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A Review of Pertinent Literature on the Nutritional Status of the Negro Child: 1919-1954

by

Evanel Renfrow Terrell

A review of pertinent literature from 1908-1950 on the health status of the Negro child in the U. S. unfolds retrogressive changes which may occur in native racial stock under adverse and unfamiliar circumstances.

Although the health status of native Africans was superior to the new white population in America in the 18th and 19th centuries, immigration and migration based upon economic and social factors have made physiological and physical findings more apparent as the Negro lives mixed within the confines of urbanized civilization. The Negro is a large integral part of the North American world, and since the sum total of the nation's health is no greater than any of its parts, it seems wise to study the nutritional status of the Negro child.

Roberts¹ asserts "Nutrition is the sum of all the factors concerned with growth, maintenance and repair of the living body as a whole or of its constituent parts." The present study will consider these factors as they apply to the Negro child. However, a number of factors present themselves as a basis for considering the Negro child separately:

1. For centuries physical characteristics, rates of growth and health were built and maintained in a tropical and semi-tropical background. Upon being transferred to a temperate climate it seemed logical to judge that new acclimatization adjustments would affect health and rates of growth.
2. It is the custom of many municipal governments to "block" or segregate races of people into one section. Any tendencies for good or bad influences on growth or health are held within the group, making definite characteristics common to certain environments.
3. On the whole the Negro is a low income group. Therefore, his buying power being less than other groups makes his total quantities of food consumption affect health and growth.
4. Due to economic and sociological conditions the incidence of certain health problems appears in greater frequency among Negroes. These are, tuberculosis, venereal diseases, hook worm in the rurals, and malaria in the rurals.

Since the development of methods for the study of nutritional status, we have emerged from the more general physical measurements of

¹Roberts, Lydia J., *Nutrition Work With Children*, University of Chicago Press, 1935.

height and weight tables based upon age, which were introduced by Holt and other scholars. These researchers have been concerned with other skeletal measurements initiated by Franzen who gives more accurate indications of growth and development over different age periods for different sexes.

A review of the current literature shows that Sterling² in a year's study made of 5,170 Negro children in Atlanta, Georgia obtained the most complete information on the nutritional status of the Negro child; hence, it is used as a basis for discussion.

Sterling's method took the following measurements on boys and girls between the ages 6—14. They were studied from the viewpoint of, standing height, sitting height, chest circumference, chest depth, chest width, head circumference, and vital capacity.

After these growth factors were taken the subjects were examined individually by the physician for clinical symptoms of good or bad nutrition. These symptoms were based upon the examiner's judgment rather than the height-weight relationship.

Observations were made of the teeth, tonsils, adenoids, neck glands, eyes, feet, skin, heart, posture, build, and scapulae.

For reliability of judgment and validity of method the measurements obtained on the Negro children were compared with those of southern white children of both sexes and of the same sociological and economic background. Since these measurements and previous studies had given satisfactory results with the latter, they would represent a safe index for Negro children.

Sterling has made numerous comparative studies of the Negro and white child, and Roberts and Crabtree,³ Mustard and Waring,⁴ Rouster and Hulvey,⁵ Herkovitz,⁶ Michelson,⁷ Rhoades and his colleagues,⁸ Schultz and fellow researchers,⁹ have made significant studies on the dimensions of the Negro child.

²Sterling, E. B., *Physical Status of Urban Negro Children in Atlanta, Georgia, Public Health Reports*, 1925.

³Roberts, F. L. and Crabtree, J. A., "Vital Capacity of Negro Children," *Journal of American Medical Association*, 88: 1950, 1917.

⁴Mustard, H. S. and Waring, J. L., "Height and Weights of Colored School Children," *American Journal of Public Health*, 16: 1017-22 1926.

⁵Royster, L. T. and Hulvey, C. N., "Relations of Weight and Height and Age in Negro Children," *American Journal of Diseases of Children*, 38: 1222, 1929.

