HEALTH CHARACTERISTICS OF SCHOOL CHILDREN AGED 8 TO 9, IN A SOCIO-ECONOMIC POVERTY AREA AND THEIR RELATION TO AGE AND ACHIEVEMENT

Thesis for the Degree of Ph. D.
MICHIGAN STATE UNIVERSITY
RALPH HUGO ROGERS
1971

This is to certify that the

thesis entitled

HEALTH CHARACTERISTICS OF SCHOOL CHILDREN AGED 8 TO 9, IN A SOCIO-ECONOMIC POVERTY AREA AND THEIR RELATION TO AGE AND ACHIEVEMENT

presented by

RALPH HUGO ROGERS

has been accepted towards fulfillment
of the requirements for

Ph. D. degree in Educational Administration

Major professor

Date October 27, 1971

O-7639

ABSTRACT

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By

Ralph Hugo Rogers

Purpose of the Study

Essentially this study had one major purpose: to survey the health characteristics of 8- to 9-year-old children attending school in a low socio-poverty area and to investigate their relationship with age and academic achievement.

In order to determine and measure relationships among the variables of this study, it was necessary to review the cumulative health records of all students in the sample and to measure the school achievement of these youngsters. One standardized instrument was used--the Metropolitan Achievement Test--to measure the achievement level of each student. The Primary II, Form F of the MAT was used with students in grade two. The MAT Elementary Form was used with third grade students. The data gathered were analyzed by an χ^2 test of homogeneity.

Major Findings

1. Students in the sample having hearing impairments and varying degrees of visual impairment showed no significant negative effects on school achievement.

2. A significant relationship between pathologies of diptheria, polio, and mumps and achievement was indicated.

3. The highest correlation observed between any pathology and academic achievement was .20. The coefficient r^2 which attempted to measure explained variation is therefore 4 per cent. The "prima facia" case is therefore that health pathology is of little use in explaining variation in academic performance. One must agree with this conclusion but the caution here is that this statement necessarily assumes accurate reliable data both in the recording of health records and in the validity of using the Metropolitan Achievement Test as a measure of academic achievement.

4. Using the findings of this study and assuming the validity of the data one must conclude that health pathologies are not a significant predictor of academic achievement.

Questions for Further Study

1. What are the effects of stress and strain on the ghetto student and its effect on a course of study?
2. What are the effects of parent's poor health on the student and its relationship to education?
3. What are the effects of density, homogeneous ghetto grouping, and a course of study?
4. What are the effects of psychophysiological symptoms of a child and its relationship to a course of study?
5. How is health distributed and how can it be better distributed to bring about success in a child in school?
6. What are the teacher training institutions doing to apprise prospective teachers of behavior patterns, attitudes, and health of children in a low socio-economic area?

Furthermore, it is suggested that:

1. A project be undertaken to insure valid and accurate health information on each student in a poverty community. The import being one of further substantiation of the findings of this study while removing some of the skepticism which may surround this study.

2. Investigation of alternatives to assessing academic achievement should carefully be considered. This is almost crucial in the inner-city since the student's verbal flexibility is usually poor and consequently the student's scores on nationally named exams will be low and is misleading.

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By

Ralph Hugo Rogers

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Administration and Higher Education

1971

Dedicated to

My Mother, Father,

and the Nation

ACKNOWLEDGMENTS

The writer wishes to express sincere appreciation to Dr. Louis Romano, chairman of the doctoral committee. The assistance of Drs. Brookover, Green, Sheur, and to Dr. Teitelbaum (who is owed a special debt of gratitude for his insightful guidance and intellectual prods of this thesis) will always be remembered.

Gratitude is extended to the Brookdale Hospital. The Charles R. Drew Health Center under the direction of Dr. Jumelle, is owed a debt of gratitude for the innumerable ways in which it made this study possible. A number of other people and institutions should be formally recognized for their contributions to this project; among them are: the students, parents, teachers, and the staff of the New York City School, Dr. Wiegands, Dr. Impellizarri, Dr. Reing, Mrs. Hayes, Mrs. Keys, Mrs. Mermelstein, Dr. Gardner, Mrs. Sloan, Dr. Moore, and Dr. Lattimore, to Dr. Watkins and Dr. Harry Lawerence who were friends when I needed a friend.

Deepest appreciation is reserved for my wife Phil, for her patience, support, and encouragement; for our

daughter Beckey; and for our sons, Ralph, Nathan, Aaron, Benjamin, and Kwamii (our son from Ghana) who during the doctoral pursuit were deprived of a father too long.

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THE PROBLEM

Introduction

"Health is a right--not a privilege," according to the New York City Mayor's Task Force. This monthly publication quoted an authority on human rights who wrote that "the right to the enjoyment of health is a subdivision of the right of personal security, one of the absolute rights of persons."[1]

This need was recognized as early as 1765, eleven years before the founding of our republic. And in 1888 the Supreme Court of the United States declared to the settled doctrine of the court that " government is organized for the purpose, among others, of preserving the public health."

Although this country spends proportionately more on health than any country in the world, we are confronted with major inadequacies in our health care organization and delivery system. New York City is in an odd position.

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[1] Health Planning, monthly publication of the Mayor's Organizational Task Force for Comprehensive Health Planning, 305 Broadway, New York, November 1970.

It has the greatest concentration of superior medical technology in the world and although some shortages exist, in the aggregate, New York City has an enormous concentration of professional personnel. This metropolitan area has by far the largest system of public medical care in the country.

Adequate preventive, therapeutic, and rehabilitative care is not available to many citizens at levels of day-to-day community practice, either through inpatient care or outside of an institutional setting. Large numbers of people--the poor, the aged, the isolated, the non-white--receive few of the benefits of modern medicine even though because of poor health they generally require more care than do more privileged groups.[1]

Experience has shown that merely making optimal educational and medical services available to children of low socio-economic families does not insure its utilization. Such children generally are members of family constellations which have little or no comprehension of the total needs of their children nor do the parents in most instances possess the sophistication to identify these needs. Many studies indicate that the medical requirements of groups are greater than those of middle income families. In Chicago, for example, of

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[1] Ibid., p. 2.

13,720 children in Project Head Start, 35 per cent were found to have health defects, including hearing, visual, dental, and emotional problems; among a group of more than 1,000 Head Start children in Boston, over 317 were found to have major physical or emotional defects.[1]

> Brownsville takes its name from Charles S. Brown. By 1883 there were 250 frame buildings in the village. Two years later an immigrant Jewish tailor, J. Jacob Cohen, moved from the Lower East Side because his ailing wife needed a country environment. Many other Jewish immigrants from the Lower East Side and Williamsburg followed, sparking the first sizable growth of the district. The first tenements were built at the turn of the century to house the growing population.
>
> Brownsville's urbanization was spurred in 1899 by the opening of the Fulton Street elevated trains and new street car lines. This made the area more accessible to Manhattan and attracted new residents. When tenements on the Lower East Side were razed for construction of the Williamsburg Bridge, many families from these blocks wound up in Brownsville.
>
> At this time the New York Herald Tribune described Brownsville as "a land of sweat shops and whirling sewing machines, of strange Russian baths, of innumerable dirty and tiny shops, of cows which are milked directly into pitchers and pails of customers at eventide, or anarchists, of Jewish dancing schools and of a peasant marker."
>
> The extension of the Interborough Rapid Transit along Livonia Avenue to Junius Street in 1920 triggered more building construction, much of which still is part of the area's housing stock.
>
> Brownsville's history is filled with protest. Today's militant leadership follows a tradition of radicalism and innovation. Emma Lazarus, the poet, whose lines are inscribed on the Statue of Liberty, was active in the area and is buried here. Margaret

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[1]Dr. Julius Richmond, Medical Director of Project Head Start. Joint publication of Project Head Start, Office of Economic Opportunity and the Bureau of Elementary and Secondary Education, Office of Education, United States Department of Health, Education, and Welfare, Washington, D.C., 1969.

> Sanger opened her first birth control clinic here in 1916. Among the many political groups headquartered here have been anarchists, socialists and communists, and now black militants.[1]

Brownsville also achieved notoriety as the home of the Amboy Dukes and Murder, Incorporated.

Ocean Hill bounds the largest ghetto in the nation. Its dilapidated housing, shabbily maintained parks, dingy streets, widespread unemployment, and high crime rates are an indictment of the past and a challenge for today.

Like many other parts of central Brooklyn, this was once a fashionable upper-middle income section. Real estate and building speculators overestimated the market for expensive homes; an error in judgment that assumed critical importance during and after the depression. There were many foreclosures; property values dropped swiftly. At about the same time, mechanization of southern cotton fields forced many blacks out of work and the great northern migration began.

In April 1936, a new subway line linked Brooklyn with Harlem and served for the oppressed blacks the fastest and cheapest way out. Development in the city has always followed new transit lines, and the "A" train helped thousands of Harlem residents discover the relative amenities of Brooklyn.

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[1]Plan for New York City, 1969, A Proposal/Critical Issues, New York City Planning Commission, p. 166.

During World War II, peak operation of the nearby Brooklyn Navy Yard attracted black laborers in large numbers, bringing even more families to the district. Unscrupulous real estate speculators, playing on fears stirred by newspaper reports, moved in with blockbusting techniques. In a decade, a community that had been 75 per cent white became a black ghetto.[1]

Since the successful fight for Medicare in the mid-1960s, the problems and inadequacies of health care services have tended to become submerged under other domestic and international issues. The nation can rise up in righteous wrath over disclosures that its cherished breakfast cereals may lack nutrition, yet it can ignore the fact that many persons die needlessly every year because they lack medical care.

Purpose of the Study

This study has one major purpose: to survey the health characteristics of 8- to 9-year-old children attending school in a low socio-poverty area and to investigate their relationship with age and academic achievement.

Need for the Study

Today, in the richest, most affluent large nation of the world we see appallingly inadequate health services

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[1] Ibid., p. 40.

and facilities for large segments of our population. Ironically, each day's newspapers and television newscasts alert us to dazzling new research discoveries, great medical advancements, and improved technology at a pace which sometimes leads us to take them for granted. Even more serious, we often assume that each discovery automatically results in an immediate improvement in health care for all citizens.

