

## **Lycoming County Early Childhood Quality Research Project**

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### **Introduction/Overview**

The Lycoming County Health Improvement Coalition's Children's Task Force received a grant from the Pennsylvania Department of Public Welfare in October 2001. Through this Child Care Resources Development grant the Coalition agreed to serve as the local Community Planning for Early Care and Education team. Broad County representation and extensive assessment led the coalition to develop a wide reaching plan in that "all children in Lycoming County will develop to their fullest potential educationally, socially, and financially in order to enjoy a quality of life that is full of promise."

Several goals were identified by the Coalition to meet their objective. Recognizing the importance of quality child care and education in the growth and development of children, the Coalition identified three goals whose focus is child care:

- Improve quality child care
- Assist the child care industry to address their concerns
- Assist the child care industry to communicate the value of early care and education to the community.

To aid in the accomplishment of these goals, The Pennsylvania State University's Prevention Research Center's Early Childhood Training Institute agreed to provide assessment and mentoring to twenty child care providers in Lycoming County. Using the industry standardized evaluation tools, Early Childhood Environmental Rating Scale – Revised (ECERS-R), Family Day Care Rating Scale (FDCRS), and the Arnett Caregiver Interaction Scale (CIS), three reliably trained assessors conducted observations on 8 child care centers, 6 family group homes, 4 family home and 2 non-regulated home providers. It is intended that these data will form baseline information for the quality of preschool environments in Lycoming County.

Instrumentation. The instruments used in this study were (a) the Early Childhood Environment Rating Scale, Revised Edition (ECERS-R) for all child care centers, (b) the Family Day Care Rating Scale (FDCRS) for all legally unregulated family child care homes, group day care homes and family day care homes, and (c) the Arnett Caregiver Interaction Scale, for all caregivers in the sample as a measure of caregiver interaction.

The Early Childhood Environment Rating Scale, Revised is a measure of program quality and consists of 43 items organized into 7 subscales: (1) Space and furnishings, (2) Personal care routines, (3) Language reasoning, (4) Activities, (5) Interactions, (6) Program structure, (7) Parents and staff. The descriptors cover the needs of children, ages 2 ½ to 5 years of age. This instrument has been widely used in the early childhood field for many years for determining the quality of child care.

The Family Day Care Rating Scale is a measure of program quality and The Family Day Care Rating Scale (FDCRS) is designed to assess family child care programs. The scale consists of 40 items, including 8 supplementary items for programs serving children with disabilities. The descriptors cover the needs of a range of ages from infancy through kindergarten. The items are organized into 7 subscales: (1) Space and furnishings for care and learning, (2) Basic care, (3) Language and reasoning, (4) Learning activities, (5) Social development, (6) Adult needs, (7) Provisions for exceptional children. This instrument has also been widely used in the early childhood field.

The following ratings were used with the ECERS and FDCRS: poor = 1; minimal = 3; good = 5; and excellent = 7. All scores are the averages of the scale.

The Caregiver Interaction Scale (Arnett, 1989) is completed for each caregiver observed. It is a measure of caregiver sensitivity and the items are divided into four sub-scales: permissive, harshness, detached and harshness/sensitivity. The Arnett scoring includes: not at all (0%) = 1; somewhat (1-30%) = 2; quite a bit (about 50%) = 3; very much (60-100%) = 4. This instrument provides an observation of the behavior of caregivers in their interactions with children. Therefore, there is a balance between the rating scales and interaction scale so that both environment and caregiver's interactions are noted.

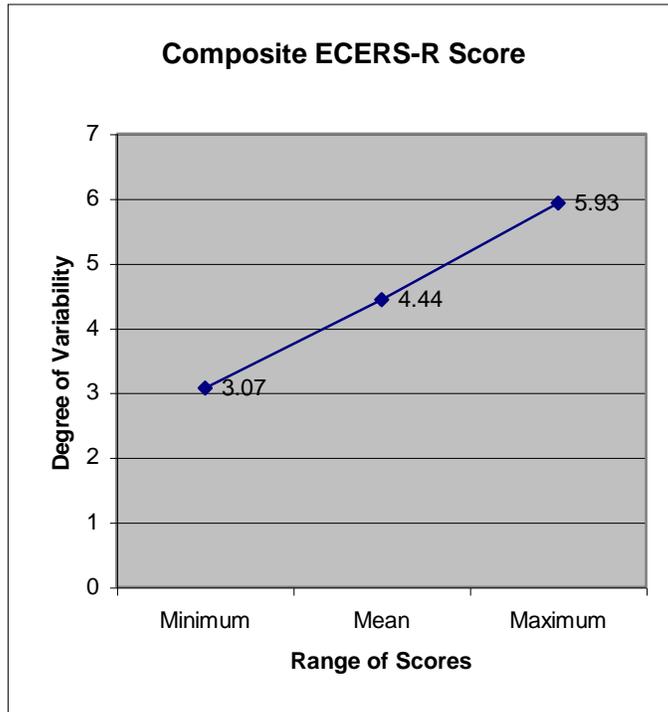
The ECERS-R, FDCRS, and Arnett scales have been used in several child care and early childhood studies over the past years, including the 2002 Pennsylvania Early Childhood Quality Settings Study. The ECERS-R is one of the most reliable program quality instruments available.

Between March 1 and May 2, 2003, assessors conducted their observations. In order to ensure accurate representation, each on-site observation was completed over a four-hour period of time. At the end of the observation time, the assessors discussed the results with providers and identified suggestions for improvement. These verbal recommendations were then followed up with an individualized assessment profile which was mailed to each provider. These profiles are confidential and individual results will not be shared with anyone other than the specific provider.

The following is analysis of the collected data. Data are analyzed by combining all child care centers to develop a composite ECERS-R score, all home based providers to develop a composite FDCRS score, as well as a composite FDCRS score for both group day care homes and family day care homes. Due to the limited number of non-regulated providers, individual analysis will not be conducted on this site as the anonymity would

not be protected. Finally, Lycoming County results will be compared to the 2002 Pennsylvania Early Childhood Quality Settings Study (ECQS).

### Overall Results – Composite ECERS-R Score for Lycoming County Child Care Centers



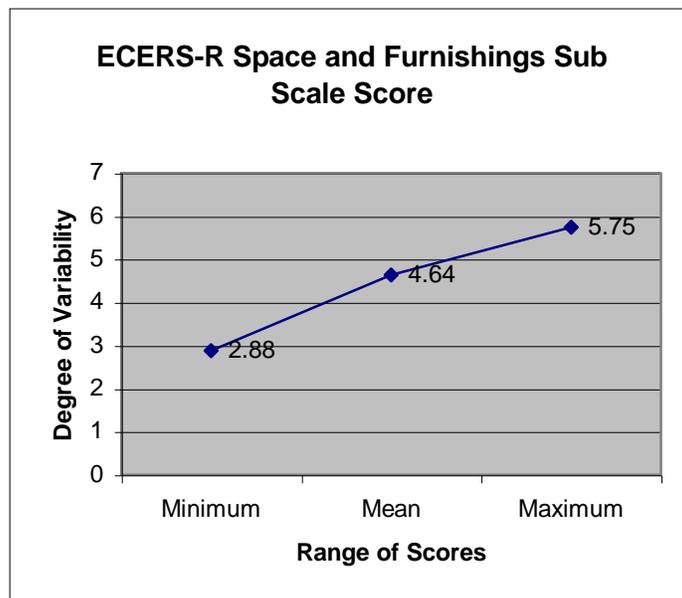
The age range of children attending the Lycoming County child care centers in this study was from 2-7 years. There were a total of 119 children in care in the observed classrooms. The eight center based child care programs observed in this study encompassed a wide range of quality. The mean composite ECERS-R score for centers was 4.44 (with a range of 3.07 – 5.93, sd .95). Given the small number of sites observed, this range of scores represents a broad level of quality. Additionally, all subscales in this study reflect this vast range of assessed quality in Lycoming County.

