

7. PHYSICAL MEASUREMENTS

This chapter presents a brief overview of the physical measurements obtained at 2 years. Training and quality control procedures are summarized, and correlational evidence is presented of the reliability of the measurements obtained during the 2-year data collection.

Physical growth measurements, as well as early motor development and early health care, are important constructs that were assessed in this study and are thought to be important factors contributing to school readiness. Children grow rapidly from birth through the early childhood years, requiring periodic key growth measurements. These periodic measurements, including child height, weight, middle upper arm circumference (MUAC), and head circumference for children born at very low birth weight (1,500 grams or less), were obtained because they are generally recognized as being accurate indicators of children's nutrition, health status, physical development, and well-being.

7.1 Procedural Differences at 2 Years Compared to 9 Months

In the 9-month data collection, length, weight, and MUAC were obtained for all children. In addition, head circumference was obtained for children born at very low birth weight. To measure child length at 9 months, a measure mat was used because children this age cannot stand independently to be measured for height. With the child recumbent on the measure mat, a foot plate was placed at the soles of the child's feet and the correct measurement of length was read from the markings on the measure mat. To measure child weight at 9 months, the mother first stepped on a SECA weight scale and her weight was recorded. With the mother remaining standing on the scale, the interviewer tapped a button on the scale to reset it and then handed the child to the mother. The scale then automatically calculated the child's weight by subtracting the mother's weight from the combined weight of mother and child. To measure MUAC, the child sat in the mother's lap and the interviewer measured the length of the child's upper arm and found the midpoint. To obtain the circumference of the upper arm, the interviewer looped a measuring tape around the child's upper arm and tightened it at the midpoint. To obtain head circumference, with the child sitting in the mother's lap, the interviewer looped the retractable tape measure around the child's head, just above the brow and around the largest diameter in back. Head circumference was read at a point midway between the eyes just above the brow.

At 2 years, the same physical measurements were obtained, although the procedures varied a bit due to the child's more advanced physical development. Procedures for obtaining these measurements were adapted from the protocol for the National Health and Nutrition Examination Survey (NHANES), a major health and nutrition survey. In keeping with this protocol and with standard 9-month practice, all physical measurements were obtained twice.

At 2 years, child height rather than child length was measured. Because children at this age are able to follow basic instructions and to stand independently, a stadiometer, the Model 214 Road Rod by SECA, was used to obtain child height. With the child standing erect at the base of the stadiometer and with the child's head in correct position, a crown piece was lowered down the stadiometer ruler and child height was obtained in centimeters and recorded in the Child Activity Booklet. Child weight was obtained by instructing the child to stand independently on the SECA scale, and the measurement was recorded in the Child Activity Booklet. In addition, child height and weight were used to calculate the child's body mass index (BMI), based on a Centers for Disease Control and Prevention (CDC) formula available at its website, <http://www.cdc.gov/nccdphp/dnpa/bmi/calc-bmi.htm>. MUAC and head circumference were obtained using the same procedures as at 9 months, although it was no longer necessary for the child to sit on the mother's lap.

7.2 Two-Year Physical Measurement Variables on the Data File

Each physical measurement was obtained up to three times for each measure. If the first two measurements were within 5 percent of each other, the third measurement was not necessary. Interviewers were trained to obtain the first measurement and estimate 5 percent of the obtained value by figuring out what 10 percent would be and then dividing by 2. In those cases in which the second measurement was more than 5 percent different (either greater or smaller than the first measurement), a third measurement was obtained and recorded. All measurements were recorded on the appropriate record form in the Child Activity Booklet. For each measure, composite variables were created that indicate the average for each physical measurement. In addition, because child height at 2 years was obtained with the child standing erect, a composite for children's BMI could also be obtained. For more information about how these composites were created, please refer to the *User's Manual for the ECLS-B Longitudinal 9-Month–2-Year Data File and Electronic Codebook* (NCES 2006-046) (Nord et al. 2006). Table 7-1 summarizes the average weight (X2CHWGT), height (X2CHHGT), MUAC (X2CHMUAC), and BMI composites (X2CHBMI) for the key demographic groups, as well as average head circumference (X2CHCRFM)

obtained for children born at very low birth weight. To obtain these statistics, all cases with missing data were omitted and the child weight W2C0 was applied.