Unfortunately, this is often not the case. While there have been unbelievable advances and discoveries, at the same time we have witnessed spiralling cost for the individual patient, inaccessibility of facilities, and a general decline in per capita medical services in many parts of the country and for particular segments of our population--too--frequently those very groups who needed the care most.

The need for developing comprehensive community health centers to help provide the desperately needed medical services with dignity in our inner cities is most apparent. To recognize the relationship between poor health and poverty and simultaneously endeavor to remove the social, political, and economic shackles from inner city residents is critical. Clearly, inner city health problems must be viewed in totality rather than as discrete problems, capable of separable attack. Neither can the worsening problems facing our rural population, blacks, our American Indians, and also Spanish Americans. These

groups compose a large portion of our long neglected migrant labor force cannot be ignored. A concerned, unified attack is needed.

These problems and inequities exist each day. The life expectancy of whites is 70 years while for blacks it is only 64 years. The risk of dying under age 35 is four times as great for the poor than the national average.[1] Black mothers die in childbirth four times as often as white mothers and black babies die in infancy three times as often as white. Furthermore, blacks have one-third more days when they are not at full physical capacity, are sick enough to require bed rest on twice as many days, and lose one and one-half times as many days from work because of disease and disability.

The problems of health care also cross socio-economic lines. A study in New York showed that prenatal mortality in the black population was higher than that in the white population in every socio-economic class.[2]

Qualitatively as well as quantitatively New York's medical resources are unmatched anywhere in the world. It has 4 per cent of the nation's population and 9 per cent

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[1] H. Jack Geiger, "Health and Social Change: The Urban Crisis," Lowell Lecture Series, Health in the Troubled City (Boston: UGBH, February 13, 1968), p. 35.

[2] John C. Norman, "Medicine in the A Ghetto," New England Journal of Medicine, CCLXXXI, No. 23 (December 4, 1969), 1274.

of its doctors. It has 140 hospitals, 22 of them large medical centers, upwards of 14 billion is spent here annually for health care, over a quarter of this by the city itself; one out of 20 people who work in the city work in the health field.

Delivery of health care has not kept pace with advancing capabilities. Health care for most adults, even the rich, is episodic; not systematic, continuing, and coordinated as it should be. The individual must be a sort of medical contractor, arranging to subcontract parts of himself to the care of a dentist, a psychiatrist, an ear, nose and throat specialist, an opthalmologist, a gynecologist, a surgeon, or a bone specialist.

For the poor health care is even more difficult. Even when care is available, fear or ignorance of the bureaucratic difficulties involved keep many poor people from seeking it. This is especially true for preventive medicine. For lack of prenatal care, maternal mortality rates average as high as 55 per 1,000 in the ghettos as opposed to 15 per 1,000 in upper-income areas.[1]

It appears that previous studies have not answered enough questions. Medical examinations have not been comprehensive enough, and few, if any, studies were completed in a low socio-economic area. It also appears that medical

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[1] Plan for New York City, 1969, p. 88.

examinations were only for a specific area of abnormality. Another question which has been raised is whether or not the medical examination was comprehensive enough.

In recognition of these factors, therefore, the present study proposes close coordination between the Charles R. Drew Clinic, Brookdale Clinic, and the school. Thus it is indicated that more comprehensive information will be presented regarding the medical history of subjects in this study permitting a more valid comparison between health characteristics and school achievement of the students in the sample.

Importance to Education

As far back as November 1930, President Hoover's Conference on Child Health and Protection spoke of these aims in the children's charter:

IV. For every child full preparation for his birth, his mother receiving prenatal, natal and postnatal care; and the establishment of such protective measures as will make child-bearing safer.

V. For every child health protection from birth through adolescence, including: periodical health examinations and, where needed, care of specialists and hospital treatment, regular dental examinations and care of teeth, protective and preventive measures against communicable diseases, the insuring of pure food, pure milk and pure water.

VI. For every child from birth through adolescence, promotion of health, including health instruction and a health program, wholesome, physical and mental recreation, with teachers and leaders adequately trained.

VII. For every child a dwelling place safe, sanitary and wholesome, with reasonable provisions for privacy, free from conditions which tend to

thwart his development, and a home environment harmonious and enriching.

IX. For every child a community which recognizes and plans for his needs, protects him against physical dangers, moral hazards, and diseases, and makes provision for his cultural and social needs.

XV. For every child the right to grow up in a family with an adequate standard of living and the security of a stable income as the surest safeguard against social handicaps.

For every child these rights, regardless of race, or color, or situation, wherever he may live under the protection of the American flag.[1]

One of the recommendations of the 1960 White House Conference on Children and Youth was that research be conducted into the aspects of new and improved methods of early identification, prevention, and treatment of childhood emotional disturbances. This was an indication of a national trend in which the schools of New York City were in the forefront. In the fall of 1959 a project was initiated in selected schools in the city to identify and meet the needs of the children in the early elementary grades. This project was officially entitled "The Early Identification and Prevention Program" and soon came to be known as "E.I.P."

Educators have long been aware of the fact that problems of adjustment frequently became apparent by the third year of school and are often accompanied by a breakdown in the learning process. E.I.P. is an outgrowth of the conviction that early recognition and attention can

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[1] White House Conference on Child Health and Protection (New York: The Century Company, 1931).

do much to reduce educational, emotional, and social maladjustments at a later age.

Nations have attempted to find solutions to the major health problems of the world. Future researchers may want to look at how these problems relate to the child's education.

> The Congress declares that fulfillment of our national purpose depends on promoting and assuring the highest level of health attainable for every person . . . and that attainment of this goal depends on an effective partnership, involving close intergovernmental collaboration, official and voluntary efforts, and participation of individuals and organization . . . to assure comprehensive health services of high quality for every person . . .[1]

The result of this study, therefore, should contribute to the body of research relevant to the education of the inner city child.

The importance of the classroom teacher as the critical factor in the teaching-learning environment cannot be overemphasized.

Theoretical Foundation of the Study

The black poor demand equality of educational opportunity. For black parents in the ghetto, this means holding teachers and principals accountable for the quality of education children receive. Too many teachers and principals long ago decided that the ghetto child frequently is ineducable. At best, they show their attitudes

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[1]From "Finding and Declaration of Purpose," Public Law 89,747, signed by the President, November 3, 1966.

in low expectancy of academic achievement. At worst, they are racist.[1]

Predictably, most educators have claimed that socio-economic background determines achievement: failure is not so much the fault of the school as of the society, which neglects to provide for its poor. In effect, this line of reasoning blames the child. Although a great deal of the educational and sociological research of recent years has emphasized social and economic factors, there is sufficient evidence to challenge this view, and ghetto parents certainly no longer accept this easy explanation. They argue that the school system's responsibility is to educate regardless of the background of the child.

Rosenthal and Jacobson's study of teacher attitudes confirms the generally held notion that teacher expectation bears on the performance of pupils.[2]

From the National Medical Association Annual Convention, Atlanta, Georgia, August 4, 1970, entitled "The Black Physician in the 1970s," Dr. Clifton R. Wharton, Jr., President, Michigan State University stated that:

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[1]Maurice R. Berube and Marilyn Gittell, eds., Confrontation at Ocean Hill-Brownsville, The New York School Strikes of 1968 (New York: Frederick A. Praeger, 1969), p. 5.

[2]Robert Rosenthal and Lenore Jacobson, Pygmalion in the Classroom (New York: Holt, Rinehart and Winston, 1968).

> The President's Commission on Health Manpower clearly chronicled many of the problems back in 1967, when it reported that "There is a crisis in American health care, however, it is not simply one of numbers. If additional personnel are employed in the present manner within the present patterns and systems of care, they will not avert or even perhaps alleviate this. Unless we improve the system through which health care is provided, care will continue to become less satisfactory, even though there are massive increases in cost and in numbers of health personnel."[1]

As has been the case with most commission reports on national problems, presidential or otherwise, it has gathered more dust than it has produced positive responses. The final point listed above is one which deserves special emphasis--the need to develop new systems through which health care can be provided. But there are signs and initial efforts which may help bring about this necessary revolution in health care services and which may serve as prototypes for the future. The concept is one of <u>total packaging</u>, not just the traditional medical services, but an approach that meets the total needs of the individual. Physicians are part of the planning and are made part of the governing body of the community health center facility.[2]

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[1] <u>Report of the National Advisory Commission on Health Manpower</u>, Vol. I (Washington, D.C.: Government Printing Office, November, 1967).

[2] Lionel F. Swan, <u>Journal of National Medical Association</u>, LX, No. 77 (January, 1968).

Although comprehensive community health centers need not be restricted to the poor by any means, it is obvious that this is where the need is greatest.

In addition to the millions of poor people deprived of proper health care, there is an estimated 30 million "near-poor" whose low income level just as effectively bars them from the health attention they should have.

In recent years we have witnessed a massive urbanization of blacks in this country--men, women, and families moving to where they thought the opportunities were. The great growth of predominantly poor blacks in the core of our cities has, of course, resulted in terribly inadequate medical care--for at the same time the more affluent classes, both white and black have moved themselves and their tax dollars from the cities to the suburbs. The result has been increasing medical needs and decreasing medical services.

There is an old quote which states, "The poor are likelier to be sick, and the sick are likelier to be poor. And without help, the poor get sicker and the sick get poorer."

Dr. Green states that intelligence is no longer considered to be a single general factor invariable for the individual, it still can be treated as a relatively stable set of aptitude limits. Between these limits fall the achievement levels elicited by specific tastes.