### Subscale Results

The Space and Furnishings subscale assesses the following items:

- Indoor space
- Furniture for care, play and learning
- Furnishings for relaxation
- Room arrangement
- Space for privacy
- Child-related display
- Space for gross motor
- Gross motor equipment

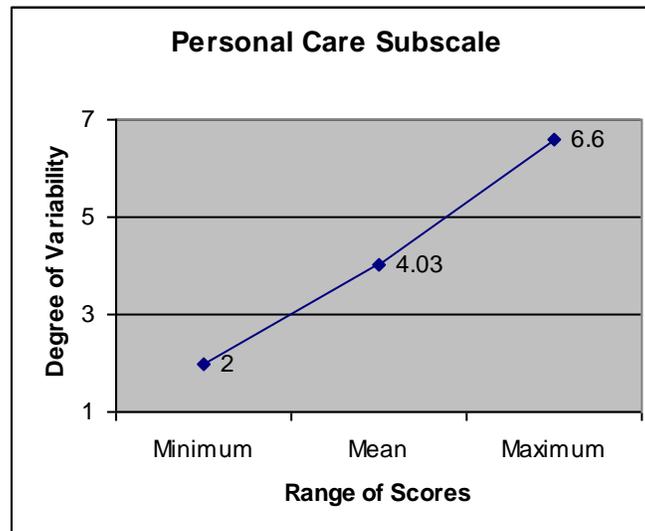
The composite score for this subscale was 4.64 (with a range of 2.88 – 5.75, sd .98).



The Personal Care Routines subscale assesses the following items:

- Greetings/departure
- Meals/snacks
- Nap/rest
- Toileting/diapering
- Health practices
- Safety practices

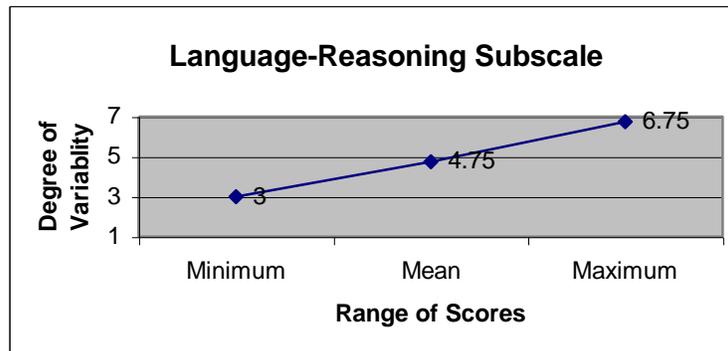
The composite score for Lycoming County centers was 4.03 (with a range of 2.00 – 6.60, sd 1.87).



The Language-Reasoning subscale assesses the following items:

- Books and pictures
- Encouraging children to communicate
- Using language to develop reasoning skills
- Informal use of language

The composite score for Lycoming County centers was 4.75 (with a range of 3.0 – 6.75, sd 1.27)

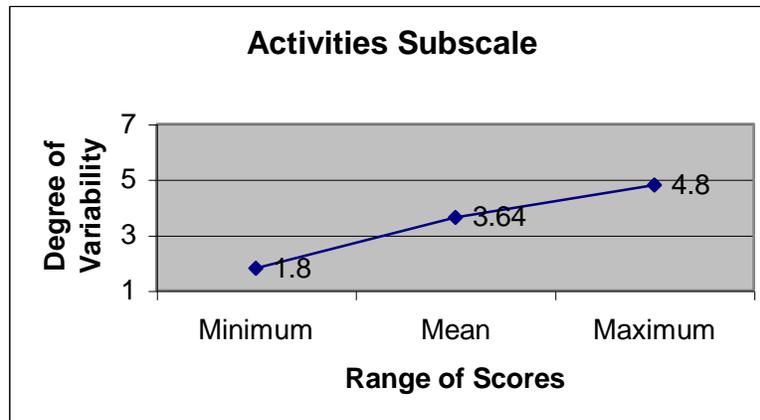


The Activities subscale assesses the following items:

- Fine motor
- Art
- Music/movement
- Blocks
- Sand/water
- Dramatic play

- Nature/science
- Math/number
- Use of tv, video and/or computer
- Promoting acceptance of diversity

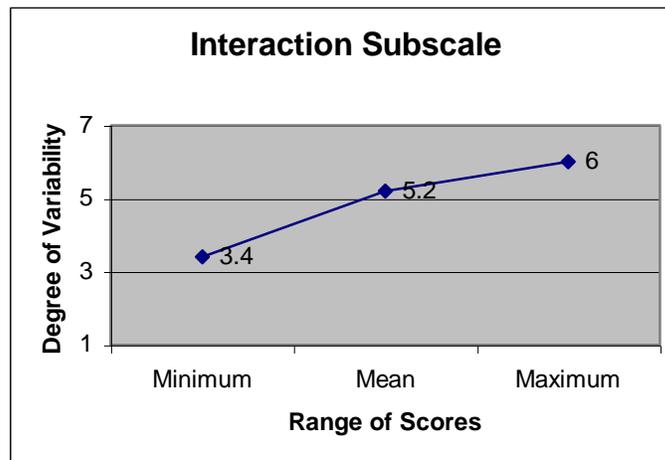
The composite score for Lycoming County centers was 3.64 (with a range of 1.80 – 4.80, sd .95).



The Interaction subscale assesses the following items:

- Supervision of gross motor activities
- General supervision of children
- Discipline
- Staff-child interactions
- Interactions among children

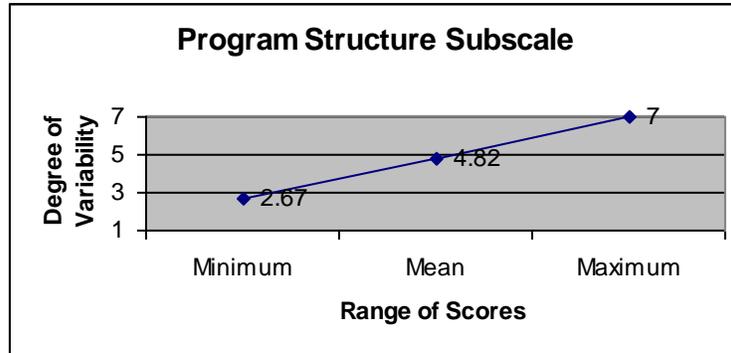
The composite score for Lycoming County centers was 5.20 (with a range of 3.40 – 6.00, sd .88).