⁶Herkovitz, M. J., "Influence of Environment on Racial Growth Curve," *School and Society*, 22: 86-8, 1925.

⁷Michelson, Nickolas "Investigation of the Physical Development of Negroes, IV Onset of Puberty," *American Journal of Physical Anthropology* 2, No. 2 June 1944.

⁸Rhoades, T. F., Rappaport, Melton, Kennedy, Ruth, and Stokes, Joseph R., "Studies in the Growth of Male Children Receiving Evaporated Milk," *Journal of Pediatrics* 26: No. 5, 1945.

⁹Schultz, Frederick W., Morse, Minerva, Cassells, Donald, E., and Iob L. Vivian, "A Study of the Nutritional and Physical Status and the Response to Exercise of Sixteen Negro Boys 13—17 Years of Age," *Journal of Pediatrics*, 17, No. 4, 444, 1940.

This investigation is based upon the measurements taken by Sterling¹⁰ on urban Negro children, and it also includes a brief report on some height-weight curves of rural Negro children.

Sterling's¹¹ height and weight curves of urban and rural Negroes were similar until the 10th or 11th year.

At this time the rural girl crossed the rural boy in weight. Rural Negro children were one-half heavier than urban children until the 6th year. By the 7th year the weight increase was almost 4 times heavier for the rural Negro than for the urban Negro.

Negro girls exceeded boys in standing height at the 8th year and retained it through the 14th year period. The sitting height of the Negro girl exceeded the boys height after the 9th year. The chest width was equal to that of the boys until the 11th year, and then the curve crossed and remained above the 14th year. The difference in chest circumference and cephalic index was slight. The findings of Mustard and Waring¹² on 1,650 Negro children in Tennessee corroborate these results so that it seems that they are quite reliable.

In southern white children the boys were taller until the 11th year; the girls exceeded until the 14th year. The white girls were lighter in weight until the 10th and 11th year; they increased until the 13th year and then slackened. The sitting height of white girls did not cross that of boys until they were 10 or 11. And from 6—14 years girls never exceeded boys in chest breadth. However, girls had a deeper chest from 12—14 years than boys. The Negro girls never equaled that of boys.

When comparing the male sex of the different races from 1—6 years, there was a slight difference from 6—12 years in favor of the white male, and at 14 the white male was 1 inch taller. From 1—6 years Negro males were heavier, from 6—12 the white male was heavier by 1.1 pounds, and by the 14th year he was 3.6 pounds heavier. The chest depth was larger in the Negro male, but the sitting height and chest circumference for both were almost identical.

The growth picture for the girls was somewhat different. From 1—6 years the Negro girls were taller. Up to the 6th year the weight curve was in favor of the white girls by $1\frac{3}{4}$ pounds. Then they gradually lost the advantage and by the 14th year they were $3\frac{1}{2}$ pounds lighter than the Negro girl. The Negro girl exceeded the white girl in chest, breadth, and depth at all ages. The head circumference was in favor of the white children. In the older Negro children there seemed to have been a large proportion of long heads, i.e. the average breadth, length, and height of the head was 75 centimeters. According to general standards it should have run 77—79 centimeters.

¹⁰Sterling, *op. cit.*

¹¹Sterling., *op. cit.*

¹²Mustard and Waring. *op. cit.* 16: 1017-22 '26.

The findings of Roberts and Crabtree,¹³ Royster and Hulvey,¹⁴ and Sterling¹⁵ in their Tennessee, Virginia and Georgia studies respectively are in disagreement with Mustard and Waring,¹⁶ Whiteacre,¹⁷ and Herkovitz¹⁸ on the height-weight age growth development.

Roberts and Crabtree,¹⁹ Royster and Hulvey,²⁰ and Sterling²¹ agree on the superiority of height and weight of the white child over the Negro child at all ages after the 7th year. On the contrary Mustard and Waring²² found Negro children uniformly heavier and taller than white children studied in the same county. Herkovitz²³ in his New York study found that up to the age of 16, Negro boys exceeded white boys. In her study on season variations of growth and height of Texas school children ages 5-19 years of age Whiteacre²⁴ found that the net gain in weight for white children was 7 pounds and for Negro children 8 pounds. The yearly gain in standing height was 2 inches and for sitting height 1 inch.

