of toddler care. Center quality is better in Early Head Start funded programs than for other centers. Early Head Start is a real strength for those cities that have it. This demonstrates the importance of a steady stream of adequate funding to keep quality in the high range. The greatest challenge in the ITERS-R for center-based programs was in the *Personal Care Routines* and *Activities* subscales.

Family child care homes operate at a lower level of quality than the centers. All the Registered and Approved providers in the study scored in the low to medium range. Infant care was weakest in the homes as it was in the centers. On a positive note, the interactions between parents and family child care providers are a strength.

There is considerable work to be done to better inform stakeholders who then will be able to strategize how to overcome the challenges to improving quality. However, with what we know now, policy makers, philanthropists, and other stakeholders are informed about the needs for improvement and what issues to address to make sure our youngest citizens will receive better quality care in the future.

Recommendations

Now that we have baseline information on quality, more studies and analysis of this data can be performed to get a better understanding of what lies behind findings. This study focused mainly on the observed quality of the programs. We strongly suggest that we complement this study by looking at the factors that determine this quality. For example, studying the programs structures will help to understand how different structures affect quality. Issues for a potential follow up study could include the following topics.

Quantitative

1. Teacher turnover rates.
2. The impact of director training.
3. Funding levels.
4. Ratio and group size.
5. With the *Activities* scores being so low across the study, we recommend an intervention followed by an evaluation to assess the intervention effectiveness.

Qualitative

6. Programs' Board of Directors and decision-making processes at the leadership level.
7. Ability of directors to raise money and advocate for their programs - fundraising practices and strategies.
8. Outreach, including parent involvement, engagement, and support.

9. Referrals and follow-up practices for children identified as having possible developmental delays and for families with other special circumstances.

Although it is too soon to evaluate the effectiveness of Irvington CARES as a public and private coalition, we recommend investing in Irvington CARES and any such coalition in these municipalities. Part of this support could be in the form of ongoing formative assessment that can help shape the organization and provide the necessary oversight to help keep their vision alive.

Federally funded programs scored in the high range. It would help to expand such programs throughout Essex County and especially in areas like Irvington that do not have an Early Head Start classroom. In addition, it could be helpful to build partnerships among programs for resource sharing and outreach in a way that would benefit all parties involved. Also, it might be possible to support privately funded programs to adopt the Early Head Start training model.

Directors and caregivers complain about the cost to their programs of sponsoring professional development training for all their staff. Although this issue should be addressed at a financial level by the state, in the mean time creative solutions for basic training for teachers and providers could be valuable. For instance, they might make better use of online courses and training DVDs. Centers should encourage more group planning time so more experienced and educated teachers will be planning with new less experienced and educated teachers.

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