7.3 Reliability of 2-Year Physical Measurements

Procedures established to ensure high data quality were implemented at training and continued throughout the year of data collection. First, interviewers were required to demonstrate correct procedures for obtaining the physical measurements. Second, once they had begun their home visits, a field supervisor or a Westat staff member accompanied the interviewer on a home visit and did a quality control review of procedures. Finally, when physical measurement data were entered at Westat, they were also routinely reviewed for errors. When systematic errors were found, the interviewer's field supervisor was contacted and that person, in turn, contacted the interviewer and reviewed the physical measurements procedures. These procedures are reviewed in the following sections.

7.3.1 Training Procedures and Certification

During the national training, interviewers had the opportunity for hands-on practice in dyads to obtain the physical measurements and to demonstrate competence to the trainers. Interviewers were trained to obtain each physical measurement up to three times and to record each appropriately on the Physical Measurements record form. As described earlier, they were also trained to ascertain that the second measurement in a set was within 5 percent of the first one. If the difference between two measurements in a set was greater than 5 percent, interviewers were trained to obtain a third measurement and to record it in the appropriate space on the Physical Measurements record form.

Certification on the physical measurements was obtained during the physical measurements training session. Three measuring stations with the appropriate measurement equipment were set up in each room. In each training room, the trainees were divided into thirds for the certification exercise. The trainer, co-trainer, and training assistant went to one of the three stations and played the role of the focus child to be measured. The trainees were assigned to a station and instructed to collect the physical measurements of the training staff person twice, the same as in the field.

Table 7-1. Children's average physical measurements and standard deviations for total sample and by key demographic variables, 2-year data collection: 2003–04

Characteristic	Children's average physical measurements														
	Weight			Height			Middle upper arm circumference			Head circumference ¹			Body mass index		
	Number	Mean (kg)	SD (kg)	Number	Mean (kg)	SD (kg)	Number	Mean (cm)	SD (cm)	Number	Mean (cm)	SD (cm)	Number	Mean	SD
Total sample	8,400	12.90	1.96	8,600	85.72	3.66	8,150	16.69	1.51	700	47.32	1.97	8,250	17.51	2.30
Child's race/ethnicity ²															
White	3,600	12.80	1.89	3,700	85.64	3.60	3,500	16.61	1.45	300	47.43	1.96	3,550	17.51	2.25
Black	1,300	12.86	2.00	1,350	85.75	3.68	1,300	16.86	1.56	200	47.20	1.99	1,300	17.45	2.40
Hispanic, race specified	1,150	13.09	2.04	1,200	85.99	3.79	1,100	16.75	1.59	100	47.37	1.97	1,150	17.64	2.26
Hispanic, no race specified	500	13.34	2.08	500	85.87	3.77	500	16.95	1.50	50	46.58	2.18	500	18.06	2.58
Asian	850	12.45	1.86	850	85.14	3.59	800	16.50	1.53	#	47.18	0.85	850	17.16	2.10
Native Hawaiian/ Pacific Islander	50	12.99	1.83	50	84.93	4.93	50	17.05	1.71	#	47.72	0.63	50	18.11	1.72
American Indian/ Alaska Native	200	13.14	1.96	250	85.45	3.87	250	17.17	1.65	0	†	†	200	17.92	2.01
More than 1 race	650	12.66	1.84	650	85.53	3.40	600	16.42	1.48	50	47.71	1.58	650	17.23	2.07
Poverty status															
Below poverty threshold	1,850	13.06	2.08	1,900	85.38	3.72	1,800	16.82	1.53	150	46.94	1.88	1,850	17.88	2.54
At or above poverty threshold	6,500	12.85	1.92	6,700	85.81	3.64	6,350	16.65	1.50	500	47.44	1.98	6,400	17.41	2.22

See notes at end of table.