Rhoades, Rappaport, Kennedy and Stokes²⁵ agree with investigators who found that on the average Negro children are equal and in many instances superior to white children of the same age, sex and socio-economic group. These investigators examined physical growth, dentition and general intelligence of 233 Negro and white children, age birth to 5 years. Their results showed that there was no difference in I.Q. among 3-year-old children; Negro children's serum protein was significantly higher than white children's at 1, 2, and 3 years of age. There were 2.88 per cent caries per child from 4½ to 6 years with lower incidence among Negroes: the Negro child better dentition. These results are supported by Steggerda and Hill²⁶ and Suks.²⁷ They worked independently in an attempt to compare the eruption time on Dutch American people and Negroes from the South, and Zulus from South Africa in comparison with whites from Central Europe. Their findings revealed a slower eruption time for whites than for the more primitive Negro race. Negro children were taller at the age of 9 months and at

¹³Roberts and Crabtree. *op. cit.*, 88: 1950, 1917.

¹⁴Royster and Hulvey. *op. cit.*, 38: 1222, 1929.

¹⁵Sterling. *op. cit.*,

¹⁶Mustard and Waring. *op. cit.*, 16: 1017-22, 1926.

¹⁷Whiteacre, J., "Seasonal Variations in Growth in Weight and Height of Texas School Children," *Texas Agriculture Exp. Station Bulletin* No. 510, p. 72, 1935.

¹⁸Herkovitz. *op. cit.*, 22: 86-8, 1925.

¹⁹Roberts and Crabtree. *op. cit.*, 88: 1950, 1917.

²⁰Royster and Hulvey. *op. cit.*, 38: 1222, 1929.

²¹Sterling. *op. cit.*

²²Mustard and Waring. *op. cit.*, 16: 1017-22, 1926.

²³Herkovitz. *op. cit.*, 22: 86-8, 1925.

²⁴Whiteacre. *op. cit.*, p. 72.

²⁵Rhoades, Rappaport, Kennedy and Stokes, *op. cit.*, 26: No. 5, 1945.

²⁶Steggerda, M. and Hill, T. J., "A Comparison of the Eruption Time of the Teeth of Dutch American Population and Negroes from the South," *American Journal of Orthodontics* 28:36, 1942.

²⁷Suks, V. J., "Eruption Time of the Teeth of South African Zulus and White of Central Europe," *American Journal of Physiology and Anthropology* 2, 351, 1919.

all ages their legs were longer, but their trunks were shorter. The body width of Negroes was less at the pelvis and chest but the body weight and head circumference was equal in Negro and white children. There was no difference between the two groups in motor development.

Up to 1925 Sterling²⁸ used skeletal measurements as indices of nutrition. After this period she began using symptoms for detecting nutrition habits.

In judging defects Emerson²⁹ says, "an adequate examination might show on the average of from 4-6 defects per child as based over large groups of children." The average number defects for this group was 5.9. There was not much difference in the two sexes until the 11th year. At this age level Negro girls exceeded boys in number of defects.

Among the 5,000 children studied by Sterling,³⁰ 74 per cent of them had excellent teeth, 19 per cent had 3 or more caries, and 75 had fillings. There seemed to be a greater incidence of caries in the temporary teeth. Both pre-natal and post-natal diets were responsible for this condition. However Blackenby³¹ in Tennessee and Shelling and Anderson³² in Maryland found few caries in Negro children.

Defective tonsils seemed to be more apparent in girls than in boys and about $\frac{1}{3}$ of the total group had enlarged or diseased tonsils, but it was agreed that enlargement did not necessarily mean diseased. Very few children had adenoids.