The Program Structure subscale assesses the following items:

- Schedule
- Free play
- Group time
- Provisions for children with disabilities

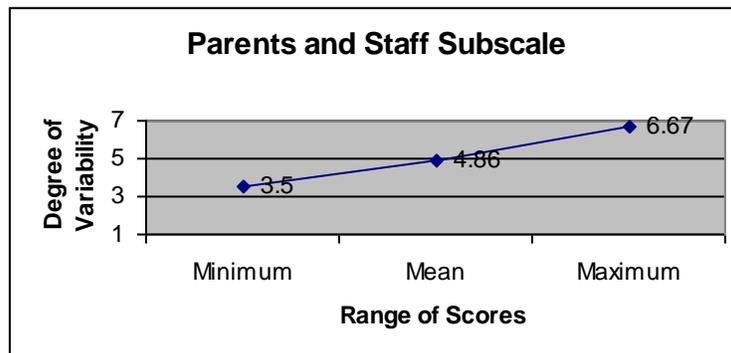
The composite score for Lycoming County centers was 4.82 (with a range of 2.67 – 7.00, sd 1.67)



The Parents and Staff subscale assesses the following items:

- Provisions for parents
- Provisions for personal needs of staff
- Provisions for professional needs of staff
- Staff interactions and cooperation
- Supervision and evaluation of staff
- Opportunities for professional growth

The composite score for Lycoming County centers was 4.86 (with a range of 3.50 – 6.67, sd 1.03).



As described in detail above, the overall quality of Lycoming County child care centers is in the adequate to good range. The ranking of highest subscale scores to lowest are as follows:

- Interaction (5.2)
- Parents (4.86)
- Program Structure (4.82)
- Language-Reasoning (4.75)
- Space and Furnishings (4.64)
- Personal Care Routines (4.03)
- Activities (3.64)

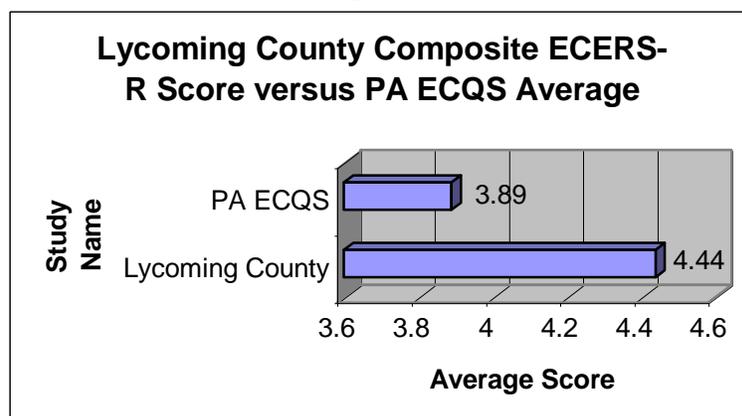
Keeping in mind that a score of 5.0 is considered “good”, 4.0 is “adequate” and 3.0 is “minimal”, care should be taken to focus on those items that scored the lowest in an attempt to raise the overall quality of child care in Lycoming County centers.

### **Composite ECERS-R Score for Lycoming County Child Care Centers versus PA Early Childhood Quality Study (ECQS)**

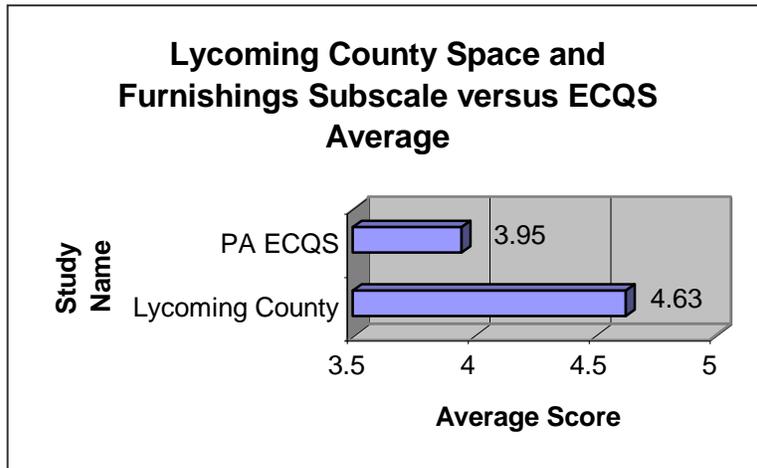
Based on the seven point scale, this score indicates that the average child care center in Lycoming County is functioning at an adequate level of care, with a mean score of 4.44. This score is also considerably higher than the 3.89 that was determined to be the statewide average in the Pennsylvania Early Childhood Quality Settings Study.

Additionally, when assessing the individual subscale categories, the center sites in this study scored significantly higher than those represented in the Quality Study. Care must be taken, however, to remember that the sample size in this study was only eight facilities and generalizations to the larger population must be carefully viewed. Also, the range of scores is great,

which indicates a wide variability in the quality of care. That said, the scores obtained by the Lycoming County child care centers who agreed to participate in this study reflect quality which ranges from minimal to good.



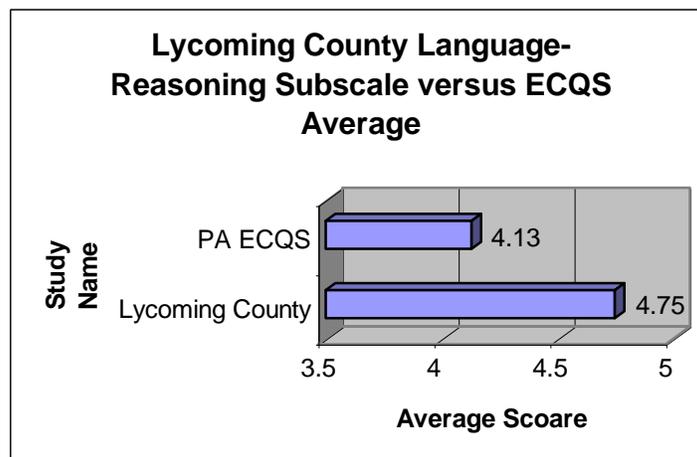
### Subscale Results



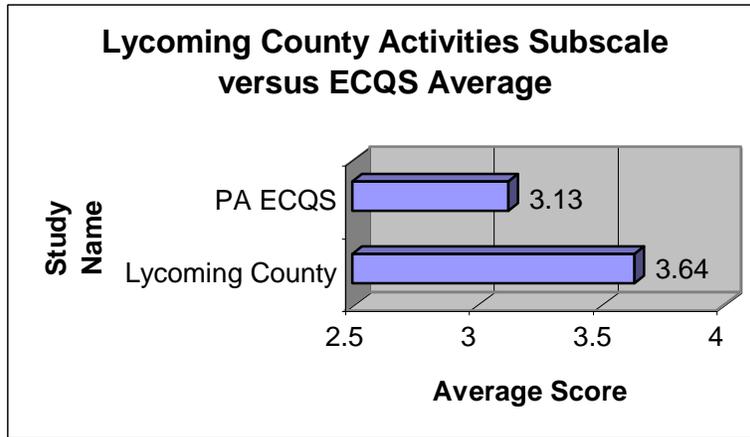
The Lycoming County centers scored dramatically higher than those in the ECQS in the Space and Furnishings subscale items (4.63 versus 3.95).