Table 7-1. Children's average physical measurements and standard deviations for total sample and by key demographic variables, 2-year data collection: 2003–04—Continued

Characteristic	Children's average physical measurements														
	Weight			Height			Middle upper arm circumference			Head circumference ¹			Body mass index		
	Number	Mean (kg)	SD (kg)	Number	Mean (cm)	SD (cm)	Number	Mean (cm)	SD (cm)	Number	Mean (cm)	SD (cm)	Number	Mean	SD
Child's sex															
Male	4,300	13.22	1.93	4,400	86.18	3.70	4,150	16.81	1.51	350	47.71	1.93	4,200	17.76	2.32
Female	4,100	12.56	1.93	4,200	85.23	3.56	4,000	16.56	1.49	350	46.93	1.92	4,050	17.25	2.26
Child's age at assessment															
21 months and under	#	11.39	1.39	#	84.65	3.70	#	17.8	0.60	#	‡	‡	#	15.91	1.82
22–23 months	800	12.70	2.02	850	84.69	3.39	800	16.69	1.57	50	47.28	1.58	800	17.64	2.28
24–25 months	6,450	12.86	1.94	6,650	85.57	3.57	6,300	16.66	1.50	500	47.32	1.99	6,350	17.52	2.31
26–27 months	850	13.18	1.90	900	87.27	3.60	850	16.84	1.47	100	47.37	1.96	850	17.27	2.15
28 months and over	200	13.89	2.23	250	88.84	4.42	200	17.07	1.54	#	47.34	2.30	200	17.59	2.66
Birth weight															
Normal	6,200	12.97	1.95	6,350	85.89	3.61	6,000	16.72	1.51	†	†	†	6,100	17.54	2.31
Moderately low	1,300	12.08	1.82	1,350	83.88	3.48	1,250	16.38	1.43	†	†	†	1,300	17.14	2.15
Very low birth	850	11.42	1.91	900	82.03	4.05	850	16.15	1.59	700	47.32	1.97	850	16.89	2.24
Mother's age (in years)															
19 and under	300	13.15	2.13	300	85.87	3.64	250	16.80	1.58	50	47.03	1.64	300	17.81	2.58
20–29	3,750	12.94	1.99	3,850	85.63	3.61	3,650	16.76	1.51	300	47.14	1.87	3,650	17.61	2.37
30–39	3,750	12.82	1.87	3,800	85.80	3.68	3,550	16.60	1.48	250	47.53	2.07	3,600	17.39	2.17
40 and over	650	12.93	2.19	650	85.75	3.84	650	16.68	1.57	50	47.44	2.01	650	17.43	2.44

See notes at end of table.

Table 7-1. Children's average physical measurements and standard deviations for total sample and by key demographic variables, 2-year data collection: 2003–04—Continued

Characteristic	Children's average physical measurements														
	Weight			Height			Middle upper arm circumference			Head circumference ¹			Body mass index		
	Number	Mean (kg)	SD (kg)	Number	Mean (cm)	SD (cm)	Number	Mean (cm)	SD (cm)	Number	Mean (cm)	SD (cm)	Number	Mean	SD
Mother's race/ethnicity ²															
White	3,950	12.80	1.88	4,100	85.64	3.60	3,850	16.61	1.45	350	47.44	1.93	3,900	17.42	2.24
Black	1,350	12.86	2.00	1,400	85.78	3.68	1,350	16.84	1.56	200	47.24	2.07	1,300	17.44	2.38
Hispanic, race specified	1,400	13.26	2.10	1,450	86.04	3.80	1,350	16.83	1.59	100	47.09	1.98	1,400	17.86	2.42
Hispanic, no race specified	50	13.21	1.87	50	85.51	3.29	50	17.08	1.73	#	‡	‡	50	18.03	1.98
Asian	1,000	12.39	1.85	1,050	85.12	3.57	1,000	16.47	1.55	#	47.51	1.36	1,000	17.11	2.11
Native Hawaiian/ Pacific Islander	50	13.29	1.72	50	87.14	3.43	50	17.38	1.61	#	‡	‡	50	17.49	1.70
American Indian/ Alaska Native	300	12.96	2.03	300	85.23	3.64	300	16.91	1.58	#	‡	‡	300	17.80	2.18
More than 1 race	250	12.50	1.97	250	85.06	3.53	200	16.47	1.39	#	47.42	1.57	250	17.13	2.06

See notes at end of table.