The glands of the neck in general seemed to appear enlarged in greater frequency in the boys while the thyroid gland was most apparent in the girls. Just about 20 per cent showed signs of conjunctivitis. The Snellen reading test was used to detect power of vision and the results showed more defective vision in the older children. Hubbard's³³ Mississippi study of the incidence of blindness in Negro babies found only 30 blind children in the group of 54,570 educable children. Schools pedograph was used to detect flat feet by imprint. Flat feet seemed to appear at about the 6th or 7th year in all age groups, with the greatest percentage in girls. Skin diseases were negligible with only 3 per cent affected. Ringworm, impetigo and eczema were the common ones found. Less than $1\frac{1}{2}$ per cent were affected with heart diseases.

Since Sterling³⁴ had no scientific equipment available or accurate data on tuberculosis and syphilis, such records were termed unusable

²⁸Sterling. *op. cit.*

²⁹Emerson, W. R., "Malnutrition in Children in the United States," *School and Society* 16: 85-8, 1924.

³⁰Sterling. *op. cit.*

³¹Blackenby, P. E., "Comparative Analysis of Dental Conditions Among White and Negro Children in Rural and Semi-rural Communities," *Journal American Dental Association* 26: 1574, 1939.

³²Shelling, D. H., and Anderson, G. M., "Relation of Rickets and Vitamin D to the Incidence of Dental Caries Enamel Hypoplasia and Malocclusion in Children," *Journal American Dental Association*, 23: 840, 1936.

³³Hubbard, J. K., "Are There Any Blind Black Babies," *Survey*, 52:91, 1924.

³⁴Sterling. *op. cit.*

on that score. However, Knox and Zentai,³⁵ Kennedy,³⁶ Emerson,³⁷ Rose,³⁸ Opie,³⁹ Poindexter,⁴⁰ and others pointed out a high rate of incidence due to ignorance, poor housing and health conditions.

About 12.69 per cent presented bony defects of rickets. The girls seemed to lead in the prevalence of rickitic symptoms.

Sanborn's spirometer was used to test vital capacity. Negro girls crossed and exceeded boys up to 12 and 13 years of age.

Sterling's⁴¹ distribution of health among the children fell into three groups, excellent, fair, and poor; 45 per cent, 35 per cent, and 20 per cent respectively. Poor nutrition was found between the ages of 8-11 years. And as the child grew older he appeared to be better nourished. Girls were better nourished than boys.

About 23 per cent of the children had good posture, poor posture increasing with age. The boys' posture was 4 times better than that of the girls. The younger children were slender build, with only 17 per cent of them being well nourished. At age 8, the younger children advanced from medium to heavy build. There was no indication that good build meant good posture. But poor posture was evident in the poor build groups.

In judging scapular types the Negro child fell into the convex group more so than the white group although there was a mixture of types. Straight or concave scapulae are said to be normal. The convex scapulae give a shorter life span.

Schultz,⁴² Morse, and associates, felt that additional statistics needed to be presented for determining physical fitness in children. These findings indicate much emphasis on measurements of nutritional status, cardiovascular rating, vital capacity and tests of strength and these studies reveal use of measurements of lung volume and its subdivisions, blood and "available fluid" volumes, basal oxygen consumption, heart rate, blood pressure and response to exercise on 16 Negro boys varying in age from 13 to 17 years.

Negro boys in this study were on the average 4 per cent shorter and 18 per cent lighter in weight than a group of white boys of the same range but from a better socio-economic environment than that

³⁵Knox, J. H. M. and Zentai, O., "Health Problems of the Negro Child," *American Journal of Public Health*, 16:805-9, 1926.

³⁶Kennedy, J. A., "Health Problems of Negroes," *Annals of American Academy*, 37:354-64, 1911.

³⁷Emerson. *op. cit.* 16: 85-8, 1924.

³⁸Rose, M., "Health Hazards of Being a Negro," *Survey*, 50:617, 1923.