Logically then, achievement should be sensitive to the same variables as intelligence and, in addition, fluctuate with factors of its own. Past research shows this to be the case. The variables to be presented can be schematized as follows: personal characteristics (motivation, health, attention span, verbal ability, and imagination).[1]

Schultz when testing the achievement of Florida ninth graders found high achievement to be inversely correlated with the number of days absent from school. This might be due to ill health causing reduced exposure to educational content.[2] Ransom found good health to correlate with good achievement. She also found attention span as well as health to be relevant to achievement for Atlanta first graders.[3]

Hypotheses have been generated that our children will achieve given opportunity, if health is up to its optimum level. The child's senses are physically based. The ability for cognition is physically based. However,

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[1]Robert L. Green, Louis Hoffman, and Robert F. Morgan, "Some Effects of Deprivation on Intelligence, Achievement, and Cognitive Growth," The Journal of Negro Education (Winter, 1967).

[2]R. E. Schultz, "A Comparison of Negro Pupils Ranking High with Those Ranking Low in Educational Achievement," Journal of Educational Sociology, XXXI (1958), 265-70.

[3]Katherine A. Ransom, "A Study of Reading Readiness," Peabody Journal of Education, XVI (January, 1939), 276-84.

we have also seen that despite ghetto conditions and ghetto health deprivations the achievement levels of the black child, if integration has occurred, have risen without the white child level of achievement lowered.[1]

Definition of Terms

Inner City Public Schools.--Refers to New York City public elementary school. Any school which receives full support of its program from state or federal sources or city government.

School District.--A school district is a legal entity created by the New York State Legislature for the purpose of operating and maintaining public education within the boundaries established by law.

Educational Quality.--The educational characteristics of school and community as perceived by educational experts to be effective in producing quality education.

Elementary Pupil.--Student enrolled in grades pre-kindergarten through fourth in a public school in New York City.

Faculty.--Administrators and teachers of public schools in New York City.

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[1] C. F. Hansen, "The Scholastic Performances of Negro and White Pupils in the Integrated Public Schools of the District of Columbia," Journal of Educational Sociology, XXXVI (1963), 287-97.

Ghetto.--Racial and color determined restrictions on freedom of choice and freedom of movement.

Parents.--Father, mother, or guardian of a pupil in the public school in New York City.

Clinic.--Charles R. Drew Health Center.

Multiphasic Examinations.--Comprehensive medical examination.

Socio-economic Poverty Area.--Ocean-Hill/Brownsville Census tract #363, New York City.

Curriculum.--A set of experiences or learning defined with provision for New York Board of Education redefined for individual pupil needs.

Pathology.--The branch of medical science that treats a morbid condition; their causes, nature, the sum of the morbid condition, processes, and results in the course of a disease.

Health Areas.--Geographical areas originally devised by the Health Department for the reporting of health data.

Sensory Neural Pathology.--The pathology or morbid condition or disease of the sense of the body and the nervous system.

Sensation.--That aspect of consensus resulting from the stimulation of the nerve process, beginning at the point of the body and passing through the brain especially by those stimuli affecting any of the sense organs as hearing, taste, touch, smell, and sight; also the capacity to respond to such stimulation.

Characteristics.--Distinguishing or contributing to distinguishing, marking peculiarity.

Health.--Soundness of any living organism's physical condition.

Health Characteristics.--Distinguishing marks or peculiar denoting the soundness or physical condition of any living organism.

Sense.--The faculty of sensation, sense, perception. In general, any of the certain agencies by or through which individuals receive impressions of the external world; popularly, one of the five senses, any receptor, or group of receptors specialize to and transmit stimuli either external as of sight, taste, smell, etc., or internal as of hunger, thirst, sex, equilibrium, muscular and visceral movement, etc. Ration perception accompanied by feeling, realization, discriminating cognition.

Perception.--The act, power, process, or product of perceiving; knowledge through the senses of existence and properties of matter and the external world; also cognition of fact or true in general by the activity of thinking; as, moral perception; apprehension; knowledge. The faculty or power or acquiring immediate and fundamental knowledge through the sense; often called sense perception or sense presentation; also, the process of acquiring such knowledge, or the mental produce so obtained, often called the percept. Any insight or intuitive judgment that implies sensual discernment of fact or truth.

Tract.--Small areas into which large cities and adjacent areas have divided for statistical purposes. Tract boundaries were established cooperatively by a local committee and the Bureau of the Census and were designed to delineate areas relatively homogeneous with respect to population characteristics, economic status, and living conditions.

Limitations of the Study

The validity of this study is affected by the following factors:

1. As is true of any study, the validity of this study is affected by the degree of frankness and sincerity of response to the instrument administered.

2. The research is limited to all children presently enrolled in an Ocean Hill-Brownsville school in New York City, age 8 to 9, who took the Metropolitan Achievement Test.

3. The study of children is limited to health characteristics, age, and achievement.

4. The acquisition of complete health information on all students in the sample was precluded by three conditions beyond the control of the writer:
   a. The improper procedures used in keeping health records.
   b. The heavy case load of the school doctor and nurse.
   c. The high mobility of students in the school.

5. The finding of a relationship between health characteristics and school achievement of the sample will be viewed as correlational and not as causal.

Research Hypothesis

There will be a significant relationship between health pathologies and academic achievement of the students in the sample.

Overview

It has been the intent of Chapter I to provide a preview of this study, as well as to expose some of the biases and presuppositions undergirding the entire study. Additionally it was necessary to explain why there is a need for this study and to denote its importance to education. It was essential that the theoretical basis upon which the study is devised be explained in some detail. Concepts vital to the understanding of this study were explained, followed by a statement of the research hypothesis to be investigated.

In Chapter II a section on the role that the school and the home play in the school achievement of children is presented. The major part of this chapter, however, deals with a review of the literature related to school achievement, age of students, health characteristics, and their relationships.

The design of the study will be described in Chapter III, including a description of the sample used in the study. Additionally, the chapter will include a description of the instrument used in the study. A discussion of methods of administration of the instrument and its scoring will be followed by a statement of the statistical methodology to be used.

Chapter IV will be devoted to an analysis of the data gathered in this study.

The last chapter will contain a summary of the study and the conclusions reached. Concluding this chapter will be implications and a list of recommendations for further study.

Having presented the purpose of this study, its need, its hypothesis, and its theoretical base, it is now essential that a review of the relevant literature be undertaken.

CHAPTER II

REVIEW OF THE LITERATURE

In this chapter some of the literature relevant to the topic and the need for this study will be reviewed. The review of the literature will be divided into four sections. The first section discusses the role of the home and of the school in influencing school achievement. The second section is a summary of the research done to determine health characteristics of early elementary-age pupils in communities socio-economically similar to the one used in this study. Third, some studies will be cited concerning the relationship of children's mental and emotional health to school achievement. Again, the concentration will be placed on studies done in locations demographically similar to the area studied by this writer. Finally, the reader's attention will be directed to some statements which outline the place of, and need for action research such as this to generate models for double multiphasic health screening for children in low income areas as well as for curriculum to help these children build coping skills in a hostile environment.

In New York City there is a basic disagreement in education over why students perform poorly in school. There is agreement, however, that many students are two or more years retarded in reading. There is disagreement over where to place blame for the situation, and, hence where to direct corrective energies. Many lay blame on the school. Others see the difficulty in the home and the community environment. It is worthwhile to present, in some detail, the contrasting arguments.

Home and Community as the Source

The common factor in those explanations generally accepted and offered by school officials and some parents is that the educational deficiencies of these children are understandable reflections of the pervasive pathology which afflicts ghetto communities and the home and family life of its children. These explanations point to the fact that the area contains a higher incidence of disadvantaged families than is found in other communities. This is not a function of race but of economic and social deprivation due in part to racial discrimination. It follows, nonetheless, that the schools must work with a higher percentage of children from disadvantaged homes, who bring certain handicaps which inhibit the learning process. These are: (1) a tendency to be withdrawn and uncommunicative, (2) a hostile reaction to authority figures, (3) difficulty in developing a consonance of

conduct, (4) a dearth of educational experience prior to entering school, and (5) low motivation to do well in school. In addition, the school finds it difficult to overcome negative community influence in seeking to overcome these handicaps and do a sound educational job. Implicit in these arguments is the assumption that the schools are functioning up to their maximum efficiency and are providing the children with the best education possible, given the reality of these deficiencies in the community.[1]

The School as the Source

The black in America occupies an inferior place in the social structure through no inherent inadequacies of his own, but because of the system under which he lives. Poverty and ghettoization condemn him, in large numbers, to inferior housing and limited education. The social structure confines him to the least rewarding job opportunities. Hence, he is all too often irrevocably trapped in a vicious cycle from which he is unable to extricate himself. Since there is a strong tendency in our society to motivate academic accomplishment by offering occupational reward, equal motivation for the black child then becomes the responsibility of the school. It must limit

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[1]The analysis which follows is culled largely from a presentation by Dr. Charles Shapp, one of the Assistant Superintendents of the schools in the community, made to the HARYOU Education Committee on April 5, 1963.

some of the frustrations which make him decide there is no point in trying, which make him develop a disparaging self-image which keep him trapped in the vicious cycle. It becomes increasingly more apparent that the public school system either cannot or will not fulfill this responsibility.[1]

While there are many reasons given for, and relevant to, the poor academic performance prevalent in the ghetto, the explanations in terms of adequacy or inadequacy of teachers and teacher supervisory personnel are likely to generate controversy and intense emotions. Public school teachers in New York City come largely from the city colleges, which have a dominant pupil population from a culture which prepares the child from birth for competition of a most strenuous type. These students are largely white, middle-class, growing up in segregated white communities, where, by and large, their only contact with the black finds him in a position of servitude. If teachers and supervisors are to meet the academic needs of a diverse populace they must have some knowledge of, and respect for, the children they are to educate.

The image of the black child given the teacher by many professors and supervisors has been one of the

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[1]This analysis is an amended version of a paper entitled "Teaching Personnel," presented by Thelma G. Johnson to the HARYOU Education Committee, April 26, 1963.

lovable child of limited intellectual capacity, unable to gear himself to competition of any appreciable degree, and of his culture as one which has made an extremely limited contribution to the total heritage of America. This is often borne out in the annual Negro History celebrations, when stories of Negro heroes (usually those who have excelled in sports or entertainment) are presented in auditorium programs. But the child is shown little of his own image in superior or even in equal positions of status during the remainder of the school year.