Compared to the ECQS results, Lycoming County centers scored significantly higher in the Personal Care Routines subscale (4.03 versus 3.39)

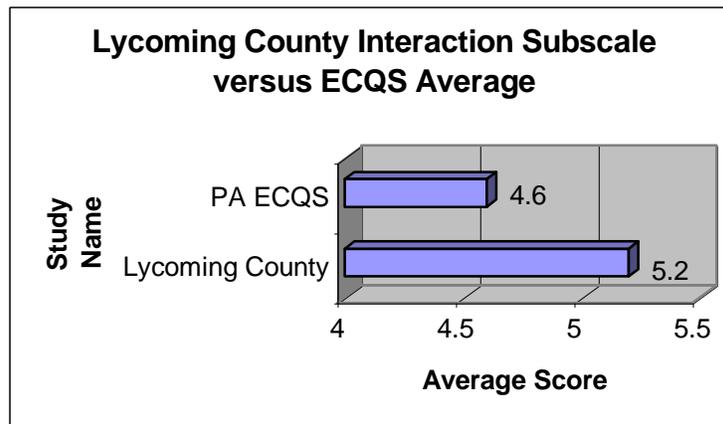
Compared to the ECQS results, Lycoming County centers scored significantly higher in the Language-Reasoning subscales (4.75 versus 4.13).



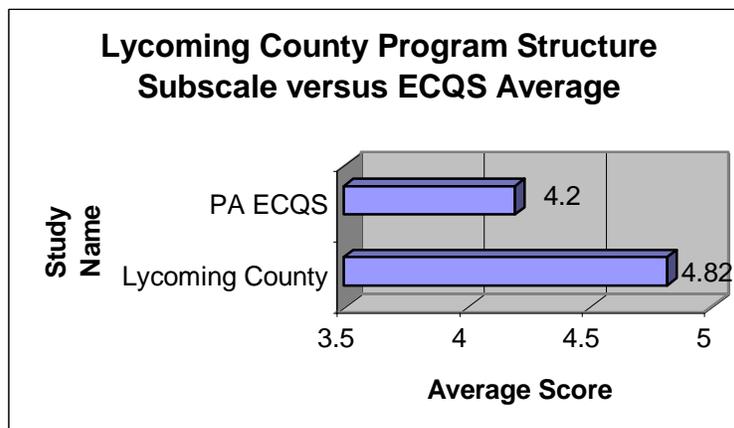
Compared to the ECQS results, Lycoming County centers scored higher in the Activities subscales (3.64 versus 3.13). It should be noted, however, that this is the lowest rated subscale. This score is deemed minimal and centers should be encouraged to further investigate how they can focus on increasing this score.



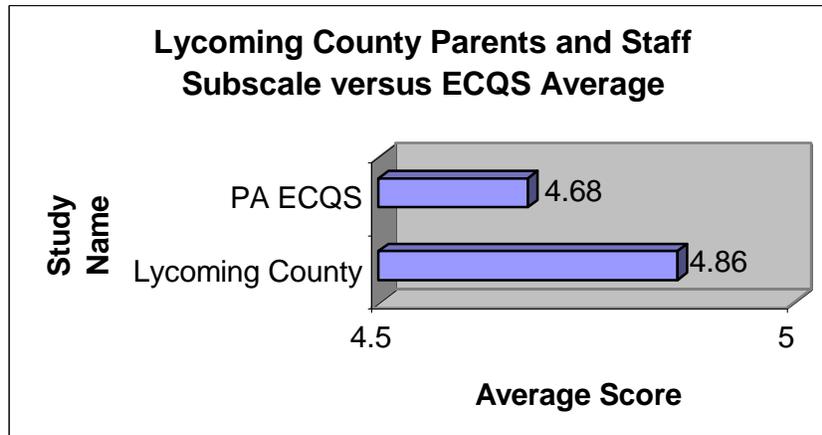
Lycoming County centers also scored significantly higher than the ECQS average on the Interaction subscales (5.20 versus 4.60).



In the Program Structure subscale, Lycoming County centers scored higher than the ECQS average (4.82 versus 4.20).

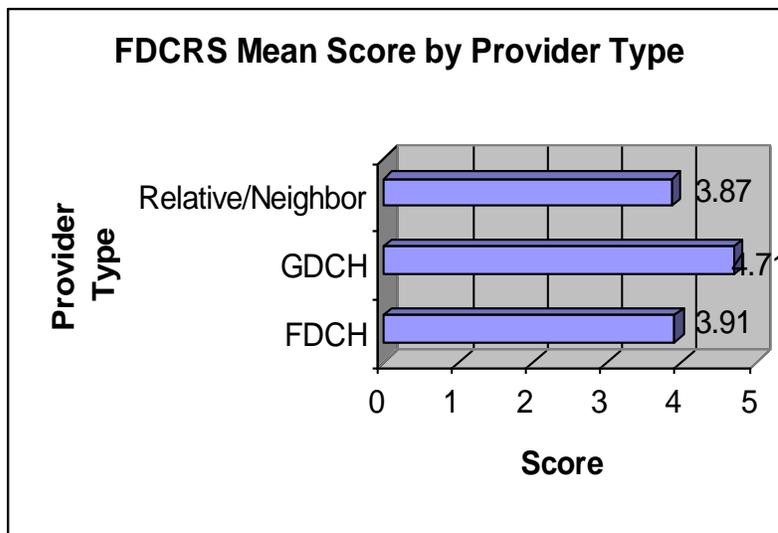


Finally, in reviewing the Parents and Staff subscale, Lycoming County centers scored higher than the ECQS average (4.86 versus 4.68).



### Overview – Family Day Care Rating Scale (FDCRS) Home-based Provider Results

The group child care homes who participated in this study provided higher quality care than center based care and the other types of home providers.

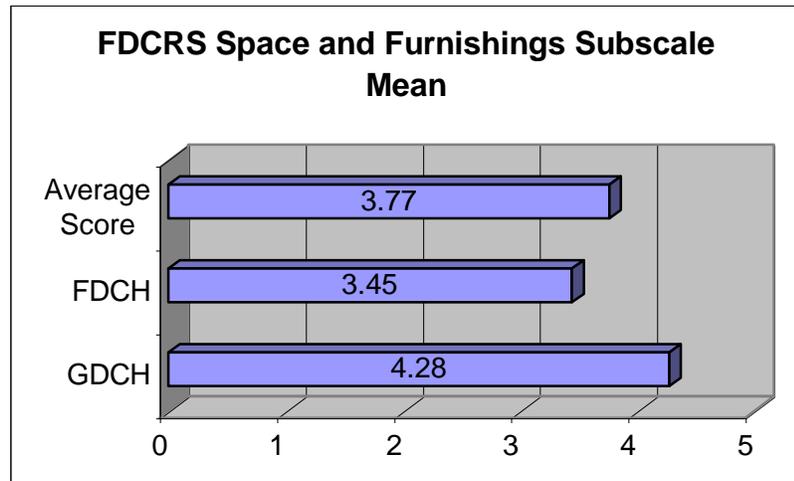


Care must be taken to not overgeneralize these results to be assumed as representative of all child care in Lycoming County. Due to the small sample size, it is fair to say that these results are representative of those who participated in this study and are indicative of a portion of Lycoming County child care providers.