³⁹Opie, Eugene, "Health Gains Among Negroes," *American Journal of Public Health*, 21: 290-1, 1931.

⁴⁰Poindexter, Ralph, "Handicaps in the Normal Growth and Development of the Negro Child," *American Journal of Public Health*, 28: 1048-52, 1938.

⁴¹Sterling. *op. cit.*

⁴²Schultz, Frederick W., Morse, Minerva, Cassells, Donald, Iob, L. Vivian,; "A Study of the Nutritional and Physical Status and the Response to Exercise of Sixteen Negro Boys, 13-17 Years of Age," *Journal of Pediatrics* 17, No. 4,444, 1940.

previously studied by Robinson. However, the weights of Negro boys in relation to skeletal build compared favorably with standards set up by McCloy. The boys tended to be more muscular than the average. This result was supported by their low fat index in relation to a normal weight index and a high creatinine index. Negro boys showed smaller lung volumes than white boys in Robinson's study, and the vital lung capacity was 15 per cent lower than that of the whites. When the oxygen consumption was compared with figures for older boys as given by Robinson it was found to be 8 per cent lower than his average figures for boys and Robinson's figures are 90 per cent lower than the Mayo Clinic Standards. Before leaving this section this investigator wishes to point up the fact that there was a positive correlation between increase of defects and low intelligence quotients.

Both white and Negro researchers from the North and South leaned toward scientific and general studies done by socio-intellectual facilities and opportunities as the inhibiting growth and development factors. In a study on the growth and development of 300 new born Negro babies Kessler and Scott⁴³ found that boys from indigent groups weighed 200 grams less than boys from a higher socio-economic status. One hundred sixty-four subjects were males while one hundred thirty-six of them were females. A study of the osseous maturation as represented in the calcification of the distal femoral and proximal tibial epiphysis showed that there was slightly greater maturation among the girls. The ossification increased with increasing birth weight. These authors believe that even though average birth weights of Negro infants have previously been reported to fall from 100-500 grams less than white infants the possible effect of socio-economic conditions must be considered before the lower birthrate of Negroes can be ascribed to inherent racial factors.

In 1944 and 1945 Michelson made health measurements on 4745 New York City children from birth through puberty. Of the children investigated he found that Negro females reach the age of puberty at the same age that investigators had reported for white females. Negro infants born in 1943 showed an increase in stature as compared to corresponding age groups studied in 1919-1920 and 1935-36. The cephalic index is slightly higher in the northern born baby than in the southern born—female infants having a higher index. The cephalic index was also about the same for whites and Negroes.

Additional investigating was done in South East Missouri by the Farm Security Administration of low-income families. Four thousand one hundred twenty-four males and females were used as subjects and of these one-third were Negroes while two-thirds were whites. Of the families considered there were 3.8 per cent defects per person. Respiratory system diseases were found to be most common and the rest of the defects were in genito-urinary, digestive, nervous systems, and dentition. In some areas the incidence of defects was in Negroes who had

⁴³Kessler, Althea, Scott, Roland, B., "Growth and Development of Negro Infants. II Relations of Birth Weight, Body Length and Epiphyseal Maturation to Economic Status," *American Journal of Diseases of Children*, 80: No. 3, 370, Sept., 1950.

more children per family than whites. All these families were farm laborers and renters, spent little money for health facilities or health improvement. Therefore the facilities were not adequate to meet the needs of the group in this territory.

The story of comparative Negro-white health relations can be gathered from The Metropolitan Life Insurance Company which no doubt has the most complete causes for the nation's death rate. At the close of the Civil War this company found that the Negroes' health was superior to that of whites, and that there was no evidence of tuberculosis among them. But immigration of the Negro to the city coupled with no training, lack of money or background to meet the new odds, caused the ratio of 1-3 in white to Negro tuberculosis incidence. The mortality of the Negro population in 1940 was the same as that of the white population in 1920. By 1950, the mortality of the Negro was less than 10 per cent than that of the white population.