Responsible positions, even within the neighborhood school, are in the main held by people who perceivably differ from him. The dearth of black principals, assistants, and supervisors is a most glaring deficit and one which leaves a marked, unwholesome effect upon the child's self-image. Since the black child rarely sees his own image in positions of authority, and since the striving for status is an inherent part of American culture, he often gratifies his normal human need for recognition in a manner detrimental to society. The white child likewise suffers the ill effect of seeing only his own image in authoritative positions. This imbues him with a fallacious concept of his own superiority. The perpetuation of this pattern of education has proven to be a most unwise one.

The competitive culture from which the bulk of the teachers come, with the attendant arrogance of intellectual superiority of its member, lends itself readily

to the class system within the school, which sets the standards and deprecates creativity, which effects perpetuates the academic pre-eminence of the dominant group. In the case of the black child, the added insult is the preconceived idea that he is barely educable. The schools in the ghetto area are operated, in general, in such a manner as to prevent children from learning those things which they must learn if they are to realize their full potential.[1] There is no willingness to ask, "How can we restructure the school in order to take the child with his handicaps and capabilities and do the job to see that he will reach his maximum potential?" The human organism is blessed with the plasticity and the raw stuff that can come to fruition, and the school must do its best to see this happens.

When teachers and principals have a low opinion of the children's learning ability, the children seldom exceed those expectations. If we take standard curriculum, point by point, and go into any school in the community and ask the children from the first grade onward, "How are these things taught?", one will find that it does not jibe with what is happening in the white schools, particularly schools in white middle-class areas, although the same set of standards are supposedly applied to all of the children. The problem of the minority group

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[1] Ibid., p. 202.

schools will not be solved through more "special services," nor can they await the changing of the child's family background. The problem can only be solved through a functional and structural reorganization of the school system itself. If the schools are to be the focal point in the socializing process, they must help to develop an understanding and acceptance of culturally determined attitudes and behavior.

The child confronted with contradictions between the goals set for him and the objective conditions becomes demoralized, either by seeing his shortcomings as responsible for his difficulties or by seeing the objective as so limiting that he is powerless to cope with it. Since the limitations of his achievement have been indicated there is no need for him to go further. When the level of education for the class is below his potential, he has little desire to be different from the dominant group and soon rechannels his energies in other directions. Often he becomes either disruptive or withdrawn.

With the understanding on the part of the teacher that the child's culture is not a barren, unproductive one, from which the sole contribution is in the area of physical prowess and manual labor; with the understanding that while American Negroes have much in common, one with the other, there are equally as many variables in individual backgrounds as there are in individual students, the teacher will then be able to gear the curriculum to

students with differing and disparate backgrounds and use the differences to enrich her program.[1] She must be able to strengthen her capacity to create a climate of learning which will involve children so fully that the resolution of social and emotional problems is encouraged. The present system feeds and perpetuates the emotional problem, thereby creating a greater social problem.

Within the system there are brilliant, dedicated, responsible educators who have been giving children the kind of academic guidelines and exposures which have made possible a degree of success, in spite of the present structure. The system itself prohibits the growth of this type of teacher. The paternalism which permeates the school system has assumed monumental proportions.

A democratic teacher-supervisor relationship is mandatory, if the classroom teacher, particularly in the elementary school, is to maintain a respectful self-image. There are cases of supervisors in the ghetto schools who have told experienced teachers from other parts of the surrounding area that it would be much wiser for them to stay out of the New York City school system. These teachers were told that not only could these children not learn, but they did not have any respect for teachers, and that they, these teachers, could expect bruises. This is reinforced by the practice in the school system of

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[1] Ibid., p. 203.

assigning newly licensed, inexperienced teachers, and not the most experienced, qualified teacher to the schools in the ghetto, in spite of the fact that it is generally known that these children need the best, most qualified and experienced teachers in order to fulfill their intellectual and human potentials.

Superior teaching has many facets--creativity and stamina, staying power, a sense of humor, dedication, flexibility, and most of all, an ingrained belief that all children can learn.[1]

Studies Concerning Health Characteristics of Early Elementary Age School Children

Children of poverty inherit deprivation in many areas of life; the effects of poverty extend into the socio-emotional and educational aspects of the child's life with great impact. Yet, much research pointed to determining characteristics of poverty-stricken children seems to take the approach that we can treat the problems of the poor as separate entities, as though various areas of life were segmented and independent.

A problem encountered in reviewing the literature was to join together all the medical, sociological, and psycho-educational studies on the separate effects of poverty in these areas as the discrete factors influence the well being of the whole child. When discussing health

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[1] Ibid., p. 204.

characteristics it should be understood that we mean mental, emotional, and physical well being. This writer would agree with the viewpoint that any educational program for the "disadvantaged" child must include medical facilities to deal with the health problems of the children of poverty. These health problems are well delineated in the literature. A systematic review of the literature pointed to the need for early identification of children's problems through a complete medical evaluation including physical examination and medical history.[1] The literature suggests special attention be given to: nutritional deficiency, lack of coordination, speech problems, and psycho-emotional problems. In low socio-economic groups it is also obvious that the incidence of tuberculosis, rheumatic fever, neurological damage, mental retardation, congenital deformities, mental illness, dental problems, and malnutrition is significantly higher than in more advantaged groups.[2] There is a wide spread medical health crisis all over the country. However, in black communities the crisis worsens. Recent statistics on the national mortality rate of black mothers is 90.2

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[1]G. Binning, "Earlier Physical and Mental Maturity Among Saskatoon Public School Children," Canadian Journal of Public Health, XLIX, No. 1 (January, 1968), 9-D.

[2]Hilda Knobloch, and Benjamin Passamanick, "Environmental Factors Affecting Human Development Before and After Birth," Pediatrics, XXVI (1960), 210-18.

per 100,000; for white mothers it is 22.4. Approximately 200 black doctors graduate from medical schools each year; the net gain in black M.D.s is only 50 per year, however. In almost every area of disease the death rate for Negroes is twice that of whites.[1] The implications of poor health frequencies for the schools that the children attend are enormous.

The literature suggests that medical screening in schools be done to include the following tests: (1) hemoglobin, (2) urinalysis, (3) tuberculosis skin test, (4) stools for parasites, (5) vision, (6) hearing.[2] The writer, in designing this study, tested for difficulties in these areas.

Additionally, results of studies done in many cities including Chicago, New York, Los Angeles, and Denver evidence high incidences of anemia in children from low socio-economic areas. A variety of conditions may contribute to the etiology of this condition including sickle-cell anemia, lead poisoning, parasitic infection, and malnutrition.

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[1]Richard Hall, "Black Surgeon Leads the Effort for Community Health Park," Tuesday, September, 1970, p. 7.

[2]Harry Medovy, M.D., ed., The Pediatric Health Clinics of North America: School Health Problems (Philadelphia: W. B. Saunders, 1965); U.S., Department of Health, Education and Welfare, Health of Children of School Age (Washington, D.C.: Government Printing Office, 1965).

Until recently much of the effects of lead poisoning on children has been ignored. The same is true for the areas of malnutrition, parasite infection, tuberculosis, and especially sickle cell anemia. Although nutritional studies have been done and evidence that poor nutrition may have a long-range impact on the population of a country, few solutions have been proposed. The National Nutrition Survey found, for example, that one-third of all children, under 6 and 15 per cent of the total sample of 12,000 studied, showed low protein and hemoglobin plus many vitamin deficiencies. The Health, Education and Welfare Department reports this survey as "a comprehensive effort to assess the nutritional status of our population." The sample of this survey was a randomly selected multi-age group from poverty pockets in two states. Because of the poverty orientation, the majority of those examined were Negroes.[1] Read also reports that the preliminary results of other surveys including Mississippi pre-schoolers and others of Apache and Navajo children generally confirm the results of the National Nutrition Survey. However, most nutritional surveys and studies of the effect of poor nutrition as reported in the literature have been done in South America, Central Africa, Latin America, and specifically in Mexico.

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[1]Merrill S. Read, "Malnutrition and Learning," American Education, V (December, 1969), 11-14.

Deutsch points out that presently we have practically no deaths in the United States from starvation, but many children do not receive well balanced diets and often suffer deficiency diseases.[1] Since this occurs most frequently in poverty areas and since we have solutions to the problem of nutritional disability, we basically are not inclined to pay the dollars and cents needed to erradicate hunger.

Children coming to the cities from certain geographical areas show greater rates of pathology associated with malnutrition than others. Specific causes of malnourishment can be traced to prevalence of parasitic agents. For example, hookworm is common in poor children emigrating North from the South. Malaria, occurring in children, is an important causitive factor in malnutrition. Additionally, ascariasis, a parasitic disease which develops in the intestinal tract is frequently found in the South and is associated with malnutrition.[2] Other causes are extremely numerous; the above serve as examples and should support the cause advocating adequate medical diagnosis and appropriate educational programs for

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[1]Cynthia P. Deutsch, "Some Effects of Poverty on Children," Perspectives in the Education of Disadvantaged Children (Cleveland, Ohio: World Publishing Co., 1967).

[2]"White House Conference on Child Health and Protection," Special Education: The Handicapped and Gifted Child (New York: Century Company, 1930).

undernourished children. Many writers have pointed to the effect of physical growth on psychological development, and yet, we still see children in schools who suffer the physical effects of poverty.[1] This specific type of research has been widespread for over forty years!

Lead poisoning also seems another example of this knowledge and neglect as reported in the literature. This affliction usually strikes as many as 300,000 children per year in the United States, disabling some physically, causing mental retardation in others, and indeed, causing approximately 10,000 deaths per year in children who eat the lead base paint flakes which have been used in tenement housing. Benjamin Pasamanick states that whole generations of Polish immigrants and descendents which he studied in the East, Mid-west, and elsewhere over the last sixty years have shown the effects of lead-induced mental retardation.[2] The Polish population not effected

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[1]W. M. Crickshank, "The Impact of Physical Disability on Social Adjustment," Journal of Social Issues, IV (Fall, 1948), 78-83; D. M. Levy, "Aggressive-submissive Behavior and the Frohlick Syndrome," Archives of Neurology and Psychiatry, XXXVI (November, 1936), 991-1020; R. C. Barker, C. R. Wright, Adjustment to Physical Handicaps and Illness: A Survey of the Social Psychology of Physique and Disability, Bulletin No. 55 (New York: Social Science Research Council, 1946).