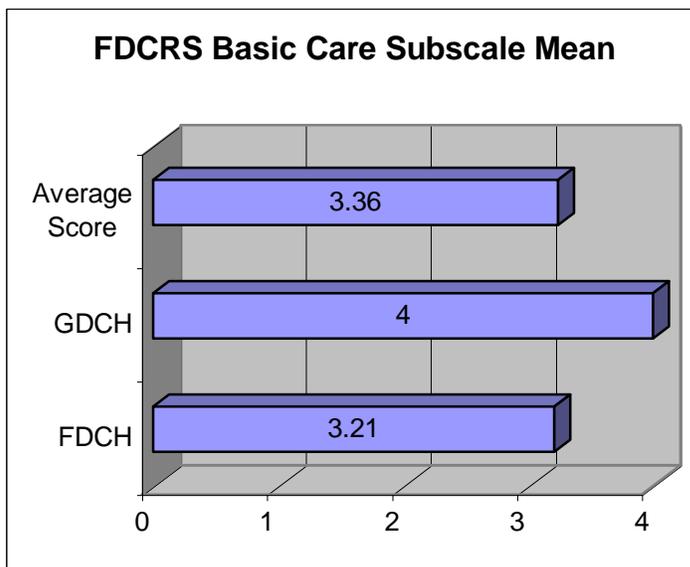
### Subscale Results

The Space and Furnishings for Care subscale assesses the following items:

- Furnishings for routine care and learning
- Furnishings for relaxation and comfort
- Child-related display
- Indoor space arrangement
- Active physical play
- Space to be alone (infants/toddlers and 2 years and older)



The average FDCRS score for all family providers who participated in this study was 3.77. The mean family day care home score was 3.45 (with range of 2.17 – 4.00, sd .65). The mean group day care provider score was 4.28 (with a range of 3.67 – 5.14).



The Basic Care subscale assesses the following items:

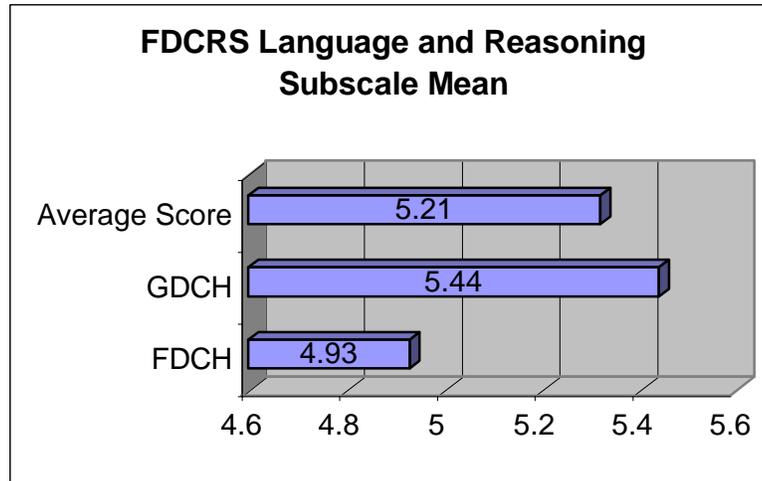
- Arriving/leaving
- Meals/snacks
- Nap/rest
- Diapering/toileting
- Personal grooming
- Health
- Safety

The average FDCRS score for all family providers who participated in this study was 3.6. The mean family day care home score was 3.21 (with a range of 2.71 – 4.57, sd .716). The mean group day care

provider score was 4.00 (with a range of 2.86 – 5.57, sd 1.15).

The Language and Reasoning subscale assesses the following items:

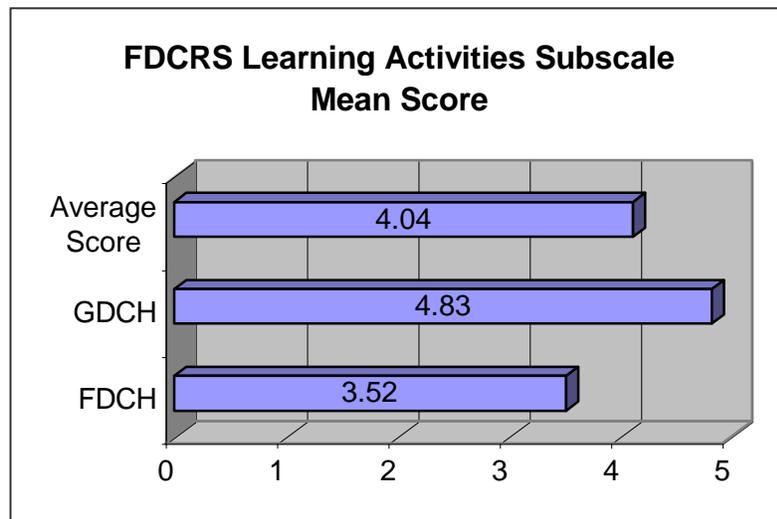
- Informal use of language (infants/toddlers and 2 years and up)
- Helping children understand language (infants/toddlers and 2 years and up)
- Helping children use language
- Helping children reason (using concepts)



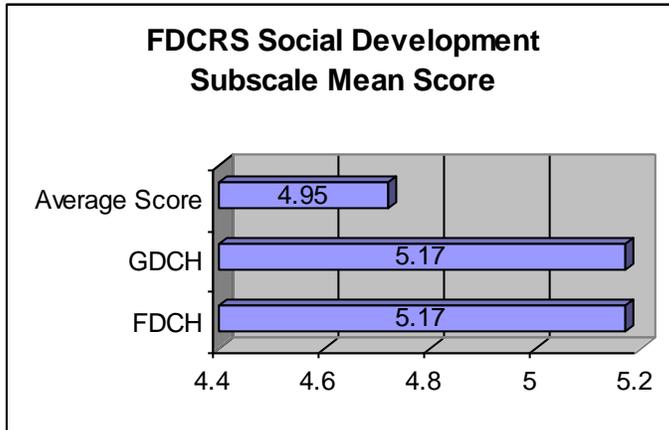
The average FDCRS score for all family providers who participated in this study was 5.21. The mean family day care home score was 4.93 (with a range of 3.25 – 5.83, sd .947). The mean group day care provider score was 5.44 (with a range of 3.25 – 7.00, sd 1.80).

The Learning Activities subscale assesses the following items:

- Eye-hand coordination
- Art
- Music and movement
- Sand and water play
- Dramatic play
- Blocks
- Use of tv
- Schedule of daily activities
- Supervision of play indoors and outdoors



The average FDCRS score for all family providers who participated in this study was 4.04. The mean family day care home score was 3.52 (with a range of 2.67 – 4.00, sd .458). The mean group day care provider score was 4.83 (with a range of 3.56 – 6.33, sd 1.28).



The Social Development subscale assesses the following items:

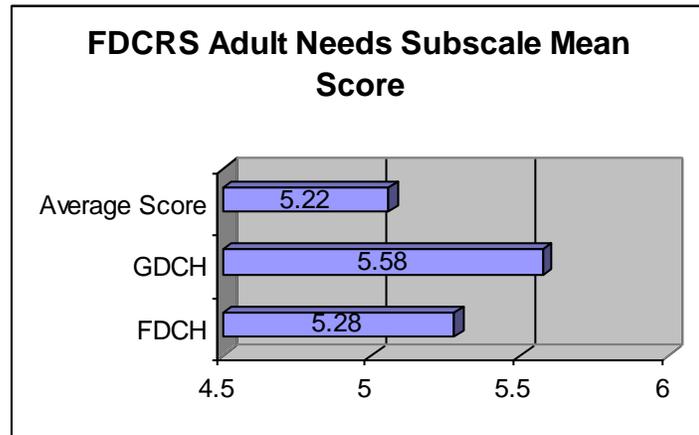
- Tone
- Discipline
- Cultural Awareness

The average FDCRS score for all family providers who participated in this study was 4.95. The mean family day care home score was 5.17 (with a range of 4.67 – 6.00, sd .547).

The mean group day care provider score was 5.17 (with a range of 4.00 – 7.00, sd 1.29).

