

Cumberland County's Kindergartners & Schools

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Cumberland County
School Readiness Assessment
FPG Child Development Institute
The University of North Carolina at Chapel Hill

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For more information about school readiness assessment in North Carolina, visit the NC SRA project web site at www.fpg.unc.edu/~SchoolReadiness

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Introduction

SCHOOL READINESS is an important issue facing the nation. The first National Education Goal states, “all children in America will start school ready to learn.”¹ Since the establishment of this goal, the issue of children’s preparedness for school has drawn increased attention from legislators, policy makers, and educators who face accountability pressures. The national Goal 1 (Ready to Learn) subgroup defined school readiness and recommended assessment principles and guidelines, but did not adopt a national school readiness assessment.² Thus, we do not have regularly reported national information about children’s skills as they enter school. In the late 1990s, the U.S. Department of Education began a national study of children, following them from kindergarten through fifth grade. This study provided national information about children’s school readiness skills in 1998-99.

Because there is no official national school readiness assessment, some states have developed their own. As of 1999, 13 states conducted statewide screenings or assessments for children entering kindergarten and an additional 16 states were working on school readiness initiatives.³

School readiness is an important issue in North Carolina. North Carolina’s *First in America*, State Board of Education, and Smart Start goals have each emphasized school readiness.⁴ In 1999, the Ready for School Goal Team, a state task force of members from the early childhood and public school communities, was charged with developing a definition of school readiness and a plan for assessing school readiness statewide.⁵ The North Carolina definition of school readiness and the task force’s assessment plan are described briefly below.

Definition of School Readiness

North Carolina has defined school readiness as

- a) the condition of children when they enter school, and
- b) the capacity of schools to educate all children.

Caution

School readiness as described here should not be confused with eligibility for school. All children who meet the legal age requirement (i.e., are 5 by October 16) are eligible—indeed, they are legally entitled—to enter kindergarten.

The **condition of children** when they enter school includes the following five areas of development and learning.

- ❖ *Health and Physical Development* includes children’s physical development and abilities.
- ❖ *Social and Emotional Development* includes children’s feelings about themselves and others, ability to form positive relationships with adults and children, ability to understand the perspective and feelings of others, and skills needed to get along well in a group setting.
- ❖ *Approaches Toward Learning* includes curiosity, enjoyment of learning, confidence, creativity, attention to task, reflection, and interests.
- ❖ *Language Development and Communication* includes verbal and nonverbal skills to convey and understand others’ meaning as well as early literacy skills.
- ❖ *Cognition and General Knowledge* includes basic knowledge about the world and other thinking skills like early math and basic problem-solving skills.

The **capacity of schools** to educate all children includes four cornerstones.

- ❖ *Knowledge of growth and development of children.*
- ❖ *Knowledge of strengths, interests, and needs of each child.*
- ❖ *Knowledge of the social and cultural contexts in which each child and family lives.*
- ❖ *Ability to translate knowledge into developmentally appropriate practice.*

Schools are responsible for accepting and addressing the learning needs of all children who are old enough to enter kindergarten. They need to help children and families make a successful transition into kindergarten.⁶ Teachers and administrators must have the knowledge, resources, and supports to ensure that they are ready to teach all children—those who come to school with many skills and those who have few.

Additionally, teachers and administrators in ready schools establish a nurturing atmosphere, use a curriculum that provides meaningful contexts for learning and addresses the five areas of development described above, and support practices that address the unique ways in which young children learn. Ready schools build strong positive relationships with families. They create partnerships with preschool teachers, community programs, and higher education to ensure that they are able

to educate all children. North Carolina’s definition of ready schools is similar to the National Education Goals Panel description of ready schools.⁷

Families and communities provide important support for each piece of the school readiness puzzle. As children’s first teachers, parents’ relationships and interactions with their children form the critical foundation for lifelong learning. Parents should have access to information and support in this important role. They should also have access to high quality out-of-home early care and education programs for their children. Nationally, 81% of 4-year-olds are cared for by someone other than their parents.⁸ Many of these children attend center-based early care and education programs. Research has shown that children who attend high quality child care centers have better school outcomes than those who attend lower quality care.⁹ Thus, families need access to high quality care and education programs for their young children. Communities are responsible for providing support for young children and their families, including health care and early care and education. Communities must also provide resources to ensure that their schools are “ready” for all children.

School Readiness Assessment Recommendations

North Carolina’s school readiness task force made several assessment recommendations, including the creation of a new statewide assessment for the purpose of accountability in the broad sense. Assessment of children as they enter kindergarten provides the best source of data for examining the overall impact of early, before-school experiences provided by families, early care and education programs, and communities on children’s preparedness for school. Assessment of schools provides valuable information about how well schools are prepared to serve kindergartners. If conducted regularly, the assessment will allow NC to monitor statewide trends over time. This new assessment, the North Carolina School Readiness Assessment (NC SRA), was pilot tested in the fall of 2000. It provided statewide information about children’s school readiness skills and schools’ preparedness for kindergartners in 2000-2001.¹⁰

The NC SRA was designed to provide a “snapshot” of the condition of children and the capacity of schools to educate all children in North Carolina. As such, it provides a broad description of school readiness. The NC SRA does not provide information that will help guide kindergarten instruction or identify children who might have disabilities. The task force made separate recommendations for these two other assessment purposes.¹¹

Cumberland County School Readiness Assessment

Although the information gathered in the Fall 2000 NC SRA was helpful in understanding the condition of children and the capacity of schools across the state, the NC SRA did not provide any information about children and schools at the county level. Consequently, community members in Cumberland County joined together to implement the Cumberland County School Readiness Assessment (CCSRA). As with the statewide study, the CCSRA was designed to provide Cumberland County with a “snapshot” of the condition of children and the capacity of schools countywide.

Purpose and Organization of Report

The purpose of this report is to describe key findings from the Fall 2001 CCSRA. Information about two pieces of the school readiness puzzle—children and schools—is presented in this report. Whenever possible, findings from the CCSRA are compared to findings from statewide and national studies of kindergartners and schools. **Unless otherwise noted, all data pertaining to North Carolina are taken from the Fall 2000 NC SRA.**¹² The first section of the report describes the condition of children as they enter school, organized by the five domains of development and learning. Because family and community circumstances place some children at greater risk of school failure than others, descriptions of children at risk and not at risk for school failure are also provided. The second section of the report describes key indicators of schools’ capacity to meet the needs of all kindergartners. Comparisons are made between schools that serve a large proportion of children at risk and schools that do not. The final section draws conclusions and makes recommendations based on the findings.