Table 7-1. Children's average physical measurements and standard deviations for total sample and by key demographic variables, 2-year data collection: 2003–04—Continued

Characteristic	Children's average physical measurements														
	Weight			Height			Middle upper arm circumference			Head circumference ¹			Body mass index		
	Number	Mean (kg)	SD (kg)	Number	Mean (cm)	SD (cm)	Number	Mean (cm)	SD (cm)	Number	Mean (cm)	SD (cm)	Number	Mean	SD
Mother's education															
8th grade or below	350	13.14	2.17	400	85.82	3.96	350	16.92	1.61	50	47.23	1.35	350	17.84	2.52
9–12th grades	1,700	13.04	2.08	1,750	85.52	3.75	1,650	16.86	1.61	150	47.00	2.20	1,650	17.78	2.56
High school diploma	1,800	12.92	1.98	1,850	85.67	3.66	1,750	16.77	1.55	150	47.21	1.77	1,750	17.55	2.24
Vocational/technical	150	12.82	2.03	200	85.84	3.37	150	16.81	1.52	#	47.89	1.65	150	17.38	2.06
Some college	2,050	12.86	1.91	2,100	85.79	3.60	2,000	16.62	1.43	150	47.48	1.99	2,000	17.44	2.27
Bachelor's degree	1,350	12.73	1.86	1,400	85.83	3.60	1,350	16.44	1.40	100	47.78	1.86	1,350	17.24	2.05
Graduate school (no degree)	150	12.70	1.83	150	85.62	4.03	150	16.23	1.36	#	47.79	2.28	150	17.26	2.75
Master's degree	600	12.72	1.67	600	85.74	3.47	550	16.58	1.37	50	47.14	1.64	550	17.26	1.99
Doctoral/professional degree	200	12.83	1.69	200	86.32	3.26	200	16.62	1.41	#	46.92	2.12	200	17.19	1.80

† Not applicable.

Rounds to zero.

‡ Reporting standards not met; too few cases for analysis.

¹ Obtained from those born at very low birth weight only (1,500 grams or less).

² Race categories exclude Hispanic origin unless specified.

NOTE: The child weight W2C0 was applied to obtain these statistics, however the cell counts are unweighted to demonstrate the distribution in the ECLS-B at 2 years. Detail may not sum to total due to rounding. Sample sizes have been rounded to the nearest 50.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), 2-year data collection, 2003–04.

Each trainer's physical measurements were obtained in advance and standards for reliability were set. For example, if a trainer's standard weight was determined to be 65 kg, any measurement between 61.75 kg and 68.25 kg would be considered reliable and, therefore, acceptable. Any value outside that range would signal that a third measurement was needed. Training staff collected each interviewer's physical measurement forms at the end of the session and reviewed the measurements on each form. If the measurements in a set differed from the standard measurements by more than 5 percent and if a required third measure was not obtained, the interviewer was required to attend a help lab and to demonstrate competence to the trainer in obtaining the physical measurements. In addition, because a trainer or training assistant served as the focal child, the interviewer's measurement procedures could be observed at the time and any errors in procedure addressed directly at the end of that trainee's turn. The purpose of the certification, therefore, was to identify those interviewers having problems to make sure they were retrained before leaving training. In this way, by the end of training, all interviewers were certified on the physical measurements.

7.3.2 Reliability and Data Quality Control During the Data Collection Year

Quality control was also maintained on an ongoing basis during the year of data collection. As physical measurements data were entered at Westat, any meaningful (e.g., discrepancies greater than 5 percent and a required third measurement not obtained) or out-of-range errors were noted, and the interviewer's field supervisor was notified immediately. The field supervisor then followed up with the interviewer and provided corrective feedback. This process was made possible by a fast feedback loop, ensuring that interviewers received timely feedback about any systematic errors.

As an indicator of reliability, correlations between the two measurements in a set were obtained. Table 7-2 presents the correlations between the first and second measurements within each set, as well as the means and standard deviations for these physical measurements. Because the point of this table is to summarize the reliability of the interviewers and not population estimates, these are unweighted statistics. There were some cases for which only a single measurement within a set was obtained, presumably due to lack of cooperation from the child. This was true for 1.3 percent ($n = 113$) of the child weight measurements, 1.4 percent ($n = 122$) of the child height measurements, 2.3 percent ($n = 193$) of the child MUAC measurements, and 2.8 percent ($n = 30$) of the child head circumferences measurements. In addition, reserve codes (i.e., -9, -8, and -7) have been deleted from these analyses. For further information about how the physical measurements composites were created and how differences larger

than 5 percent were treated, please refer to chapter 7 of the *User's Manual for the ECLS-B Longitudinal 9-Month–2-Year Data File and Electronic Codebook* (NCES 2006-046) (Nord et al. 2006).