The Adult Needs subscale assesses the following items:

- Relationship with parents
- Balancing personal and caregiver responsibilities
- Opportunities for professional growth



The average FDCRS score for all family providers who participated in this study was

5.22. The mean family day care home score was 5.28 (with a range of 4.33 – 6.33, sd .771). The mean group day care provider score was 5.58 (with a range of 4.00 – 7.00, sd 1.34).

### Family Day Care Provider Results

As described in detail above, the overall quality of Lycoming County family day care providers is in the adequate to good range. The ranking of highest subscale scores to lowest are as follows:

- Adult Needs (5.28)
- Social Development (5.17)
- Language-Reasoning (4.93)
- Learning Activities (3.52)
- Space and Furnishings (3.45)
- Basic Care (3.21)

Keeping in mind that a score of 5.0 is considered “good”, 4.0 is “adequate” and 3.0 is “minimal”, care should be taken to focus on those items that scored the lowest in an attempt to raise the overall quality of child care in Lycoming County family day care homes

### **Group Family Day Care Provider Results**

As described in detail above, the overall quality of Lycoming County group family day care providers is in the adequate to good range. The ranking of highest subscale scores to lowest are as follows:

- Adult Needs (5.58)
- Language-Reasoning (5.44)
- Social Development (5.17)
- Learning Activities (4.83)
- Space and Furnishings (4.28)
- Basic Care (4.00)

Keeping in mind that a score of 5.0 is considered “good”, 4.0 is “adequate” and 3.0 is “minimal”, care should be taken to focus on those items that scored the lowest in an attempt to raise the overall quality of child care in Lycoming County family day care homes

### **Relative/Neighbor Provider Results**

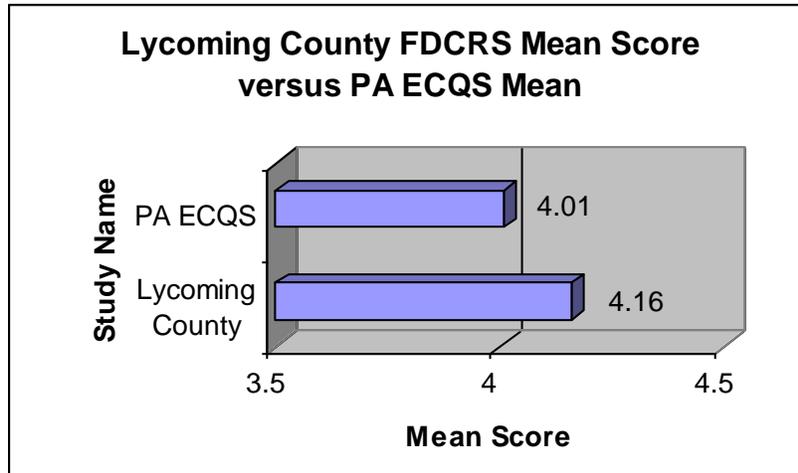
As mentioned previously, actual scoring of Lycoming County relative/neighbor providers will not be detailed since only two providers agreed to participate in this study and their anonymity cannot be guarded. However, the ranking of the highest subscale scores to the lowest are as follows:

- Language-Reasoning
- Adult Needs
- Learning Activities
- Social Development
- Space and Furnishings
- Basic Care

It can also be revealed that the mean for “Basic Care” is lower than the minimum quality score. Attention should be given to focus on increasing this subscale in particular to raise the overall quality of child care in Lycoming County relative/neighbor homes.

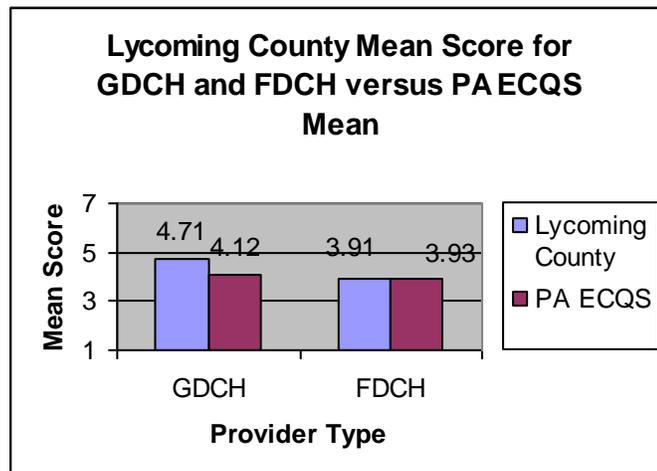
### Composite FDCRS Score for Lycoming County Family Child Care Providers versus PA Early Childhood Quality Study (ECQS)

The twelve family providers who participated in this study provide care for a total of 101 children, ranging in ages from 6 months to 5 years. The mean FDCRS score for family care homes, group day care homes, and relative/neighbor care is 4.16. This score is slightly higher than the ECQS mean FDCRS score of 4.01. Based on the seven point scale, this score indicates that the average family based child care center in Lycoming County is functioning at an adequate level of care



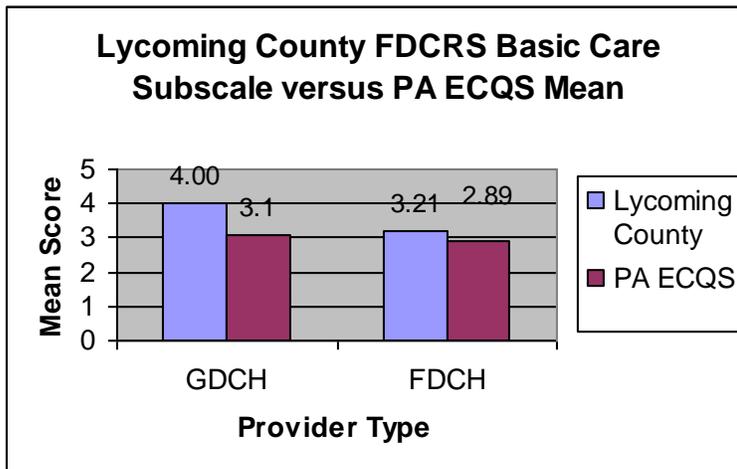
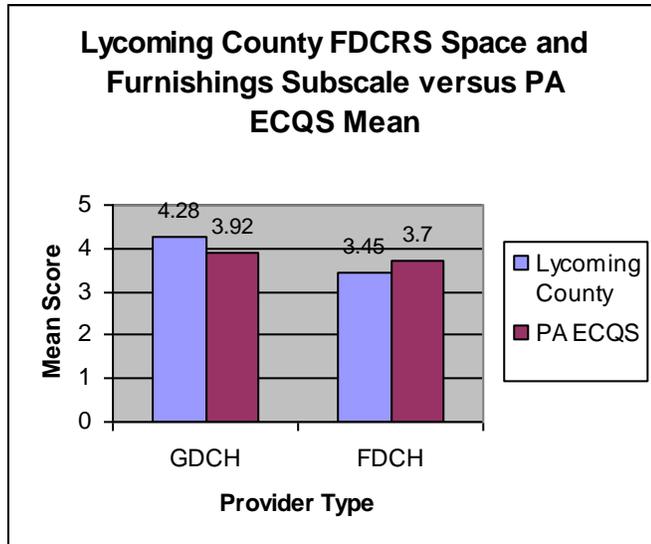
When assessing the space and furnishings subscale category, the family day care homes scored at a lower rate than those who participated in the ECQS. The FDCH in the Lycoming County study scored a mean of 3.45, versus the 3.70 in the ECQS. Group Day Care homes, however, scored 4.28 in Lycoming County, versus the statewide counterpart in the ECQS, which was 3.92.