[2]Benjamin Pasamanick, "Environmental Hazards to Children's Health" (seminar in Environmental Education, University of Wisconsin, Milwaukee, April, 1971).

was that which migrated to areas of the west coast where lead paint was not widely used to protect buildings from the effects of weather.

We will look at one further example of physical handicap which is particularly prevalent in areas such as the one used in this study. This is the anemia known as sickle cell. The disease afflicts about 1 to 2 per cent of the black population in the United States, with another 9 per cent carrying the disease in their chromosomes.[1] The disease, though fatal and crippling, has only recently received attention in spite of the fact that it was identified as early as 1910.

Sickle cell anemia has not been recognized as a community health problem even though it occurs in about 1 in 500 Negro births and median survival is only twenty years of age. Scott (1970) reports:

> In 1967 there were 1,155 new cases of sickle cell anemia, 1,206 of cystic fibrosis, 813 of muscular dystrophy, and 350 of pheylketonuria. Yet volunteer organizations raised 1.9 million for cystic fibrosis, 7.9 million for muscular dystrophy and less than 100,000 for sickle cell anemia. National Institute of Health grants for many less common hereditary illnesses exceed those for sickle cell anemia. . . . In the United States, sickle cell anemia occurs almost entirely among Negroes. . . . Conversely 98 per cent of patients with cystic fibrosis are white and (PKU) phenylketonuria is virtually unknown among Negroes.[2]

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[1]"Sickle Cell Sufferer Hopes Pain Has Ended," Michigan State News, November, 1970.

[2]Robert B. Scott, M.D., "Health Care Priority and Sickle Cell Anemia," Journal of the American Medical Association, CCXIV (October 26, 1970), 731-34.

The following figure and tables are excerpted from Scott showing comparisons between the incidence of sickle cell anemia and other well known serious childhood disorders.[1]

Notice that the above statistics were arrived at using estimates. If one generally makes the assumption that the ghettos foster high disease, death, and disability, one may imagine what the chronic disease figures look like for the Ocean-Hill area. The writer could not review in this section all the literature on health characteristics of early elementary age pupils in communities similar to Ocean-Hill, however, those reviewed are those suggested to be more prevalent in slum environments. In the study done by this writer all comprehensive medical screening was preformed. The literature points to the fact, in all cases, that the impoverished family is especially prone to physical disabilities arising from lack of prompt and early diagnosis of disease, and from treatment of "minor" maladies. One may recall that colds left untreated may develop into pneumonia; lack of innoculations are responsible for complications brought on by simple cases of measles; vision and hearing problems left untreated can result in deafness and loss of vision.

The review of the literature was intended not as an exhaustive review of all health studies done, but as an

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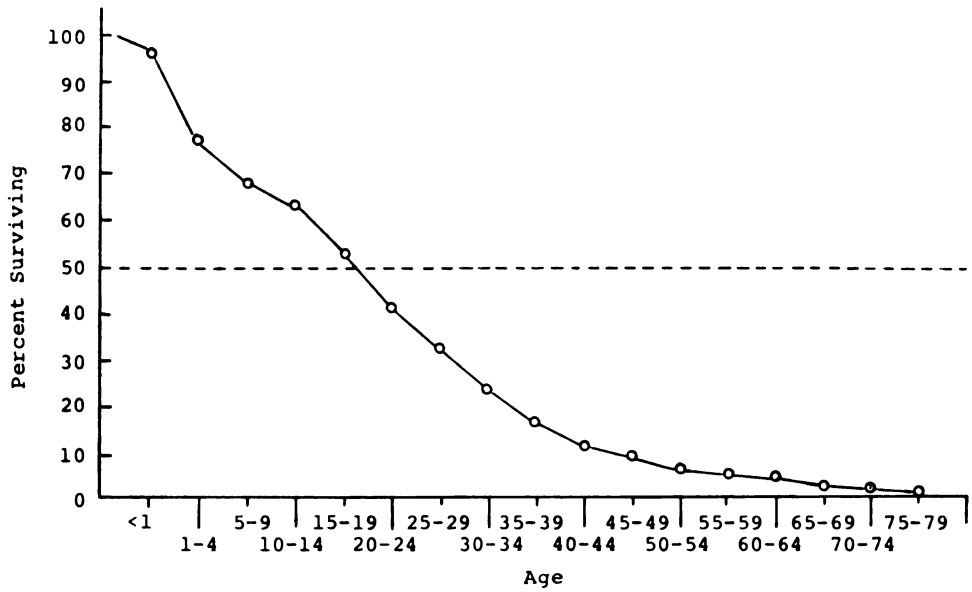
[1] Ibid.



Deaths due to sickle cell anemia and sickle cell trait reported in 1967. Dashed line indicates the median survival

Figure 2.1

Sickle Cell Anemia Death Rates

TABLE 2.1.--Incidence of some important childhood diseases

Sickle cell anemia	1:500	Negro births
Diabetes	1:2,500	Births (2:1 White:Negro)
Acute leukemia	1:2,880	Children Under 15 (majority white)
Cystic fibrosis	1:2,940	Births (98% white)
Muscular dystrophy	1:5,000	Births
Phenylketonuria	1:10,000	White births

TABLE 2.2.--Estimated new cases in United States, 1967*

	Sickle Cell Anemia	Cystic Fibrosis	Muscular Dystrophy	Phenylketonuria
Negro	1,142	17	114	0
White	13	1,180	699	350
Total	1,155	1,206	813	350

*U.S. births, 1967: 3.496×10^4 white; 0.571×10^4 Negro

indication of the variety and nature of physical ills most often found in the children who live in ghetto areas. The review serves as a spring board for setting the design of the study, and for further review of the literature.

School Achievement in the Ghettos

The question remains, "How do health characteristics of poor children have a bearing on the scholastic performance of the children in the schools?" The answer to this question has been widely researched, and hotly debated.[1] Even the tabloids, New York Times, and popular magazines carry articles on problems of disease, death, and disability in the ghettos. Schools recognize the problem and try to cope. St. Louis reports "some 50% of special clinic cases show one or more physical deficiencies which should have medical attention . . . recommend . . . a thorough medical examination be made for pupils who have trouble learning to read."[2]

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[1]B. J. Bloom, A. Davis, and R. Hess, Compensatory Education for Cultural Deprivation; M. Deutch, "The Disadvantaged Child and the Learning Process: Some Social Psychological and Developmental Considerations," in Education in Depressed Areas, ed. by A. H. Passow (New York: Bureau of Publications, Teachers College, Columbia University, 1963); O. Klineberg, "Negro-White Differences in Intelligence Test Performance: A New Look at an Old Problem," American Psychologist, CXVIII (1963), 198-203.

[2]William Kottmeyer, Teachers Guide to Remedial Reading (New York: Webster Division, McGraw-Hill, 1959).

Although funds have been allotted to deal with some small aspects of health problems, no city reports a total approach to solutions. Implications for the curriculum may be found if one examines the yearbooks of the National Society for the Study of Education dealing with teaching either educationally retarded or disadvantaged students. The question for administrators becomes one of determining the curriculum for each child who may have any of the health problems which are bred in this country's ghettos.

Statements Relating to the Need for Curriculum Decision-Making Processes

The role of the classroom teacher is one of the most inflamatory issues in contemporary education. This issue, however, has been obscured by arguments at the local school district, city, and state levels.

The Coleman Report indicates that segregated schools may act to the detriment of all American minority group children identified except Orientals. It is not clear whether differences in achievement are a function of cultural characteristics, behavior of teachers, or some interaction between these two factors, or some factor, or combination of factors not yet measured.

Barr reviewed a series of studies conducted in Wisconsin which extended over a ten-year period.[1] He concluded that none of the teacher personality variables, teacher demographic variables, and classroom climate variables which were measured were adequate predictors of student achievement.

Studies of relationships of teacher attributes to student achievement may be divided into two categories: (1) studies that focus on personality and demographic variables among teachers and pupils, and (2) studies that focus on the organization of curriculum materials.

The first type of study is concerned with individual differences among teachers and pupils. The attempts of researchers to develop instruments for measuring the behavior of teachers on personality dimensions established in theory date from the work of Withall.[2] This research was modified and extended by Mitzel and Rabinowitz.[3]

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[1]Arvil Sylvester Barr, Wisconsin Studies of the Measurements and Prediction of Teacher Effectiveness (Madison, Wis.: Dembar Publications, 1961).

[2]John G. Withall, "Development of a Technique for the Measurement of Social-Emotional Climate in Classrooms," Journal of Experimental Education, XVII (March, 1949), 347-61.

[3]Harold E. Mitzel and William Rabinowitz, Assessing Social-Emotional Climate in the Classroom by Withall's Technique (Washington, D.C.: American Psychological Association, 1954).

Further efforts to sample behaviors in classrooms were conducted by Medley and Mitzel, Flanders, and Smith.[1] These latter works focused mostly on verbal interaction among persons in classrooms, but were not directly related to work with inner city children and their teachers.

Cronback describes how teachers have usually adjusted programs to provide for individual differences in children:

> The teacher adapts instructional methods to the individual. . . .
>
> The significant thing about these adaptations is their informality.
>
> The teacher picks up some cues from the pupil's test record and his daily work, and other cues form rather casual observation of his social interactions. The teacher forms an impression of the pupil from the cues, usually without an explicit chain of reasoning. He proceeds on the basis of the impression to alter instruction; the adaptation too is intuitive, without any explicit theory. No doubt the decisions tend to be beneficial, but there is reason to think that intuitive adaptations of this kind will be inefficient and occasionally may be harmful.[2]

Stake also speaks along the same lines when he says:

> We need techniques for representing the perspectives held by different people. . . . We need

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[1]Donald Matthias Medley and Harold Eugene Mitzel, "Pupil Growth in Reading," Journal of Educational Psychology, XLVIII (April, 1957), 227-37; Ned A. Flanders, Teacher Influence, Pupil Attitudes, and Achievement (Minneapolis: University of Minnesota, 1960); Bessie S. Smith, Journal of Clinical Psychology, XVII (January, 1961), 53-54.