Table 7-2. Reliability of sets of physical measurements, 2-year data collection: 2003–04

Variable	Mean	Standard deviation	Correlation (<i>r</i>)
Child weight			
C2CHWGT1 (n=8,650)	12.61 kg	1.97 kg	.99*
C2CHWGT2 (n=8,550)	12.61 kg	1.96 kg	(n=8,550)
Child height (n=8,800)			
C2CHHGT1 (n=8,900)	85.12 cm	3.83 cm	.99*
C2CHHGT2 (n=8,800)	85.16 cm	3.83 cm	(n=8,800)
Middle upper arm circumference			
C2MUAC1 (n=8,450)	16.58 cm	1.54 cm	.99*
C2MUAC2 (n=8,250)	16.58 cm	1.53 cm	(n=8,250)
Head circumference			
C2CHHC1 (n=1,100)	47.81 cm	1.98 cm	.98*
C2CHHC2 (n=1,050)	47.80 cm	1.99 cm	(n=1,050)

* $p < .05$.

NOTE: Sample sizes have been rounded to the nearest 50.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), 2-year data collection, 2003–04.

7.4 Comparison of 2-Year and 9-Month Physical Measurements

To compare the 2-year physical measurements with the 9-month measurements, the difference between the composites was obtained by subtracting the 9-month composite from the 2-year composite for each measure, for example, X2CHHGT–X1CHLENG to yield overall increase in height, and applying the round 2 longitudinal child weight W2C0. To obtain these differences, all cases with missing data were omitted and the difference had to be greater than or equal to zero (i.e., cases with a round 2 value smaller than the round 1 value were deleted from the analysis). (For further information about cases that had 2-year physical measurements that were smaller than those obtained at 9-months, please see the Data Anomalies section of the *User's Manual for the ECLS-B Longitudinal 9-Month–2-Year Data File and Electronic Codebook* [NCES 2006-046] [Nord et al. 2006].) These increases in growth are presented in the following table, grouped by key demographic variables. Because BMI could not be obtained at 9 months, it is not included in this table.

Table 7-3. Average growth as measured by increases in physical measurements, 2-year and 9-month data collections: 2001–02 and 2003–04

Characteristic	Average growth in physical measurements from 9-month to 2-year data collection											
	Weight			Height			MUAC			Head circumference ¹		
	Number	Mean (kg)	SD (kg)	Number	Mean (cm)	SD (cm)	Number	Mean (cm)	SD (cm)	Number	Mean (cm)	SD (cm)
Total sample	8,000	3.49	1.68	8,550	12.68	3.69	5,550	1.69	1.78	600	3.50	2.15
Child's race/ethnicity ²												
White	3,450	3.45	1.64	3,700	12.66	3.65	2,350	1.65	1.76	250	3.26	1.93
Black	1,250	3.41	1.61	1,350	12.74	3.79	900	1.71	1.79	150	3.65	2.00
Hispanic, race specified	1,100	3.53	1.77	1,200	12.81	3.72	750	1.79	1.82	100	3.73	1.97
Hispanic, no race specified	500	3.81	1.87	500	12.71	3.93	3,200	1.93	1.88	50	4.72	3.68
Asian	800	3.36	1.58	850	12.34	3.51	550	1.66	1.65	#	3.11	1.19
Native Hawaiian/ Pacific Islander	50	3.37	1.24	50	11.75	3.07	50	1.39	1.90	#	3.59	0.40
American Indian/ Alaska Native	200	3.03	1.54	250	11.04	4.17	150	1.74	1.77	0	†	†
More than 1 race	600	3.44	1.56	650	12.67	3.39	50	1.45	1.75	50	3.00	2.58
Poverty status												
Below poverty threshold	1,800	3.61	1.90	1,850	12.39	3.96	1,250	1.84	1.85	150	3.64	2.00
At or above poverty threshold	6,200	3.45	1.61	6,650	12.76	3.61	4,300	1.65	1.76	450	3.46	2.19
Child's sex												
Male	4,100	3.48	1.68	4,350	12.36	3.69	2,800	1.64	1.79	300	3.57	2.42
Female	3,900	3.49	1.68	4,200	13.02	3.67	2,750	1.74	1.77	300	3.44	1.84
Child's age at assessment												
21 months and under	#	2.45	1.18	#	15.85	3.90	#	1.48	0.73	#	‡	‡
22–23 months	800	3.45	1.64	850	12.58	3.30	550	1.59	1.70	50	3.56	2.03
24–25 months	6,150	3.47	1.67	6,600	12.62	3.64	4,300	1.67	1.77	450	3.39	2.02
26–27 months	800	3.57	1.68	850	13.15	4.11	550	1.98	1.98	50	3.97	2.82
28 months and over	200	3.98	2.09	200	13.17	4.94	150	1.79	1.77	#	4.94	2.23
Birth weight												
Normal	5,900	3.50	1.68	6,300	12.66	3.69	4,100	1.69	1.78	†	†	†
Moderately low	1,250	3.37	1.59	1,300	12.87	3.75	850	1.74	1.80	†	†	†
Very low	800	3.33	1.60	850	13.00	3.93	600	1.54	1.66	600	3.50	2.15