Study Description

Participants

The Fall 2001 CCSRA gathered information about school readiness from a random sample of children just entering kindergarten and their parents as well as from all public school kindergarten teachers and elementary public school principals who supervise kindergartens in Cumberland County. The sample is representative of kindergartners and public schools countywide and includes 198 kindergartners from 48 public schools. Every elementary school in the county that serves kindergartners participated in the study. One kindergartner from each classroom with kindergarten students at the school participated in the assessment. Fourteen classrooms did not participate in the study because no eligible kindergartners were enrolled.⁹ Only children with parental consent were eligible to be selected for the study. Children repeating kindergarten were not included. The sample included children with and without disabilities. It also included children who spoke English or Spanish as their primary language.

Assessments

A variety of measures were used to assess the two pieces of the school readiness puzzle—children and schools. Information about the condition of children was gathered from parents, kindergarten teachers, and children. Project staff developed surveys for parents. Questions on the parent survey addressed children’s health, health insurance coverage, motor skills, approaches toward learning, previous child care experiences, and family demographics. Kindergarten teachers were asked to rate children’s social skills and problem behaviors. Project staff assessed children’s language and math skills during one-on-one activities with the children.

Project staff also developed surveys for principals and teachers. The principal and teacher surveys focused on schools’ capacity to educate kindergartners. Questions addressed class size, education and experience, activities and materials, kindergarten transition practices, professional development opportunities, and school services. Information about kindergarten transition practices was also obtained from the parent survey. A complete description of the assessment battery is available on the NC SRA web site.¹³

Procedures for Gathering Information

Project staff visited children early in the school year (about the ninth week) to obtain information about the condition of children near the time they entered school. During our visit, we gave teachers a social skills rating scale to complete for each participating child and we sent a parent survey home with each participating child. We also gave surveys about schools' readiness for children to principals and kindergarten teachers. Principals, teachers, and parents were eager to share their thoughts about school readiness. Eighty percent of parents of participating children returned surveys; 83% of teachers returned surveys; 85% of teachers rated children's social skills; and 88% of principals returned surveys. The information provided by these individuals is included in this report. Data gathered from children and their parents were weighted based on population estimates so that conclusions about *all* of Cumberland County's kindergartners can be drawn from our sample of children. Data gathered from kindergarten teachers and principals did not need to be weighted because all kindergarten teachers and principals were given the opportunity to complete surveys, and most provided data for the study.

Defining Risk

If Cumberland County wants all children to be successful in school, then the community must look beyond the general descriptions of children and schools to examine differences between children at risk and not at risk for school failure and the schools that serve them. Years of research have demonstrated that children from lower-income families have poorer educational outcomes than children from higher-income families.¹⁴ For this report, risk was determined by family income. Specifically, children whose parents or teachers reported that they were eligible for free or reduced-price school lunch were defined as at risk for school failure. Children from families with an income up to 185% of the poverty level are eligible for free or reduced-price lunch at schools that participate in the National School Lunch Program. For the period July 1, 2001, through June 30, 2002, 185% of the poverty level was determined to be an annual income of \$32,653 for a family of four.¹⁵ The terms *at risk* and *lower income* are used in this report to refer to Cumberland County children who qualify for free or reduced-price lunch.

In this report, we also examine characteristics of schools that served a high proportion of kindergartners at risk for school failure. We used free and reduced-price lunch eligibility as our definition of risk. *High-poverty schools*^b were defined as those with half or more of the kindergartners eligible for free or reduced-price lunch. *Low-poverty schools* were defined as those with less than half of the kindergartners eligible for free or reduced-price lunch.

Condition of Children

This section begins by describing basic characteristics of kindergartners. Findings from each of the five domains of development and learning are then presented.

Who Are Cumberland County's Kindergartners?

On average, kindergartners were about 5½ years old at the beginning of the school year. About half of the children (51%) were male. The racial and ethnic composition of Cumberland County's kindergarten population is shown in Figure 1. Principals reported that about 4% of kindergartners received special education or related services and less than 2% of kindergartners were learning English as a second language. One percent of the children who participated in the CCSRA spoke Spanish as their primary language.

Fifty-five percent of Cumberland County's kindergartners were at risk for school difficulties because they were from lower-income families. This figure is larger than that for North Carolina. Statewide, approximately 40% of kindergartners were at risk for school difficulties due to low income. Maternal education level also has been shown to be related to children's risk for school failure.¹⁶ Approximately 9% of Cumberland County kindergartners' mothers did not have a high school diploma compared to 14% of kindergartners' mothers statewide. Seventeen percent of Cumberland County kindergartners' mothers had a Bachelor's degree or higher compared to 20% statewide.

Parents reported that approximately 84% of Cumberland County kindergartners were cared for by someone other than a parent for at least 10 hours a week during the year before they entered kindergarten. (See Table 1.) Statewide, 69% of kindergartners were cared for by someone other than a parent before they entered school. Nationally, 81% of 4-year-olds were cared for by someone other than a parent.¹⁷ More children from lower-income families were cared for by their parents only compared to children from higher-income families (19% vs. 12%), but this difference was not significant.^c Child care center was the most frequent nonparental care arrangement for both lower-income and higher-income children (25% and 33%). Sixty-one percent

Figure 1
Racial & Ethnic Composition of CC Kindergartners

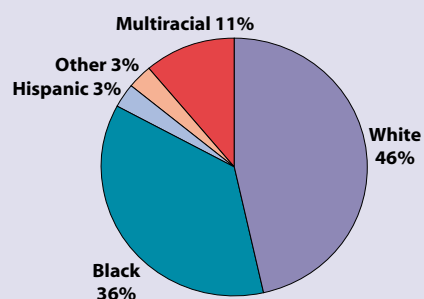


Table 1
Care Arrangements for Children the Year Before Kindergarten

	CC	NC
Parent only	16%	31%
Child care center	29%	33%
Public preschool	15%	6%
Relative	15%	9%
Head Start	10%	6%
Babysitter	7%	5%
Family child care home	5%	3%
Half-day preschool	4%	5%
Unknown (not parent)	0%	3%

of Cumberland County children participated in some type of center-based early care and education program during the year before they entered school. Of children who were cared for by someone other than a parent, 17% used two different care arrangements and 2% used more than two care arrangements during this period.