[2]Lee Joseph Cronbach and Goldine C. Gleser, Psychological Tests and Personnel Decisions (Urbana: University of Illinois Press, 1965), pp. 28-29.

> better devices for scaling perceptions of objectives. We need better procedures for processing judgments.
>
> What are appropriate and inappropriate roles for the classroom teacher in curriculum evaluation: can we capitalize upon the considerable ability of teachers to estimate which of two teaching techniques is more likely to accomplish a particular long-term goal? Through training we could refine the teachers' powers of observation and estimation to make his contribution both technically sound and educationally valid. It is not unreasonable to conjecture that someday the primary role of the classroom teacher may be as a curriculum trouble-shooter, a conceptually oriented monitor, an evaluator, the essential link between the school's provision of a standard learning situation and the modification of it to accommodate the uniqueness of the student.[1]

It would seem that few measures of differences among teachers have been identified which adequately predict pupil achievement. The more general personality and demographic variables which have been employed have not been of the type which could readily influence school decision-making policy. Demographic differences, among these health characteristics of students, particularly with respect to minority group membership and socio-economic status, appear to be substantially related to student achievement. It is therefore imperative that curriculum decisions be based on all of this input.

The principal health characteristics factors which were measured in this study were chosen because it is believed that they relate to classroom process, and occur most frequently in ghetto classrooms. There appears, in

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[1]Robert E. Stake and Douglas D. Sjogren, Activity Level and Learning Effectiveness (Lincoln: University of Nebraska, 1964), p. 14.

any case, to be little relevant literature about the effects on pupil learning of cognitive course structure as this relates to general well-being of the children of the poor. That is not to say that we do not have countless articles of educational research on the "exceptional" child who may be blind or otherwise physically or mentally handicapped. Programs which deal with health problems of the poor are usually not related to treatment of pupils in schools. Few studies even exist of the effect of food programs on student achievement--naturally no one really studies the effect of the Black Panther free breakfasts as they relate to the schools perhaps due to the general alienation of the "people" from their institutions.

> Knowledge of factors that influence the health and social functioning of school populations is essential to the intelligent design of school programs. This knowledge is equally important if we wish to evaluate the effectiveness of professional health practices in terms of changes in the health of the population served. In addition it will enable supervisors to know those characteristics of student and their environment that are predictive of the greatest risk to their health.[1]

With this knowledge administrators will be able to better cost out the budget. When we are able to figure out health characteristics of children and identify the problem we will make realistic placements and the course of study could be made more realistic and relevant. Early

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[1]U.S., Public Health Service, School Health Survey, 1967.

identification of the problem will reduce future cost factors because we will lessen the need for double clerical work, re-education, and less need for remediation.

> The problems of emotional and social adjustment which beset children usually have their beginning in early childhood and become apparent by the third year in school. One of the frequent concomitants is a sharp breakdown in the learning process. Under present conditions too many of our children who are educationally retarded in the upper grades of elementary school, junior high, and senior high school are the results of failure to recognize and administer to the problem early enough. Earlier recognition and attention may do much to reduce both the frequency and severity of these maladjustments at a later age.[1]

We must recognize that meeting the physical and emotional needs of children through health, nutritional, and social services is a prerequisite to academic achievement. We must recognize too, that screening and early identification are only components of a health program, since children should receive continuing health supervision in a system that assures early detection of abnormality with immediate provisions for diagnosis, prognosis, treatment, and follow-up.

To this end there should be an orientation program for teachers by the principal and the district office to refine techniques of early identification of incipient maladjustment. There must be too, an identification of patterns which are in the community school district. To

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[1]"Early Identification and Prevention Program" (unpublished paper, Board of Education of the City of New York, Bureau of Educational and Vocational Guidance).

serve the educational needs of the child, health findings must be translated into classroom recommendations. We must promote joint efforts involving agencies, communities, schools, and teacher preparatory institutions in developing and implementing health programs. Lastly there must be a health counselor assigned to each school to coordinate the health program.

We must begin to look at "comprehensive health care." For many people living in New York City, especially those in poverty areas, "comprehensive health care" means the sum total of all their visits to emergency rooms, specialty clinics, and outpatient departments plus, of course, the hours and days spent waiting in these places.

> In these circumstances no single staff person feels directly responsible for the general health of the patient; and the patient has no primary person to turn to for medical care. A family's medical problems are not treated in any integrated way; health education and preventive services do not exist.[1]

The World Health Organization recognizes health as a state of complete physical, mental, and social well being and not merely the absence of disease or infirmity. They go on to say that "there is no uniform system of health care to analyze, but rather a very complex series

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[1]The City of New York, "An Alternative to Crisis Medicine," Health Services Administration HSA News, I, No. 2 (February, 1971).

of independent institutions which must act together to provide health care.[1]

The problem of ill health is closely intermingled with poverty, disability, and unemployment. It appears then, that only through comprehensive family care can we begin to deal with those related areas which cause ill health as well as the vast difficulties ill health causes in a poverty affected population.

Downs reported that the presence of chronic disease in one family member was associated with high rates of illness, both acute and chronic, in other family members.[2]

The Health Services Administration points out that "It's no secret that New York and the nation are in the midst of a major crisis in health care. Basic changes must be made in the way health care is delivered.[3]

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[1]Louis Knowles and Kenneth Prewitt, Institutional Racism in America (Englewood Cliffs, N.J.: Prentice-Hall, 1969).

[2]J. Downs, "Illness in the Chronic Disease Family," American Journal of Physical Health, XXXII (June, 1942), 589-600.

[3]The City of New York, "A Broad-scale Attack on the Health Care Crisis," Health Services Administration HSA News, I, No. 2 (February, 1971).

Dr. Gaston Jumelle points out that a comprehensive Family Health Center should aim to break the cycle of neglect, indifference, sickness, illiteracy, chronic disability, and delinquency among the citizens of this community. There is little hope that this self-perpetuating cycle can be broken without a new and improved approach to providing health services for members of these lower income families. The services now being offered are insufficient and often inaccessible, impersonal, fragmented, lacking in continuity, and of quality.[1]

The objectives of the Comprehensive Health Center should be:

1. To deliver family health care in the community.
2. To become involved in developing of careers of community people.
3. To make the community aware of health needs.
4. To aid in consumer education.
5. To implement change of attitudes toward health.

The consumers must have a voice as a change agent and in implementing health care. This will help to change attitudes which will influence behavior and make for the implementation of comprehensive family care.

Comprehensive medical care is a compassionate personalized birth to death attention, preventive,

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[1]Charles Drew Neighborhood Health Center Survey, Bedford-Stuyvesant-Crown Height, Brooklyn, New York. Narrative-Statistics, October 1, 1970, September 30, 1971, p. 149.

advisory, and rehabilitative as well as diagnostic and therapeutic that the ideal family physician used to give within the limits of his knowledge and facilities.

Model

This model delineates a series of stages and processes at progressively higher levels of community institutionalization. It is flexible to innovations which develop outside of the community structure.

The model includes three basic processes: the sponsorship of the program, the formation of areas in institutions for teaching the innovation to the community, and the development of paraprofessionals and aides. Although these three processes overlap in time, they tend to occur in the order of presentation.

1. Paraprofessional employee. The training of community people for paraprofessional positions such as: (1) community health workers, (2) community mental health workers, (3) dental assistant, (4) family health workers, (5) public health nurse, and (6) social service workers.

There should be a course of study developed which should include: (1) job description, (2) managerial training, (3) problem solving, (4) decision making, (5) planning, (6) communication, (7) high school equivalency, (8) college program.

2. Health Aides. Health Aides should be selected from returning vets and individuals indigenous to the community, who will be salaried employees without professional qualifications who will serve as a case finder of people in need of health services. He would interpret and translate basic health facts, attitudes and practices. He would also help develop an awareness of the constant change in the environment, man's influence on his environment, and the influence of the geographic region of man's response to his environment. It is hoped that they will help to deter the general continuum of progressive deterioration that presently exists.

The program may be sponsored through: (1) the Office of Educational Opportunity; (2) federal, state, and city governments, and (3) industry.

White House Conferences

Health protection-social services delivery has been a recurring topic since 1909, 1919, 1930, 1940, 1950, 1960.

In 1970 it was felt that:

1. A federally financed national child health care program which assures comprehensive care for all children.
2. A system of early identification of children with special needs and which delivers prompt and appropriate treatment must be adhered to.[1]

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[1]The Journal of the National Association for the Education of Young Children (March, 1971), 196-98.

Summary

It was the intent of this chapter to illustrate and discuss those issues and facts which are relevant to the topic under study here. The unique features of this literature review are summarized in the section which follows.

There are two competing explanations for the failure of ghetto students to perform up to grade level. One stresses the shortcomings and disinterest on the part of the schools; the other stresses the deprived economic and cultural background of the pupils. Both agree that the motivation of ghetto pupils to excel in school work is low. Both also agree that lack of motivation stems from economic conditions produced by racial discrimination and segregation. On nothing else is there agreement.

The major disagreement is that those who blame home and community conditions claim that, given the conditions, the schools are functioning at maximum efficiency; while those who see the problem in terms of deficiencies within the school believe that the schools are functioning at minimum efficiency. A large part of the disagreement stems from differences in philosophy about the role of the school in contemporary American society. Especially its role vis-a-vis low income and minority group pupils. Those who see the school as the culprit in the educational failure of ghetto youth view

the schools as the major molder of those attitudes, motivations, skills, and values which determine youth's future place in life. Those who see the home and community environment as to blame establish a lesser role for the schools in shaping the destinies of youth. While both sides would agree that a partnership among home, school, and community must exist in order to produce properly motivated and adequately functioning members of society, their diagnoses make clear the divergence in the responsibilities assigned to each of the partners.