When reviewing results for specific provider type, some interesting results are identified. While the Group Day Care Homes score significantly higher than their counterparts in the ECQS (4.71 versus 4.12), Family Day Care providers scored just below the ECQS mean (3.91 versus 3.93). This has serious implications considering a score of 3.0 is considered “minimal”. Focus should be provided to Family Day Care providers in Lycoming County to increase their overall quality.



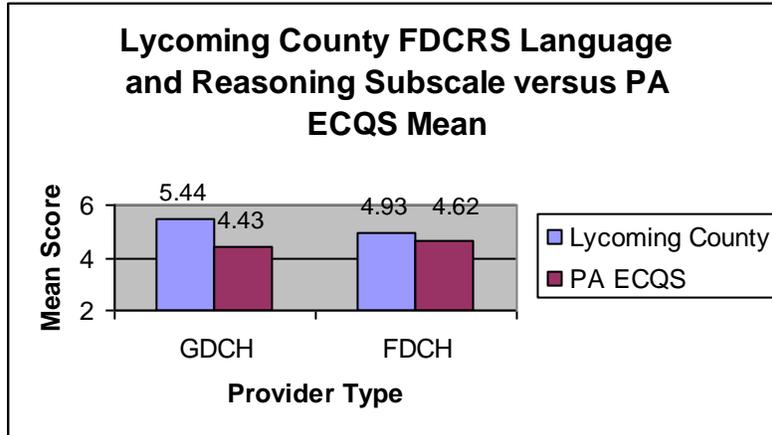
### Subscale Results

When assessing the space and furnishings subscale category, the family day care homes scored at a lower rate than those who participated in the ECQS. The FDCH in the Lycoming County study scored a mean of 3.45, versus the 3.70 in the ECQS. Group Day Care homes, however, scored 4.28 in Lycoming County, versus the statewide counterpart in the ECQS, which was 3.92.

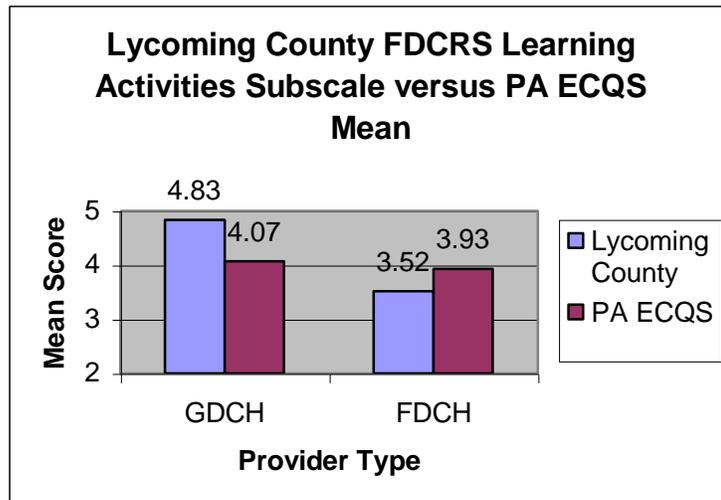


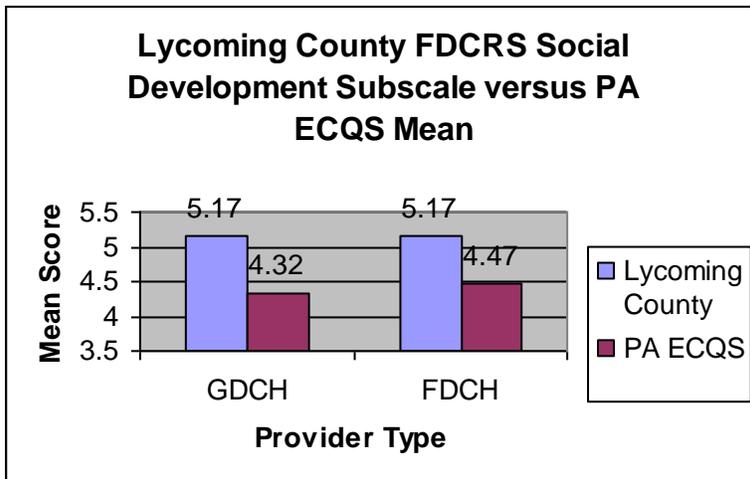
Lycoming County Family Providers scored higher than their counterparts in the ECQS on the Basic Care Subscale. Group Day Care Homes received a mean score of 4.0, versus 3.1 in the ECQS. Family Day Care Homes scored 3.21 versus 2.89 in the ECQS.

Mean scores for the Language and Reasoning Items indicate that Lycoming County Family Providers are functioning at a higher level than their Commonwealth counterparts. Group Day Care Homes especially are doing a “good” job with this critical component of child interaction (5.44 versus 4.43 in the ECQS). Family Day Care Homes are also operating at a slightly higher level than others in ECQS (4.93 versus 4.62).



The subscale of Learning Activities presents some concerns when reviewing the scores for Family Day Care Homes. The mean score for this category for Lycoming County homes was 3.52 versus their counterparts in the ECQS who scored a 3.93. Group Day Care Homes, however, again scored higher than those in the ECQS, with a mean score of 4.83 versus 4.07.

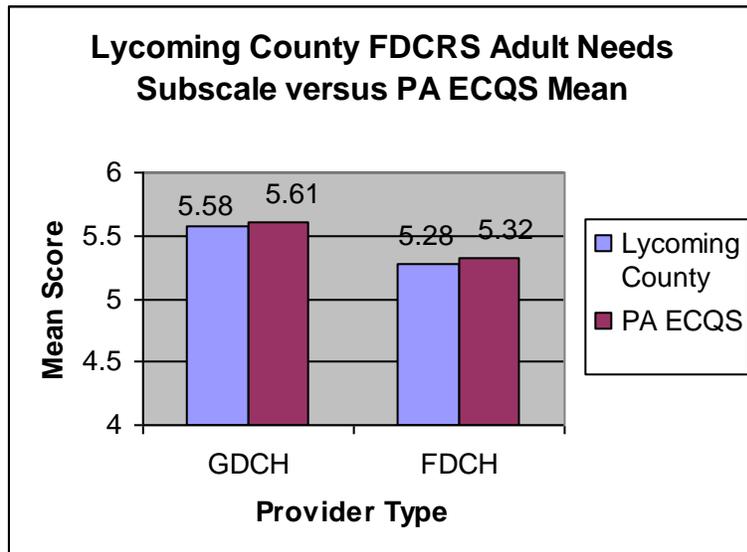




Both family child care provider types scored significantly higher in Lycoming County than did their counterparts in the ECQS on the Social Development subscale. Group Day Care Homes scored 5.17 versus 4.32 in the ECQS, while Family Day Care Homes scored 5.17 versus 4.47 in the ECQS. These scores indicate family providers are providing “good” care in this