Health & Physical Development

Children's health and physical development are critical to their school success. The Fall 2001 CCSRA included measures of children's general health status, health insurance coverage, and motor skills.

Overall, the health of Cumberland County kindergartners as rated by their parents was very similar to their peers across the state and nationally. Eighty-six percent of kindergartners in Cumberland County were rated as having very good or excellent health compared to 85% of kindergartners statewide. Nationally, 83% of kindergartners were rated as having very good or excellent health.¹⁸ Fewer Cumberland County kindergartners from lower-income families (83%) were in very good or excellent health compared to kindergartners from higher-income families (90%), but this difference was not significant. A significant difference in health status between lower-income and higher-income children has been found in North Carolina and nationally.¹⁹

According to parent reports, approximately 6% of kindergartners in Cumberland County did not have any health insurance coverage. This figure is the same as that for North Carolina. More children from lower-income than higher-income families were uninsured (7% vs. 4%).

Most Cumberland County kindergartners demonstrated age-appropriate motor skills according to their parents. Ninety-six percent could button their own clothes; 92% could mostly write and draw rather than scribble; and 87% could walk without tripping, stumbling, or falling easily. These figures are similar to those for the state. Significantly more higher-income than lower-income children were able to walk without tripping, stumbling, or falling (93% vs. 82%).

Summary

On average, Cumberland County kindergartners were in very good health and demonstrated age-appropriate motor skills. Their health and physical development were very similar to their peers statewide. The health of Cumberland County children from lower-income families was not significantly different from that of children from higher-income families. Likewise, the motor skills of children from lower-income families were similar to those of higher-income children with only one exception (i.e., walking without tripping, stumbling, or falling). Statewide, there is a significant difference in the health status and motor skills of lower-income and higher-income kindergartners.

Social & Emotional Development

Children’s ability to interact well with other children and adults is an important part of school. The Fall 2001 CCSRA included teacher ratings of kindergartners’ positive social skills and problem behaviors.

Cumberland County kindergartners varied widely in both their social skills and problem behaviors. The Cumberland County average score of 98 for social skills was about the same as the national average^d of 100. The Cumberland County average score of 97 for problem behaviors also was about the same as the national average (higher scores indicate more problem behaviors). The average scores for social skills and problem behaviors in Cumberland County were about the same as those for North Carolina. Compared to national norms,^e about the same number of Cumberland County kindergartners had very low^f social skills (17% in CC vs. 16% nationally) and fewer Cumberland County kindergartners had very high^g problem behaviors (9% in CC vs. 16% nationally).

We compared Cumberland County data with state and U.S.²⁰ data for certain social skill and problem behavior items. (See Table 2.) Compared to kindergartners across the state, about the same number of Cumberland County kindergartners were rated by their teachers as making friends easily and more Cumberland County kindergartners were rated as accepting peer ideas. However, Cumberland County and NC ratings were lower than those for kindergartners nationally. About the same number of Cumberland County children were rated as fighting often with others and getting angry easily compared to kindergartners across the state. These county and state ratings of problem behaviors were lower than those for kindergartners nationally. Because these are teacher-reported data, differences between kindergartners in Cumberland County, North Carolina, and the U.S. may be due to differences in children’s skills or differences in teachers’ expectations. Most likely, both factors account for the difference.

Children’s risk status was related to social skills, but not problem behaviors. Children from lower-income families were rated by teachers as having significantly fewer positive social skills than children from higher-

Table 2
Percentage of Kindergartners Who Very Often...

	CC	NC	US
Make friends easily	67%	63%	77%
Accept peer ideas	47%	41%	74%
Fight with others	3%	4%	10%
Get angry easily	6%	6%	11%

Figure 2
Social Skills by Family Income

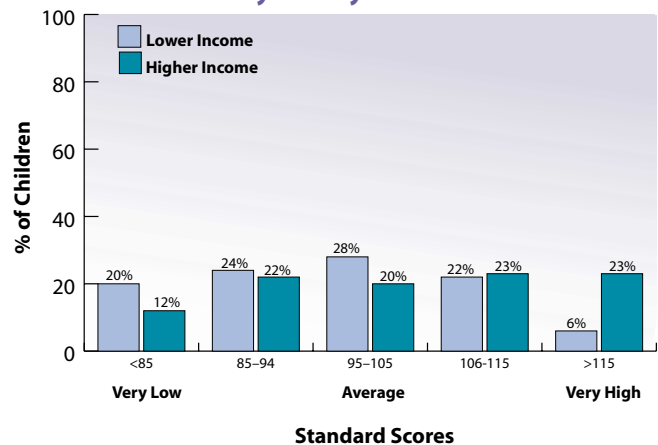
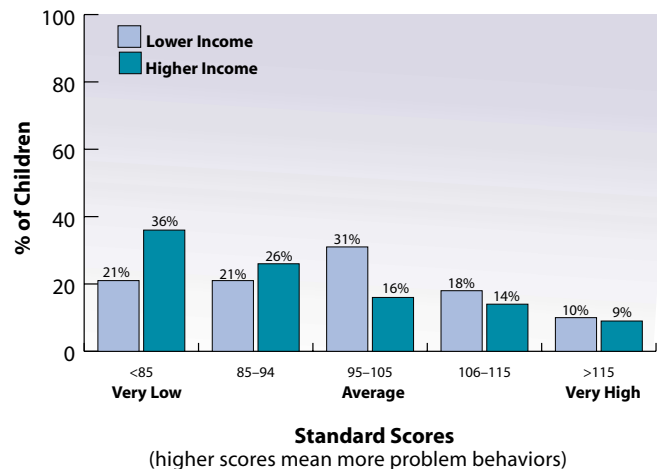


Figure 3
Problem Behaviors by Family Income



income families. (See Figure 2.) Children’s problem behaviors were about the same for both income groups. (See Figure 3.) Results from the statewide study indicated that children’s risk status was related to both social skills and problem behaviors.