Of most relevance for research, however, are the empirical supports for each viewpoint. Both sides of the debate are able to cite a few systematic studies and seemingly endless anecdotes to support assertions about what goes on in the homes, classrooms, and the streets of the ghetto. The probability is that an accurate portrayal of the ills of education in the ghetto is some mixture of the assertions of each side.

The data presented earlier make it quite clear that the main story about the ghetto is that an increasingly larger proportion of youth fail to perform up to grade level. But none of the controversy about the schools in the ghetto seems to focus on this central fact. Rather, all arguments appear to focus on the <u>end product</u>. While the end product is of concern, an

understanding of ghetto pupils must make the deterioration the focus, if an effective ameliorative program is to be developed.[1]

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[1]Youth in the Ghetto (New York: Harlem Youth Opportunities, Unlimited, Inc., 1964).

will be differentiated by use of the formula

$$M = U \pm \sigma \ .$$

One-half standard deviation above the mean will be considered high and a half standard below the mean will be considered low.

Health Measures

1. Rubella: German Measles
   By data collected, health records, and hospital records

2. Measles: An infectious virus disease
   By data collected from health records, hospital records

3. Vision: The power of seeing
   By health records, private doctor reports, clinic reports

4. Hearing: The sense by which sound is perceived
   By testing with a audiometer, private doctor reports, clinic reports

5. Respiratory having to do with, or used for breathing
   Absent record and doctor report

6. Rheumatic fever
   Doctor report, hospital report, and health records

7. Heart Disease: Any impaired condition of the heart
   Medical examination, hospital records, clinic records, private doctors reports, and health records

8. Allergy: A state of unusual sensitiveness to certain substances such as particular kind of pollen
   Hospital and clinic records

9. Seizures Neurological
   Hospital records and teacher observation

10. Diabetes: A disorder marked by profuse secretion of urine
Health records and hospital records

11. Lead Poisoning
Health and hospital records

12. Chicken Pox: A disease which covers the body with sores
Questionnaire, health records

13. Tuberculosis: An infectious disease that affects organs of the body
Questionnaire, health and hospital records, clinic and private doctors records

14. Mumps: A contagious disease caused by a virus
Questionnaire and absent reports, health records

15. Orthopedic defects
Teacher observation, doctor reports, clinic reports

16. Asthma
Allergy clinic report and absent records

17. Yellow Jaundice
Hospital, clinic, and health records

18. Worms: A disease characterized by the presence of parasitic worms in the body, especially in the intestines
Clinic records

19. Scarlet Fever
Health records

20. Penicillin Reaction
Questionnaire, health records

21. Diarrhea
Teacher observation, absent report

22. Pneumonia
Health records, absent reports

23. Constipation: A sluggish condition of the bowels
Absent records and clinic records

24. Malnutrition: Poor nourishment
Health records, private doctors report, teacher observation

25. Epilepsy: A condition giving rise to periodic disturbances of brain function, diverse in nature, abrupt in onset, usually brief in duration, and often accompanied by a disturbance in consciousness and involuntary muscular contraction
Hospital records and health records

26. Bronchitis: Inflammation of the mucous membrane of the bronchial tubes
Health records, clinic records

27. Dental caries: Decay of the teeth
Health records, clinic records

28. Syphilis: An infectious chronic venereal disease
Hospital records, health records, clinic reports

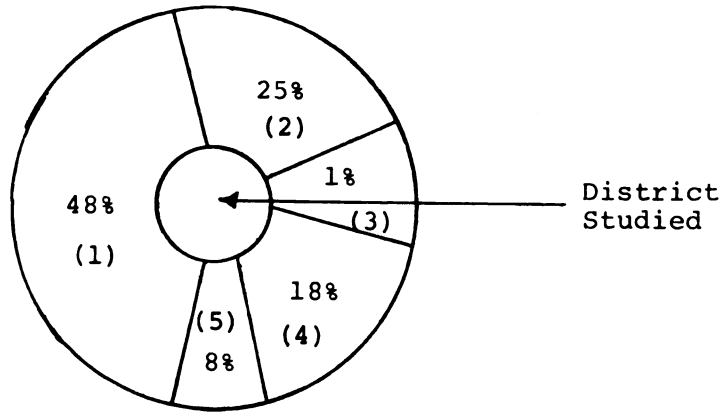
29. Sickle Cell Anemia: A hereditary form of anemia in which the normally round red blood cells become sickle-shaped, are ineffective in carrying oxygen, and are easily destroyed
Hospital and clinic records

Health Survey

The survey takes a look at the child's medical history, current history and examination, immunization history, current immunizations (while attending school), and immunizations which parents sign for. The investigator assessed the kinds of diseases and disorders and other conditions found in the population which tend to absent children from school. Figure 3.2 illustrates the relationship of absenteeism and self reported reasons for absenteeism.

The evaluation of this attendance district is a broad relationship of the absent pattern given by the attendance district superintendent.

The health problems will be operationalized. The investigator will determine from the survey whether the



1. Respiratory diseases 48%
   a. common cold
   b. sore throat
   c. bronchitis
   d. sinus condition
   e. pulmonary tuberculosis

2. Common Communicable diseases 25%
   a. measles
   b. German measles
   c. chicken pox
   d. mumps

3. Digestive disorders 1%
   a. stomach ache
   b. nausea
   c. vomiting
   d. diarrhea
   e. constipation
   f. gastrointestinal upset
      1) bacillary dysentery
      2) infectious hepatitis
      3) food poisonings

4. Other Medical causes 18%
   (includes)
   a. skin disorders 1.9%
      1) impetigo
      2) ringworm
   b. injuries--accidental .5%
   c. dental condition 2.0%

5. Non-medical causes 8%
   a. weather
   b. clothing
   c. home history

Figure 3.2

Relationship of Absenteeism and Self Reported Reasons for Absenteeism

child has the problem or not and set discrete data on each disease or disorder.

The investigator will look through the child's school health records. Under medical history the investigator will plot all the pathology found in the following areas: (1) visual difficulties, (2) hearing difficulties, (3) frequent respiratory infections, (4) measles, (5) rheumatic fever, (6) heart disease, (7) allergies, (8) seizures, and (9) diabetes.

The current history and examination records were consulted to determine if the child had been examined by the school doctor and to see if the parent was in attendance when the child was examined. The current history was checked for abnormal: (1) eating habits, (2) sleeping habits, (3) toilet habits, (4) behavior, (5) physical appearance, (6) skin disorder, (7) ears, (8) eye difficulties, (9) mouth and teeth, (10) nose and throat, (11) heart, (12) lungs, (13) abdomen, (14) hernia and genitals, and (15) posture and extremities.

The immunization history was checked to see if the child had been immunized for: (1) smallpox, (2) diptheria pertussis tetanus, (3) booster diptheria tetanus, (4) polio vaccine, (5) measles vaccination, and (6) rubella vaccination.

The current immunization school record was checked to see if the school doctor had immunized the child for:

(1) smallpox, (2) diptheria tetanus pertussis, (3) polio, (4) measles, and (5) rubella.

The records were checked to see if the family was known to any other agencies: (1) welfare, (2) courts, and (3) hospitals.

The records were checked to see if the child had had: (1) chicken pox, (2) tuberculosis, (3) hospitalization, (4) mumps, (5) orthopedic defect, (6) convulsions, (7) asthma, and (8) yellow jaundice.

The cumulative record was checked for: (1) days of absence by each child this term, (2) mother, father, and child birthplace, (3) birth trauma, (4) family history, (5) penicillin reaction, (6) number of rooms in the house, (7) if they had a family doctor, (8) are there any deceased children, (9) tuberculosis, (10) kidney trouble, (11) syphillis or gonorrhea, (12) excessive bleeding, (13) cancer, (14) mental illness, (15) sugar diabetes, (16) skin disease, (17) reaction to medicine, (18) anemia or low blood (19) high blood pressure, (20) stroke, (12) mental retardation, (22) epileptic or convulsions, (23) diarrhea, (24) pneumonia, (25) constipation, (26) father in the house, (27) if there had been any miscarriages, (28) pain on urination, (29) asthma, (30) days absent for the years 1966, 1967, 1968, 1969, and 1970, and (31) number of siblings.

The test scores of the M.A.T. determined the: (1) word knowledge raw score, (2) word knowledge grade equivalent, (3) reading raw score, (4) reading grade equivalent, (5) total, (6) grade equivalent interval.

The health records at Charles Drew Medical Health Center and Brookdale Hospital were consulted to determine if there was any pathology that the school health records had missed.

Once the data was collected, the investigator made comparisons between the relevant variables to determine what effect they had on achievement and to determine what projection, if any, could be made for children in the grades pre-kindergarten, kindergarten, and first grade.

Summary

The purpose of this chapter has been to explain the procedures and instrumentation used to fulfill the objectives of this study.

A description of the instrument, the Metropolitan Achievement Test, which was selected to measure student achievement, was given as was information concerning the test's validity and reliability.

The community of Oceanhill-Brownsville, the setting for the study was described. Characteristics of the students in the sample were listed and discussed.

An explanation of the mechanics of test administration used in this study was given. An explanation of how the data would be treated was also given.

The following chapter will be devoted to the analysis of the data gathered in this study.

CHAPTER IV

ANALYSIS OF THE DATA

It has been the purpose of this study to investigate the relationship between health characteristics of 8- and 9-year-old students in a low socio-economic area and age and school achievement. One major research hypothesis was presented in Chapter I, around which this study has been developed. This hypothesis has been analyzed and the data obtained and appropriate explanation will be presented in this chapter.

Data Analysis and Discussion

As was stated in Chapter III, the method of analysis is the χ^2 (Chi-Square) test of homogeneity. It is to be noted that the analysis is performed separately on each grade. This was done because the variable which measures academic achievement is different for each grade. That is to say, the Metropolitan Achievement Test, Primary II, From F was used in the second grade whereas the Metropolitan Achievement Test Elementary Form was used in the third grade.