In spite of overwhelming handicaps research findings reveal the following:

1. Death rate for Negroes shows an index of decline in all cases.
2. Some studies show white children after the age of 6 to be superior in height, superior in weight, and superior in vital capacity.
3. The general IQ of Negro and white children are approximately same in equal socio-economic groups.
4. Negro children are superior in chest development.
5. Negro children have superior teeth.
6. Malnutrition is lower than might be expected among Negroes due to the large proportion of the dollar spent for food.
7. There is no difference in motor development of Negro and white children.
8. There is greater incidence of tuberculosis in Negro children.
9. The serum protein is greater in Negro children than white children.
10. The sitting height of both groups is identical.
11. Physical build is medium in the early years of the Negro child, increasing to good.
12. Posture is medium in Negro children, being better in boys.
13. What is happening to Negro children is what is happening to all children. In the long run, the best safeguards and security and optimum health for Negro children rests in this nation's providing good care for all of its children. The care of children should not be considered according to ethnic group membership.

Conclusions

The health status of the Negro child as revealed in the literature for the years 1919-1954 is improving. This seems to be true because the growth curves for Negro children are comparable with white children's of the same social and economic level and the hereditary or racial growth curve outweighs environmental effects as children enter adolescence. There needs to be a concerted effort on upgrading the status of our Negro children's health. Every dedicated American should consider this task a part of his job. In all probability a survey of subsequent years in a future paper will no doubt reveal greater improvement than brought forth in these studies.

Bibliography

1. Bakwin, H. and Bakwin, R., "Body in Infants: Anthropometry in Newborn," *Human Biology*, 6:612, 1954.
2. Bent, M. J. and Green, E. F., "Experiment in Health Education in Three Negro Schools," *Journal Health and Physical Education*, 7:486, 1936.
3. Birings, Lee, "The Negro School Child Compared Physically with the White School Child," *Archives of Pediatrics*, 44:191-193, 1927.
4. Blackenby, P. E., "Comparative Analysis of Dental Conditions Among White and Negro Children in Rural and Semi-rural Communities." *Journal of American Dental Association*, 26:1574, 1939.
5. Dodge, A. N., "Weights of Colored Infants," *American Journal of Physiology and Anthropology*, 10:337, 1921.
6. Emerson, W. R., "Malnutrition in Children in the United States," *School and Society*, 16:85-8, 1924.
7. Farm Security Administration, "The Health of Low Income Families in South East Missouri," *Journal of American Medical Association*, 93: 41, No. 1, 1941.
8. Font, C., "Normal White and Colored Children," *Delaware State Medical Journal*, 104:111, 1935.
9. ——— "Changing Concepts of Normal Nutrition," *Northwestern Medical Journal*, 37:71-74, 1938.
10. Haynes, G. E., "Conditions Among Negroes in the City," *Annals of American Academy*, 49:105-19, 1913.
11. Hewitt, A., "Comparative Study of Negro and White Children in a Southern School System," *Elementary School*, 31:111-19, 1930.
12. Herkovitz, M. J., "Influence of Environment on Racial Growth Curve," *School and Society*, 22:86-8, 1925.
13. Hubbard, J. K., "Are There Any Blind Black Babies," *Survey*, 52:91, 1924.
14. Hardlicks, A., "Anthropology of the American Negro," *American Journal of Physiology and Anthropology*, 10:204, 1927.
15. Hughes, M., "Race, Growth, Occlusion," *American Journal of Orthodontics*, 24:1065, 1938.
16. Jones, E. K., "Problems of the Negro Child," *Annals of the American Academy*, 98:142-7, 1921.
17. ——— "Negroes Struggle for Health," *National Conference Social Work*, 68-72, 1923.
18. Jones, S. B., "Fifty Years of Negro Public Health," *Annals of American Academy*, 49:138-46, 1913.
19. Kennedy, J. A., "Health Problems of Negroes," *Annals of American Academy*, 37:354-64, 1911.
20. Kessler, Althea, and Scott, Roland B., "Growth and Development of Negro Infants. In Relation of Birth Weight, Body Length and Epiphyseal Ma-