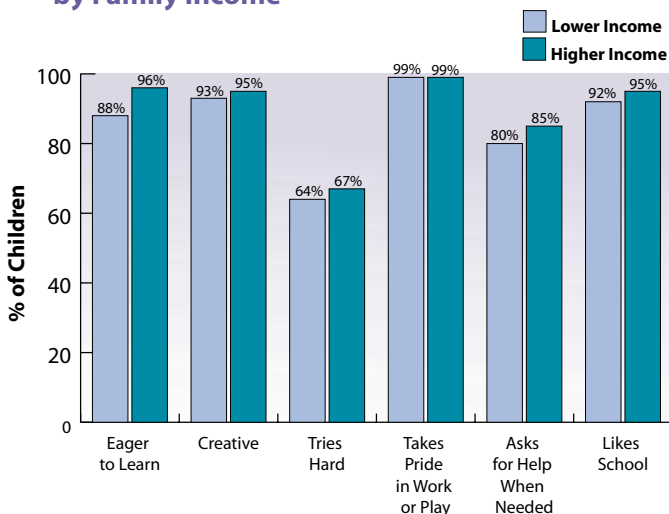
Summary

In general, the social skills of Cumberland County kindergartners were about as well developed as those of kindergartners across the state and nationally. Children from lower-income families in Cumberland County had significantly lower social skills than children from higher-income families. However, lower-income and higher-income children did not differ in their problem behaviors. Statewide, kindergartners from lower-income families had significantly lower social skills and significantly more problem behaviors than their higher-income peers.

Table 3
Percentage of Kindergartners Who Often or Very Often...

	CC	NC	US
Seem eager to learn	92%	89%	92%
Show creativity	94%	91%	85%
Try hard (persist)	65%	63%	73%

Figure 4
Approaches Toward Learning by Family Income



Approaches Toward Learning

This domain includes characteristics important in developing lifelong learners—eagerness to learn, creativity, persistence, pride in own work, asking for help when needed, and enjoyment of school. In the Fall 2001 CCSRA, parents rated the frequency with which their child demonstrated each of these characteristics.

Overall, kindergartners in Cumberland County were as eager to learn, creative, and persistent as their peers statewide. Compared to kindergartners nationally, Cumberland County kindergartners were rated as being about as eager to learn, more creative, and less persistent.²¹ (See Table 3.) The differences between Cumberland County and national data may be due to differences in the children, differences in parents’ expectations, or both.

Approaches toward learning for children from lower-income and higher-income families in Cumberland County are shown in Figure 4. There were no significant differences between children at risk and those not at risk on any of the approaches. These findings contrast with statewide results that indicated lower-income and higher-income children differed significantly on all six approaches toward learning.

Summary

Overall, Cumberland County kindergartners demonstrated positive approaches toward learning with about the same frequency as their peers statewide. Likewise, children from lower-income families were rated by their parents as demonstrating these positive characteristics with about the same frequency as children from higher-income families. Statewide, there is a significant difference in the approaches toward learning of lower-income and higher-income kindergartners.

Language Development & Communication

Several measures of children's language skills provided information about children's understanding of spoken words, their ability to name letters of the alphabet, their ability to break spoken words into parts (i.e., phonemic awareness), and their understanding of story and print concepts. Children's performance in each of these areas is presented in this section.

Cumberland County kindergartners varied in their understanding of spoken words. The average Cumberland County score of 100 on this measure was the same as the national average of 100 and higher than the NC average of 97. About the same number of Cumberland County children scored very low and fewer children scored very high compared to national norms. (See Table 4.)

A similar pattern was evident in a measure of children's ability to recognize letters of the alphabet and simple words. Like kindergartners across the state, Cumberland County kindergartners varied in these skills. Some children could not correctly identify any letters of the alphabet that were shown to them while others could read words. Cumberland County's average score of 97 on this measure was lower than the national average of 100, but higher than the NC average of 93. Compared to national norms, about the same number of Cumberland County kindergartners had very low scores (18% in CC vs. 16% nationally), but fewer Cumberland County kindergartners had very high scores (6% in CC vs. 16% nationally).

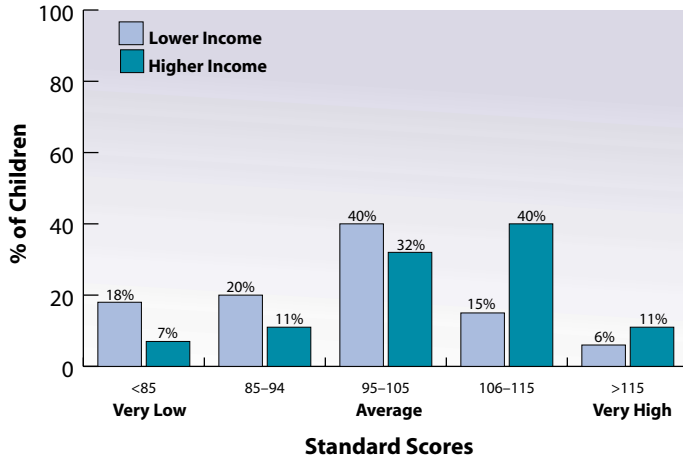
On a measure of phonemic awareness, 37% of Cumberland County kindergartners could not answer correctly any items. This figure is similar to the statewide rate of 39%. Of those kindergartners who were able to answer at least 1 item correctly, the Cumberland County average score was about the same as the national and statewide average scores.

The CCSRA also included information about kindergartners' understanding of books. Many children (91%) could identify the front of a book (compared to 87% in NC) and over half (64%) understood that one reads from left to right (compared to 64% in NC).

Table 4
Understanding of Spoken Words

	CC	NC	National Norms ^e
% with very low scores (<85)	13%	21%	16%
% with very high scores (>115)	8%	8%	16%

Figure 5
Understanding of Spoken Words
by Family Income



Language and communication skills differed greatly between children from lower-income and higher-income families. These differences were significant for each skill measured—children’s understanding of spoken words, their ability to name letters of the alphabet, their ability to break spoken words into parts (i.e., phonemic awareness), and their understanding of story and print concepts. Figure 5 provides an example of the gap in skills between children from lower-income families and those from higher-income families. The NC and national²² studies of kindergartners also reported income differences in children’s language and communication skills.

Summary

On average, Cumberland County kindergartners’ language and communication skills were about the same as the national average and higher than the statewide average. On some language measures, fewer Cumberland County kindergartners scored very high than would be expected based on national norms. The language and communication skills of children from lower-income families were significantly lower than those of children from higher-income families.

General Knowledge & Math Development

The Fall 2001 CCSRA included measures of children’s knowledge of color names and early math skills. Two different math assessments were administered to kindergartners. These assessments measured children’s basic math skills such as counting and understanding concepts like *big*. A composite math score (the average of the two assessment scores) is reported.