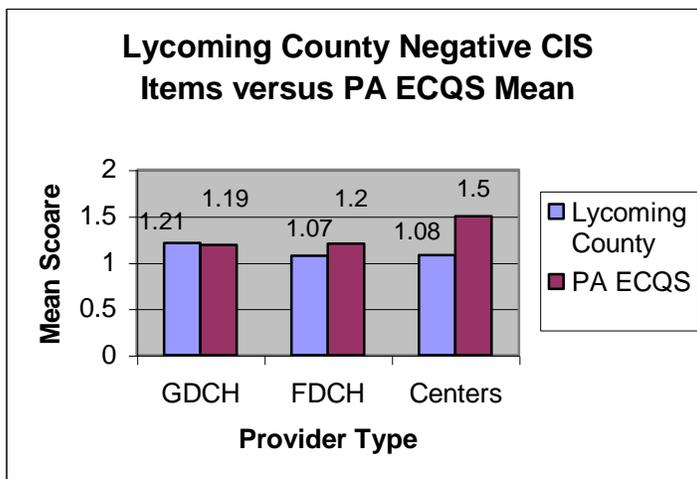
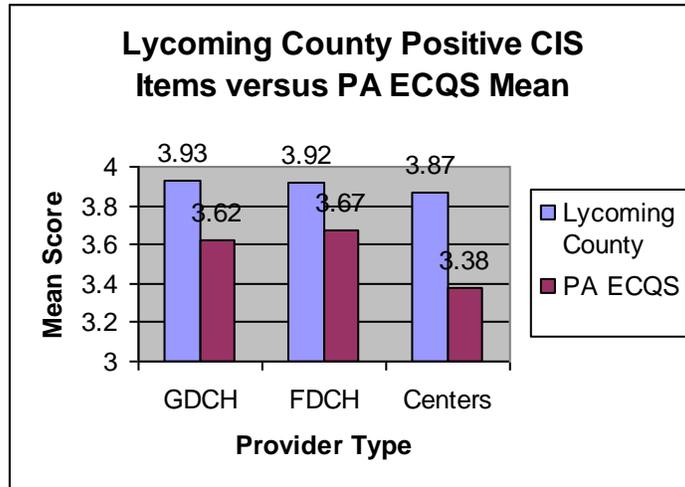
subscale.

Lycoming County family providers scored lower than their counterparts throughout the Commonwealth on the Adult Needs subscale. Family Day Care providers scored 5.28 versus 5.32 on the ECQS, and Group Day Care Homes scored 5.58 versus 5.61. It should be noted, however, that these scores are still considered in the “good” range and do not reflect serious concerns.



### CIS Findings

Information on the CIS/Arnett by type of provider is presented in Tables 1 and 2. When comparing results from the CIS with type of provider, all provider types scored similar. On the positively rated items, Group Day Care Homes scored highest (3.93), followed closely by Family Day Care Homes (3.92), and Centers scored 3.87. These results indicate that all observed Lycoming County caregivers had many positive interactions with the children in their care. These results are higher than their counterparts in the ECQS.



In reviewing the negatively rated items, all caregivers related in a similar fashion with the children in their care. Family Day Care homes scored the lowest (1.07), followed by Centers (1.08) and Group Day Care Homes (1.21). These results are also more favorable than their ECQS counterparts.

## **Conclusions and Recommendations**

- Even though the overall scores of most child care programs in Lycoming County were above that of the state mean, it is important to note that they are still at the minimal to average range.
- It is recommended that the goal for quality on the ECERS-R and FDCRS is a 5.00, which is considered within the good range on both scales for all settings.
- Center and home based providers have differing strengths and weaknesses. It is interesting to note that all forms of home based care (family day care home, group day care home and relative/neighbor) have the same identified attributes and deficiencies. The strengths of provider types are:
  - Centers :
    - Interactions with children, including supervision of gross motor activities, general supervision of children, discipline, staff child interactions, and interactions among children.
    - Relationships between parents and staff, including provisions for parents, personal and professional needs of staff, staff interaction and opportunities for professional growth.
    - Program structure, such as scheduling, free play and group time.
  - Home Providers
    - Adult needs, such as balancing personal and caregiving relationships, relationship with parents and opportunities for professional growth.
    - Social development, including use of appropriate tone and discipline with children.
    - Language and reasoning, such as informal use of language, helping children to understand language and helping children to reason.
- Care should be given to those categories which providers scored lowest:
  - Centers
    - Learning activities, such as art, music and movement, blocks, sand/water activities, dramatic play, nature/science, math/number, use of television, and promoting acceptance of diversity.
    - Personal care routines, such as diapering, toileting, meals and snacks, and personal grooming

- Home based providers
  - Basic care routines, such as diapering and toileting, meals and snacks, and personal grooming
  - Space and furnishings, such as indoor space, furniture for care, play and learning, furnishings for relaxation, room arrangement, space for privacy, child related display and gross motor space.
  - Learning activities, such as helping infants and toddlers understand language, helping children to reason, art, sand and water play, blocks, use of television, and cultural awareness.
  
- Study participants reported they enjoyed and benefited from the mentoring component of this study. All sites identified, with the guidance of the mentor, short and long term goals that would increase their environmental rating score should they be implemented.

**Table 1: Caregiver Interactions with Children  
 Positive Behaviors by Type of Provider**

**Average Score**  
**1 = never; 2 = few instances**  
**3 = many instances; 4 = consistently**

<b>Item</b>	<b>FDCH</b>	<b>GDCH</b>	<b>Center</b>
Speaks warmly to children	4.00	4.00	3.88
Listens attentively when children speak	4.00	3.75	4.00
Excited about teaching	4.00	3.75	3.88
Seems to enjoy children	4.00	4.00	4.00
When children misbehave, explains reason for rules	3.83	3.25	3.63
Encourages children to try different experiences	3.17	3.00	3.63
Seems enthusiastic about children's activities	4.00	3.75	3.88
Pays positive attention to the children	4.00	3.75	4.00
Appropriately reprimands children when they misbehave	4.00	4.00	4.00
Talks to children on a level they understand	3.83	4.00	4.00
Exercises firmness when necessary	4.00	4.00	4.00
Encourages children to exhibit prosocial behavior	3.83	4.00	3.88
Positive physical contact	4.00	3.50	3.50
Seems interested in children's activities	4.00	3.75	3.88
Sincere in tone of voice and manner	4.00	4.00	4.00
Supervises the children closely	4.00	4.00	3.75
Expects children to exercise self control	4.00	3.75	3.88
When talking to children, bends or sits at their level	4.00	4.00	3.88
<b>Totals</b>	<b>3.92</b>	<b>3.93</b>	<b>3.87</b>

**Table 2: Caregiver Interactions with Children  
 Negative Behaviors by Type of Provider**

**Average Score**  
**1 = never; 2 = few instances**  
**3 = many instances; 4 = consistently**

<b>Item</b>	<b>FDCH</b>	<b>GDCH</b>	<b>Center</b>
Seems critical of the children	1.17	1.25	1.00
Places high value on obedience	1.17	1.50	1.38
Seems emotionally distant from children	1.00	1.00	1.00
Exercises little control over children	1.00	1.25	1.00
Speaks with irritation or hostility	1.00	1.25	1.13
Threatens children in trying to control them	1.17	1.25	1.13
Spends considerable time in activity not involving children	1.00	1.25	1.13
Negative physical contact	1.00	1.00	1.13
Routine or mechanized teaching style	1.00	1.25	1.13
Punishes the children without explanation	1.17	1.00	1.00
Finds fault easily with children	1.00	1.00	1.00
Seems to prohibit many things children want to do	1.17	1.50	1.00
Seems unnecessarily harsh when scolding children	1.00	1.00	1.00
<b>Totals</b>	<b>1.07</b>	<b>1.21</b>	<b>1.08</b>