See notes at end of table.

Table 7-3. Average growth as measured by increases in physical measurements, 2-year and 9-month data collections: 2001–02 and 2003–04—Continued

Characteristic	Average growth in physical measurements from 9-month to 2-year data collection											
	Weight			Height			MUAC			Head circumference ¹		
	Number	Mean (kg)	SD (kg)	Number	Mean (cm)	SD (cm)	Number	Mean (cm)	SD (cm)	Number	Mean (cm)	SD (cm)
Mother's age (in years)												
19 and under	250	3.77	1.97	300	12.86	3.83	200	1.61	1.64	50	2.93	1.65
20–29	3,550	3.50	1.73	3,800	12.52	3.75	2,500	1.71	1.80	300	3.61	2.38
30–39	3,700	3.44	1.57	3,950	12.80	3.62	2,500	1.66	1.75	250	3.47	1.96
40 and over	450	3.61	1.84	500	12.87	3.69	300	1.85	1.97	50	3.32	1.68
Mother's race/ethnicity ²												
White	3,750	3.45	1.62	4,050	12.66	3.60	2,600	1.64	1.75	300	3.34	2.07
Black	1,250	3.43	1.62	1,350	12.80	3.79	950	1.74	1.83	200	3.49	1.85
Hispanic, race specified	1,350	3.66	1.86	1,400	12.76	3.87	900	1.78	1.82	100	3.96	2.70
Hispanic, no race specified	50	2.80	1.81	50	13.13	3.20	50	3.02	1.98	#	‡	‡
Asian	950	3.29	1.54	1,000	12.35	3.48	650	1.69	1.72	#	3.01	1.20
Native Hawaiian/ Pacific Islander	50	3.23	1.21	50	12.31	3.48	50	1.61	1.74	#	‡	‡
American Indian/ Alaska Native	300	3.09	1.51	300	11.18	3.98	200	1.42	1.60	#	‡	‡
More than 1 race	200	3.47	1.54	250	12.42	3.71	150	1.50	1.80	#	3.58	2.51
Mother's education												
8th grade or below	350	3.58	1.84	350	12.50	3.66	250	1.72	1.72	#	4.90	2.91
9–12th grades	1,600	3.58	1.94	1,700	12.46	4.19	1,200	1.88	1.94	150	3.24	2.19
High school diploma	1,650	3.50	1.69	1,800	12.56	3.60	1,200	1.68	1.75	150	3.55	2.04
Voc./technical	150	3.60	1.61	150	12.36	3.04	100	1.32	1.10	#	3.81	1.18
Some college	1,950	3.47	1.54	2,050	12.67	3.61	1,350	1.55	1.71	150	3.55	2.15
Bachelor's degree	1,300	3.40	1.53	1,400	13.03	3.42	900	1.75	1.80	100	3.65	2.08
Graduate school (no degree)	150	3.32	1.32	150	13.59	2.96	100	1.08	1.02	#	3.11	0.71
Master's degree	550	3.34	1.44	600	12.85	3.47	350	1.64	1.74	50	3.03	2.31
Doctoral/professional degree	200	3.36	1.59	200	13.21	3.56	100	1.74	1.84	#	3.00	1.24

† Not applicable.

Rounds to zero.

‡ Reporting standards not met; too few cases for analysis.

¹ Obtained from those born at very low birth weight only (1,500 grams or less).

² Race categories exclude Hispanic origin unless specified.

NOTE: The round 2 weight W2C0 was used to obtain these statistics; however the cell counts are unweighted to demonstrate the distribution in the ECLS-B at 2 years. Detail may not sum to total due to rounding. Sample sizes have been rounded to the nearest 50.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), 2-year data collection, 2003–04.

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