Many Cumberland County kindergartners (79%) could name 10 basic colors. Almost all children (95%) could either name or find 10 basic colors. These figures are very similar to NC averages. About twice as many children from lower-income families could not name or find all 10 basic colors as compared to children from higher-income families (7% vs. 3%). This was also true of kindergartners statewide.

Table 5
Math Skills

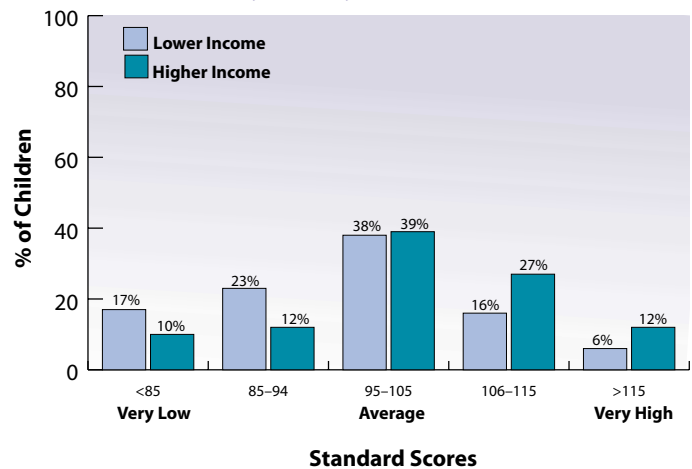
	CC	NC	National Norms ^e
% with very low scores (<85)	14%	22%	16%
% with very high scores (>115)	8%	6%	16%

Children’s math skills varied widely. The average score of 98 was about the same as the national average of 100 and higher than the statewide average of 95.

About the same number of Cumberland County kindergartners scored very low and fewer kindergartners scored very high compared to national norms. (See Table 5.)

As shown in Figure 6, more children from lower-income families had very low math scores compared to children from higher-income families. Additionally, fewer children from lower-income families had very high math scores compared to children from higher-income families. The difference in math skills between lower-income and higher-income children was significant. Income differences in math skills were also evident in the North Carolina and national²³ studies of kindergartners.

Figure 6
Math Skills by Family Income



Summary

Cumberland County kindergartners generally knew the names of basic colors. Overall, their math skills were about the same as the national average and higher than the statewide average. Fewer Cumberland County kindergartners scored very high on math measures than would be expected based on national norms. Kindergartners from lower-income families had significantly lower math skills than children from higher-income families.

Capacity of Schools

North Carolina recognizes that schools are an important part of “readiness.” Schools must be able to educate effectively all children who enroll in kindergarten. This section of the report describes key characteristics of kindergarten teachers, classrooms, principals, and elementary schools in Cumberland County. Characteristics of schools serving a high proportion of lower-income kindergartners are highlighted throughout the section. We designated 60% of Cumberland County schools as high-poverty schools because half or more of their kindergarten students were eligible for free or reduced-price lunch.

Teachers

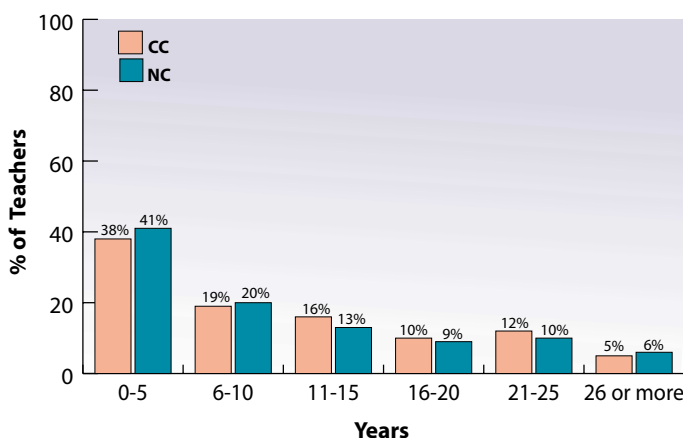
Kindergarten teachers play an important role in helping children make the transition to school and facilitating their learning. In the fall of 2001, 98% of kindergarten teachers in Cumberland County were female; 79% were White and 17% were Black. Approximately 26% of kindergarten teachers had earned a Master’s degree or higher. This number is lower than national figures of 40% to 47% of kindergarten teachers with a Master’s degree or higher;²⁴ however, it is very similar to the North Carolina statewide rate. Four percent of Cumberland County’s kindergarten teachers have obtained advanced certification from the National Board for Professional Teaching Standards.

Almost all kindergarten teachers in Cumberland County (95%) were licensed to teach at the kindergarten level. However, only 6% were licensed in an area that requires extensive coursework in early childhood development (i.e., Birth-Kindergarten or PreK-K add-on license). This number is lower than the NC figure of 11%. Cumberland County kindergarten teachers had taught preschool or kindergarten for an

average of 11 years, similar to statewide and national averages.²⁵ Thirty-eight percent of Cumberland County kindergarten teachers had no more than 5 years of experience. (See Figure 7.) This number is similar to NC findings. Kindergarten teacher education and licensure were similar for low-poverty and high-poverty schools.

Kindergarten teachers across Cumberland County used a variety of strategies to help children and families prepare for school entry. Almost all Cumberland County kindergarten teachers reported that open houses were conducted before

Figure 7
Teaching Experience of Kindergarten Teachers



the school year began. However, Cumberland County’s kindergarten teachers reported engaging in other transition practices with equal or less frequency than kindergarten teachers statewide and nationally.²⁶ (See Table 6.) The frequency of four transition activities differed significantly for high-poverty and low-poverty schools. Kindergarten teachers in low-poverty schools were significantly more likely to send written materials to a child’s home before school started than teachers in high-poverty schools (72% vs. 52%). Preschool teachers were significantly more likely to bring children to visit kindergarten classrooms in high-poverty than low-poverty schools (31% vs. 13%), and kindergarten teachers in high-poverty schools were significantly more likely to have informal contacts with preschool teachers about children than those in low-poverty schools (39% vs. 23%). More kindergarten teachers in high-poverty than low-poverty schools reported the occurrence of regular meetings among school, early childhood, and preschool staff (23% vs. 7%).

Parents also provided important information about kindergarten transition activities. Almost all parents (98%) reported meeting their child’s teacher during the early part of the school year. This number is similar to the North Carolina figure. Likewise, about the same number of Cumberland County parents reported that they had received written information about preparing their child for kindergarten compared to parents of kindergartners statewide (92% in CC vs. 93% in NC). Although many kindergarten teachers indicated that they did not send written materials to children’s homes before school started, parents likely credited schools for any materials provided to them prior to completing our survey.