- turation to Economic Status," *American Journal of Diseases of Children*, 80: No. 3,370, Sept., 1950.
21. Knox, J. H. M., and Zentai, P. J., "Health Problems of the Negro Child," *American Journal of Public Health*, 16:805-9, 1926.
 22. Michelson, Nickolas, "Studies in the Physical Development of Negroes, IV Onset of Puberty," *American Journal of Physical Anthropology*, 2, No. 2, June 1944.
 23. Menchan, W. N., "Negro College Takes to the Nursery School," *School and Society*, 36:338-40, September, 1932.
 24. McGraw, E. N., "Comparative Study of Groups of White and Southern Negro Infants," *Genetic Psychology Review*, 10: 1-105, 1931.
 25. Mustard, H. S. and Waring, J. L., "Height and Weights of Colored School Children," *American Journal of Public Health*, 16:1017-22, 1926.
 26. Opie, Eugene, "Health Gains Among Negroes," *American Journal of Public Health*, 21:290-1, 1931.
 27. Poindexter, Ralph, "Handicaps in the Normal Growth and Development of the Negro Child," *American Journal of Public Health*, 28:1048-52, 1938.
 28. Orington, M. C., "Fresh Air Work Among Negro Children in New York," *Conference on Character and Correction*, 17:115-115, 1906.
 29. Rhoades, T. F., Rappaport, Melton, Kennedy, Ruth, and Stokes, Joseph, Jr., "Studies in the Growth and Development of Male Children Receiving Evaporated Milk," *Journal of Pediatrics*, 26, No. 5, 1945.
 30. Roberts, F. L. and Crabtree, J. A., "Vital Capacity of Negro Children," *Journal of American Medical Association*, 88: 1950, 1917.
 31. Roberts, Lydia J., "Nutrition Work with Children," *University of Chicago Press*, 1935 ed. pages 110-113, 1935.
 32. Rose, M., "Health Hazards of Being a Negro," *Survey*, 50:617, 1923.
 33. Royster, L. T. and Hulvey, C. N., "Relations of Weight and Height and Age in Negro Children," *American Journal of Diseases of Children*, 38:1222, 1929.
 34. Schultz, Frederick W., Morse, Minerva, Cassells, Donald E., and Job, Vivian, "A Study of the Nutritional and Physical Status and the Response to Exercise of Sixteen Negro Boys 13-17 Years of Age," *Journal of Pediatrics*, 444, No. 4, 1940.
 35. Shelling, D. H. and Anderson, G. M., "Relation of Rickets and Vitamin D to the Incidence of Dental Caries Enamel Hypoplasia Malocclusion in Children," *Journal of American Dental Association*, 23:840, 1936.
 36. Steggerda, M. and Hill, T. J., "A Comparison of the Eruption Time of Teeth of the Dutch American Population and Negroes from the South," *American Journal of Orthodontics*, 28:361, 1942.
 37. Suk, V., "A Comparison of the Eruption Time of Teeth of Zulus from South Africa and Whites from Central Europe," *American Journal of Physiology and Anthropology*, 2:351, 1919.
 38. Sterling, E. B., "Physical Status of Urban Negro Children in Atlanta, Georgia," *Public Health Reports*, 1925.
 39. Todd, T. W., "Dimensions of the Body, White and American Negroes of Both Sexes," *American Journal of Physiology and Anthropology*, 12: 35, 1928.
 40. Warner, B., "The Negroes Outlook for Health," *Conference on Character and Correction*, 123:124, 1908.
 41. Whittinghill, E., "Nutrition Experiments in the Public Schools of Winston-Salem," *American Journal of Public Health*, 18:1211, 1928.
 42. Whiteacre, J., "Seasonal Variations in Growth in Weight and Height of Texas School Children," *Texas Agriculture Exp. Station Bulletin*, No. 510, 1935.