Summary

Compared to kindergarten teachers nationally, fewer Cumberland County teachers had a Master’s degree or higher. Although almost all kindergarten teachers in Cumberland County were teaching within their area of licensure, only a small percentage had a license that required extensive early childhood development training. Cumberland County kindergarten teachers had about as much teaching experience as their peers across the state and nationally. However, Cumberland County teachers used practices designed to help children and families make the transition into school less frequently than teachers across North Carolina and the nation. Teachers in high-poverty schools used some transition practices more frequently than teachers in low-poverty schools. Kindergarten teacher education and licensure did not differ for low-poverty and high-poverty schools.

Table 6
Kindergarten Transition Practices Used with Some or All Students

	CC	NC	US
Open house before school starts	97%	84%	62%
Written materials sent to child’s parent before school starts	59%	82%	62%
Written records of child’s past experiences	75%	77%	74%
Preschoolers visit kindergarten classroom	23%	33%	39%
Kindergarten teacher visits preschools	6%	10%	17%
Informal contacts with preschool teachers	32%	40%	NA
Regular meetings among school & early childhood community	14%	35%	29%

Classrooms

The classroom environment is a critical part of schools' readiness for children. Cumberland County kindergarten programs in public schools were full day, five days a week. Kindergarten class size in Cumberland County ranged from 10 to 29 students. The average kindergarten classroom had 20 students, the same as the national average²⁷ and one child less than the statewide average of 21 students. The average class size for high-poverty schools in Cumberland County was significantly

smaller than for low-poverty schools (19 vs. 21). However, these class sizes were larger than the class size of 18 set as a goal by the U.S. Department of Education.²⁸

Almost all Cumberland County kindergarten classrooms (99%) had a teacher assistant. In 95% of these classrooms, the assistant worked full time. Both of these percentages are the same as statewide figures. The average child to adult ratio in kindergarten was 10 children per adult, one child fewer than the statewide ratio of 11:1.

Figure 8
Frequency of Classroom Activities

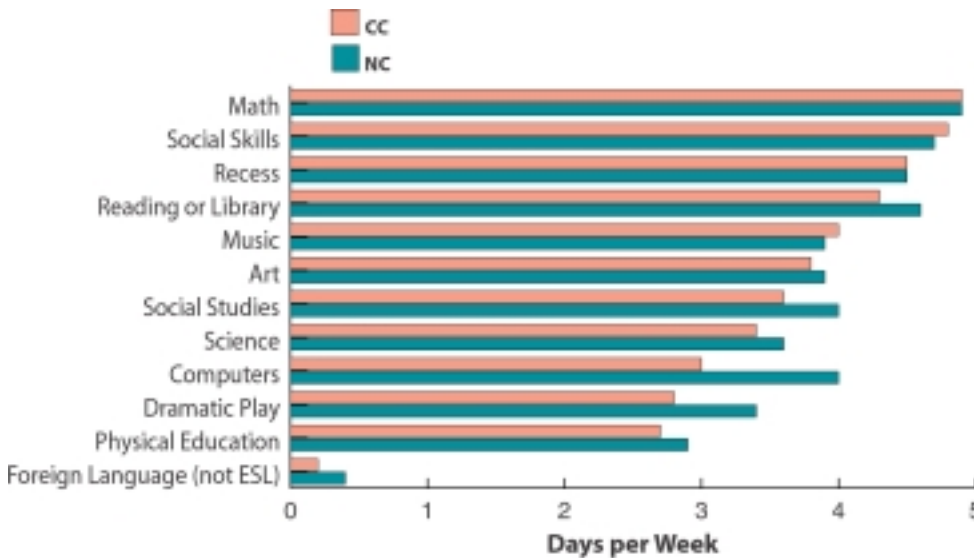


Table 7
Percentage of Classrooms with Excellent Learning Center Materials

	CC	NC
Math	54%	48%
Fine motor	42%	41%
Blocks	39%	39%
Reading	35%	42%
Dramatic play	34%	26%
Sand/Water	31%	26%
Writing	26%	22%
Computer	23%	32%
Art	22%	26%
Listening	21%	21%
Music	16%	11%
Science	12%	9%

Cumberland County kindergartners were exposed to many learning activities at school. Teachers reported that math, social skills, and recess were covered about every day. Reading also occurred frequently. The frequency of classroom activities is shown in Figure 8.

Teachers also provided information about the learning centers in their classrooms. The availability of learning centers in Cumberland County kindergartens was generally high and was similar to state and national availability.²⁹ Kindergarten teachers rated the quantity and quality of most learning center materials as adequate or excellent, but some centers were rated as having better materials than others. (Note that this information is about learning center materials. Teachers were not asked to rate the quantity and quality of other classroom materials.) Overall, Cumberland County kindergarten teachers rated math, fine motor, and block center materials as the best. (See Table 7.) Fewer

teachers rated science/nature and music center materials as excellent. The percentage of excellent learning center materials was generally the same or higher in Cumberland County kindergartens compared to kindergartens across North Carolina. Teachers contributed an average of \$521 of their own money to purchase classroom materials in the past year. This figure is higher than the \$425 of personal expenditure reported by kindergarten teachers statewide. The quantity and quality of learning center materials were the same for high-poverty and low-poverty schools.

Summary

Cumberland County's average kindergarten class size of 20 is comparable to classrooms nationwide, with classrooms in high-poverty schools significantly smaller than those in low-poverty schools (19 vs. 21). However, the average Cumberland County kindergarten class size is larger than the class size of 18 set as a goal by the U.S. Department of Education.³⁰ Kindergartners engaged in a variety of learning activities each week and, in general, had access to adequate materials in their classroom learning centers. The quantity and quality of learning center materials was the same in high-poverty and low-poverty schools. In general, the characteristics of Cumberland County kindergarten classrooms were similar to kindergarten classrooms statewide.

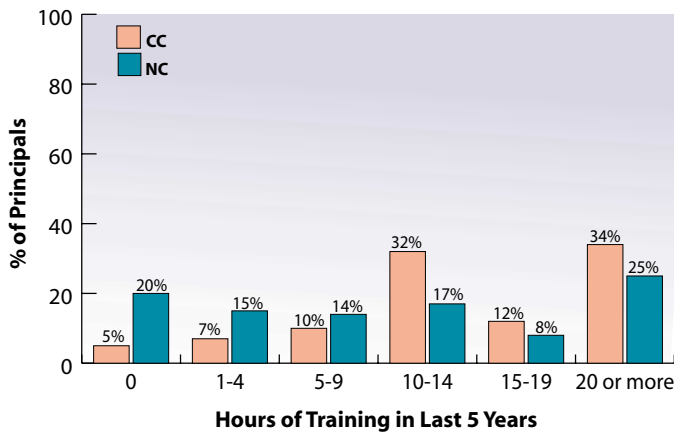
Principals

Elementary school principals provide leadership and support for the teachers and staff who work with kindergartners. In Cumberland County, 83% of principals were female; 62% were White and 33% were Black. All principals had a Master's degree. Fewer principals in Cumberland County had education beyond a Master's degree (e.g., Education Specialist) compared to their peers statewide (29% in CC vs. 51% in NC). Principal education did not differ between high-poverty and low-poverty schools.

On average, principals had 9 years of experience as principals, similar to the national average,³¹ but less than the statewide average of 11 years. Cumberland County's principals had an average of 14 years of teaching experience compared to the statewide average of 13 years and the national average of 11 years.³² Approximately 76% of Cumberland County principals were licensed to teach at the kindergarten level compared to 47% statewide, and 55% of principals had taught either preschool or kindergarten compared to only 17% statewide.

Continuing education and in-service training allow education professionals to stay current with knowledge in the field. Thirty-four percent of Cumberland County's principals had 20 or more hours of early childhood education training in the last five years, whereas only 5% of principals had not had any recent early childhood education training. The training experience of Cumberland County principals is greater

Figure 9
Principals' Recent Training
in Early Childhood Education



than that of principals statewide. (See Figure 9.) Significantly more principals from low-poverty schools reported having 20 or more hours of early childhood education training than principals from high-poverty schools.

Summary

Cumberland County principals had at least a Master's degree, but fewer Cumberland County principals had education beyond a Master's degree than their peers statewide. Many principals were certified to teach kindergarten and more than half had spent some time teaching kindergarten. Over three-fourths of Cumberland County principals had received early childhood education training within the past few years. Principal education did not differ for high-poverty and low-poverty schools, but principals from

low-poverty schools were more likely to have extensive early childhood education training. Compared to principals statewide, principals in Cumberland County were better on some characteristics and worse on others.

Schools

School resources such as buildings and services contribute to schools' ability to meet the needs of all students. Approximately 42% of Cumberland County's elementary schools had at least one building that was 40 years old or older compared to 39% of elementary schools statewide.

Schools provided a range of services for children outside the normal K-12 age range and traditional school day. In Cumberland County, 74% of schools with kindergartens offered before- or after-school care for students compared to only 31% of schools statewide. Approximately 48% of schools had on-site prekindergarten programs for at-risk 4-year-olds compared to 30% statewide, and 14% offered prekindergarten for at-risk 3-year-olds compared to 8% statewide. High-poverty schools tended to offer more services for at-risk children prior to school entry than low-poverty schools, but the difference was not statistically significant.

Schools varied somewhat in the type of professional services available to kindergartners. Many services were available to all kindergartners in Cumberland County. (See Table 8.) Professional services were equally available in high-poverty and low-poverty schools.

Summary

Approximately three-quarters of Cumberland County elementary schools offered before- or after-school care and about half offered prekindergarten for at-risk 4-year-olds. Both of these figures are higher than those for North Carolina. Cumberland County schools generally provided a wide variety of services to their kindergarten students. Kindergartners from both high-poverty and low-poverty schools had the same professional services available to them. Many services were more widely available in Cumberland County schools than in elementary schools statewide.

Table 8
Percentage of Schools with Professional Services Available to Kindergartners

	CC	NC
Art teacher	100%	83%
Counselor	100%	96%
Music teacher	100%	93%
Occupational therapist	100%	79%
PE teacher	100%	92%
Physical therapist	100%	72%
School nurse	100%	87%
School psychologist	100%	93%
Social worker	100%	79%
Special education teacher	100%	92%
Speech & language therapist	100%	99%
ESL teacher	93%	61%
Curriculum specialist	61%	50%
Reading specialist	59%	43%
Drama teacher	3%	7%

Conclusions

The Fall 2001 CCSRA provides a general description of the condition of children as they enter school and the capacity of schools to educate all kindergartners in Cumberland County. The demographic characteristics of the kindergartners in the sample are similar to those of all kindergartners in the county as reported by teachers in the study and all students in the county as reported by the NC Department of Public Instruction.³³

The CCSRA provides a comprehensive set of data that will help both the early childhood and public school communities better understand their strengths and areas for improvement. This assessment could help Cumberland County evaluate the effectiveness of existing early childhood initiatives like Smart Start as well as new initiatives like public prekindergarten. The Fall 2001 CCSRA may be most useful, though, as a baseline from which to compare change over time. This countywide assessment would enable Cumberland County to monitor progress if conducted every 3 to 5 years. These Fall 2001 data provide the starting point for monitoring change.

The Condition of Cumberland County Kindergartners

What did the data tell us about Cumberland County's kindergartners? Key points are summarized in this section.

Children entered kindergarten with a wide range of skills. Anyone who has been around a group of young children knows that they vary in their skills and abilities. The Fall 2001 CCSRA data confirmed this. The challenge for Cumberland County is two-fold. First, the county must accept this variability as normal for children entering school. Schools must be prepared to address the diverse needs of kindergartners, and children with low skills should not be kept out of school. *Every* child in Cumberland County who is 5 years old by October 16 is legally entitled to—and could benefit from—school. The second challenge is to provide opportunities for every child to build his or her skills in each of the five areas of development and learning before coming to school.

As a group, Cumberland County kindergartners' skills in each of the five areas of development and learning were about the same as kindergartners nationally. On average, Cumberland County kindergartners' health status, social development, approaches toward learning, language and math skills were about the same as kindergartners nationally. Cumberland County kindergartners demonstrated higher language and math skills than kindergartners statewide. Although these results reflect well on children's early experiences, Cumberland County must continue to provide early learning opportunities for children to develop their skills in all areas. These learning opportunities should be available at home and in the early care and education programs that so many young children attend.

Cumberland County kindergartners from lower-income families entered school at a significant disadvantage compared to their peers from higher-income families. Years of research have demonstrated that children from lower-income families have poorer educational outcomes than children from higher-income families.³⁴ Cumberland County kindergartners from lower-income families had much lower social skills, language and communication skills, and math skills at the beginning of school than children from higher-income families. Cumberland County is not unique in facing this problem. Statewide and nationally, kindergartners from lower-income families have lower school readiness skills. Educators at all levels—local, state, and national—are responsible for addressing this issue. As a final note, it is important to remember that these are group differences. Not all children from lower-income families had low skills when they entered school.

The Capacity of Cumberland County Schools

What did the data tell us about Cumberland County's elementary schools? Two main findings are summarized below.

In general, Cumberland County schools were similar to schools statewide and nationally on most aspects of their capacity to meet the needs of kindergartners. Compared to state and national data about schools, Cumberland County did as well or better in many areas of schools' preparedness for children. Cumberland County kindergarten teachers had about as much teaching experience as their peers across the state and nation. The average kindergarten class size in Cumberland County was about the same as the national average and one child less than the statewide average. Compared to their peers statewide, more Cumberland County principals were certified to teach kindergarten; more principals had spent some time teaching kindergarten; and more principals had received early childhood education training within the past few years.

The capacity of high-poverty schools was generally the same as the capacity of low-poverty schools, but may not be good enough to meet the needs of kindergartners at risk for school failure. Although high-poverty schools were better than low-poverty schools on class size and some transition activities, schools serving a high proportion of lower-income kindergartners had similar characteristics to those serving a low proportion of lower-income kindergartners. For example, teacher and principal education, learning center materials, and services offered were generally the same in high-poverty and low-poverty schools. While it is good that the capacity of schools was generally similar for high-poverty and low-poverty schools, one could argue that the capacity of high-poverty schools should be better than that for low-poverty schools if Cumberland County wants to help children at risk catch up to their peers. The Fall 2001 CCSRA provides data that show the gap in children's skill levels before they enter the K-12 public school system. Providing the same educational services for everyone may not guarantee success for each child. Schools may need extra resources and support if they are to be successful in reducing the gap in children's skills.

Recommendations

The findings from the Fall 2001 CCSRA suggest that Cumberland County still has work to do to ensure that each child enters school ready to succeed and that schools have the capacity to educate all kindergartners. Some recommendations are provided below.

- ❖ **Prioritize high quality services for children birth through five who are at risk for school failure.** To reduce the gap in skills between children at risk and those not at risk for school failure, Cumberland County must provide high quality services and supports to these children and their families each year of their lives before they enter school. High quality prekindergarten programs for 4-year-olds at risk for school failure may be one way to deliver these services. However, preparing children for school starts at birth—not just the year before they come to school. Cumberland County needs to provide services and supports for young children at risk and their families *each year* from birth through age five.
- ❖ **Continue to improve the quality of all early care and education programs in Cumberland County.** Approximately 61% of Cumberland County children were in some type of center-based early care and education program the year before kindergarten, and many were likely in these programs for more than one year. We know that children’s development and learning is positively affected if these programs are of high quality.³⁵ Smart Start efforts have improved the quality of care and have been shown to be related to school readiness.³⁶ The Fall 2001 CCSRA data suggest that all children, not just those at risk for school failure, could benefit from high quality early care and education efforts. Cumberland County should continue to improve its early care and education system in order to strengthen the skills of entering kindergartners.
- ❖ **Provide extra resources and supports for children at risk when they enter school.** Cumberland County must continue to provide high quality services for children at risk when they enter and as they move through the public school system. Without extra help, these children will likely fall even further behind their peers from higher-income families.

- ❖ **Continue to improve the capacity of Cumberland County public schools to educate all kindergartners.** Being at or above state and national averages on key school characteristics still leaves room for improvement in meeting the needs of all children when they come to kindergarten. The average Cumberland County kindergarten class size was higher than the class size of 18 set as a goal by the U.S. Department of Education.³⁷ Compared to kindergarten teachers nationally, fewer Cumberland County kindergarten teachers had Master’s degrees. The racial and ethnic composition of kindergarten teachers should more closely reflect the racial and ethnic composition of their students. Finally, kindergarten teachers and schools should do more to support the successful transition of children and families as they move into the public school system. The credentials of Cumberland County’s principals suggest that they are well qualified to provide leadership in enhancing the school experiences of young children.

- ❖ **Support families in their roles as parents and children’s first teachers.** Families are critical to their child’s success and should have access to information and support in their important roles. Cumberland County should, for instance, provide information to families about developmentally appropriate ways to extend their child’s learning during everyday routines. Early childhood programs and public schools should work to build strong positive relationships with families and provide the support families request.

- ❖ **Continue to support children’s development and learning in each of the five areas.** Each of the five areas of development and learning is important, and children’s development in one area is affected by their development in another. To improve children’s skills in these areas, Cumberland County must provide appropriate early learning opportunities for children before they enter public school. These efforts must continue when children enter the public school system. The challenge for families and teachers (both early childhood and public school teachers) is to promote children’s learning in ways that are appropriate for their ages and developmental levels. Families, early childhood programs, and public schools need to support children’s development in all five areas—health and physical development, social and emotional development, approaches toward learning, language development and communication, and cognition and general knowledge. ↩

Notes

- ^a Most of these classrooms were mixed-aged rooms that contained few kindergarten students. The kindergartners in these classrooms were not eligible for the study due to lack of parental consent or retention.
- ^b High-poverty schools as defined in this report are not the same as and should not be confused with low wealth counties. Many more factors besides free and reduced-price lunch are considered in designating a county as low wealth. The NC Department of Public Instruction's *Allotment Policy Manual for FY 2001-02* describes in more detail criteria for defining low wealth counties. This manual is available at <http://www.ncpublicschools.org/fbs/allotment/TOC.htm>.
- ^c Throughout the report, the term *significant* means statistically significant at $p < .05$.
- ^d Throughout the report, *national average* refers to the overall mean of the standard scores for the national standardization sample for each measure. The average, or mean, for children of all income levels was set at 100 with a standard deviation of 15 for these measures. Scores on these measures can range from 40 to 160, with most scores falling between 70 and 130.
- ^e *National norms* are based on the national standardization samples of the measures. These norms were set so that 16% of the children had scores less than 85 and an additional 16% had scores greater than 115.
- ^f Throughout the report, *very low* refers to standard scores less than 85.
- ^g Throughout the report, *very high* refers to standard scores greater than 115.

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