The design used in this study employed academic achievement as a fixed variable and looks at how various pathologies are distributed over the levels of achievement. Each student was checked for the pathology and received a "0" if the pathology was present, a "1" if not present. Hence, the pathology was scored as a 0-1 dichotomy. Academic achievement was categorized into high, medium, and low using the arbitrary decision:

low = mean - 1 standard deviation
middle = mean $\pm$ 1 standard deviation
high = mean + 1 standard deviation

The χ^2 test of homogeneity determines whether the two variables, academic achievement and pathology, are related. It is to be emphasized that this test does not lend itself to cause and effect statements. One may look at these tables and can interpret them only if it is assured that the pathology was accurately diagnosed and that the M.A.T. (either form) is a valid measure of academic achievement.

Tables 4.1 and 4.2 show the relationship of each pathology with academic achievement. In each case only the percentage having the pathology is shown. The χ^2 value is also reported along with the associated significance level. It is left to the reader to determine whether the significance level is high enough to render decisions about the utility of considering the relationship between academic achievement and pathology significant.

TABLE 4.1.--Percentage having various pathologies among differing M.A.T. scores in second grade students.

Pathology	Low M.A.T.	Middle M.A.T.	High M.A.T.	χ^2	Significance Level
Hearing difficulties	1.1	3.3	0.0	1.657	.25
Frequent respiratory infection	7.7	18.7	9.9	.249	.75
Measles	8.8	9.9	8.8	2.548	.25
Rheumatic Fever	3.3	1.1	2.2	3.286	.10
Heart Disease	1.1	4.4	0.0	2.432	.25
Allergies	1.1	6.6	1.1	2.293	.25
Seizures	0.0	1.1	1.1	0.927	.50
Diabetes	0.0	0.0	0.0	.000	. .
Skin	0.0	1.1	0.0	1.034	.50
Eyes	4.4	16.5	6.6	1.802	.25
Mouth and Teeth	24.2	49.5	25.3	2.823	.10
Nose and Throat	2.2	5.5	3.3	0.138	.75
Rubella	2.2	8.8	5.5	1.258	.50
D.T. Shots	2.0	2.0	0.0	9.908	.05
Polio (oral)	3.5	3.0	0.0	4.700	.05
Lead	1.1	3.3	2.2	0.268	.75
Chicken Pox	4.4	4.4	6.6	3.295	.10
T.B.	0.0	0.0	1.1	2.823	.10
Mumps	5.5	4.4	9.9	8.234	.05
Orthopedic Defects	0.0	0.0	0.0	.000	. .
Convulsions	0.0	0.0	0.0	.000	. .
Asthma	0.0	0.0	0.0	.000	. .
Yellow Jaundice	1.1	1.1	0.0	1.104	.75
Worms	1.1	3.3	0.0	1.657	.50
Scarlet Fever	1.1	1.1	1.1	0.328	.90
Penicillin Reaction	0.0	0.0	2.2	5.709	.10
Diarrhea	0.0	0.0	0.0	.000	. .
Pneumonia	1.1	2.2	0.0	1.112	.75
Constipation	0.0	1.1	1.1	0.927	..75
Malnutrition	0.0	1.1	0.0	1.034	.75
Anemia	1.1	0.0	0.0	3.171	.25

TABLE 4.2.--Percentage having various pathologies among differing M.A.T. scores in third grade students

Pathology	Low M.A.T.	Medium M.A.T.	High M.A.T.	χ^2	Significance Level
Hearing difficulties	2.1	3.1	0.0	3.936	.25
Frequent respiratory infection	14.6	13.5	9.4	5.123	.10
Measles	12.5	7.3	14.6	1.614	.500
Rheumatic fever	1.0	0.0	0.0	5.628	.10
Heart disease	2.1	4.2	0.0	5.628	.10
Allergies	3.1	1.0	3.1	.919	.75
Seizures	0.0	0.0	0.0	0.0	. .
Diabetes	0.0	0.0	0.0	0.0	. .
Skin	0.0	0.0	0.0	0.0	. .
Eyes	12.5	8.3	8.7	12.167	.005
Mouth and Teeth	28.1	28.1	36.4	4.234	.25
Nose and throat	6.3	8.3	11.5	.828	.75
Rubella	11.5	9.4	8.3	2.148	.50
D.T. shots	2.1	0.0	0.0	7.956	.05
Polio (oral)	2.1	0.0	0.0	12.474	.005
Lead	3.2	1.1	1.1	2.190	.50
Chicken pox	6.3	1.0	4.2	3.907	.25
T.B.	0.0	0.0	0.0	0.0	. .
Mumps	5.2	3.1	5.2	.446	.90
Orthopedic defects	0.0	0.0	0.0	0.0	. .
Convulsions	0.0	0.0	0.0	0.0	. .
Asthma	0.0	0.0	0.0	0.0	. .
Yellow jaundice	0.0	1.1	0.0	2.472	.50
Worms	1.0	3.1	0.0	4.711	.10
Scarlet fever	1.0	3.1	0.0	4.711	.10
Penicillin reaction	0.0	0.0	0.0	0.0	. .
Diarrhea	0.0	0.0	0.0	0.0	. .
Pneumonia	1.0	0.0	0.0	2.223	.50
Constipation	0.0	1.0	1.0	.998	.75
Malnutrition	0.0	0.0	0.0	0.0	. .
Anemia	0.0	1.1	1.0	.998	.75

Tables 4.3 and 4.4 show the correlation between each pathology and academic achievement by grade level.

A word of caution should be mentioned before these tables are read and interpreted. The highest correlation observed between any pathology and academic achievement is .20. The coefficient r^2 which attempts to measure explained variation is therefore 4 per cent. The "prima facia" case is therefore that:

> Health pathology is of little use in explaining variation in academic performance.

One must agree with this conclusion but the caution here is that this statement necessarily assumes accurate reliable data both in the recording of health records and in the validity of using the Metropolitan Test as a measure of academic achievement.

These points then will lessen the impact of this study and leave open ambiguous interpretations of the data. The reader is directed to the Need for Further Study section of this paper for the author's comments on these two points.

It is interesting to note that those students having hearing difficulties and varying degrees of visual impairment showed no significant negative effects on school achievement. One would expect that auditory and visual impairments would be major obstacles in attaining academic achievement. However, as shown in Table 4.1,

TABLE 4.3.--Pearson product moment correlation between each pathology and academic achievement for second grade

Type of Pathology	Academic Achievement
Hearing difficulties	.08
Frequent respiratory infections	-.04
Measles	.01
Rheumatic fever	.07
Heart disease	.07
Allergies	.00
Seizures	-.10
Diabetes	.00
Skin	.00
Eyes	-.05
Mouth and teeth	.14
Nose and throat	-.03
Rubella	-.11
D.T. shots	-.06
Polio (oral)	.06
Lead	-.05
Chicken pox	-.07
T.B.	-.14
Mumps	-.13
Orthopedic defects	.00
Convulsions	.00
Asthma	.00
Yellow jaundice	.11
Worms	.08
Scarlet fever	.00
Penicillin reaction	-.20
Diarrhea	.00
Pneumonia	.09
Constipation	-.10
Malnutrition	.00
Anemia	.15

TABLE 4.4.--Pearson product correlation between each pathology and academic achievement for third grade

Type of Pathology	Academic Achievement
Hearing difficulties	.13
Frequent respiratory infection	.20
Measles	.01
Rheumatic fever	.13
Heart disease	.12
Allergies	.02
Seizures	.00
Diabetes	.00
Skin	.00
Eyes	.35
Mouth and teeth	-.20
Nose and throat	-.08
Rubella	.14
D.T. shots	.10
Polio (oral)	.07
Lead	.13
Chicken pox	.11
T.B.	.00
Mumps	.03
Orthopedic defects	.00
Convulsions	.00
Asthma	.00
Yellow jaundice	-.00
Worms	.08
Scarlet fever	.08
Penicillin reaction	.00
Diarrhea	.00
Pneumonia	.13
Constipation	-.07
Malnutrition	.00
Anemia	.00

a significance level of .25 for both impairments indicates no significant relationship between these pathologies and achievement.

In Table 4.2, however, even though a .25 significance level was found denoting the relationship between hearing impairment and achievement as not very significant, a very significant correlation, at the .005 alpha level, was found between visual impairment and achievement. A justified implication seems to be that uncorrected visual difficulties manifest themselves as problems and obstacles to achievement as time passes. In short, at the second grade level, Table 4.1, no significant relationship between visual difficulties and achievement was found. However, in third grade, Table 4.2, a very significant relationship between these two variables was found to exist.

Most of the significance levels in Tables 4.1 and 4.2 show no statistical significance in the relationship between the pathologies and achievement. However, it is interesting to note that at both grade levels, second and third, a highly significant relationship between students having pathologies of diptheria, polio, and mumps is indicated. One can conclude, then, that at least in these three instances, achievement and physical impairment have a relationship.

As stated earlier, it is left to the reader to determine whether the significance levels are high enough to render decisions about the utility of considering the relationship between academic achievement and pathology significant. However, what is not always realized by the reader who is dealing with statistical considerations is that people are these statistics. The writer feels that what is most significant and most meaningful about the data in these tables is that so many children in the sample have had such a vast array of pathology which exceeds anticipated childhood diseases. It would be interesting to compare the extent and frequency of these pathologies with those of a higher socio-economic and racially-ethnically different elementary school.

Summary

The investigator found it very hard to get much of the material needed for this thesis due to the improper keeping of health records, and cumulative records by teachers.

The teachers no longer send out absentee forms, so they receive very little feedback as to the cause of absenteeism on the part of the student. For example, the attendance bureau shows respiratory diseases as being a very high causative agent of absenteeism, yet this is not reflected on the child's health card.

It is apparent from observation and the literature that in areas such as Ocean Hill there must be a high degree of malnutrition. Yet the health cards do not show any teacher's observations which would indicate that to be true.

It appears too, that with the case load that the school doctor and nurse are confronted with, many children go unexamined by the school. The investigator also noted there is a high degree of mobility of the students, hence many go unexamined. The medical cards were not up to date in the areas of current history and examination, immunization history and current immunization; many cards only had the child's name on it. The investigator was forced to record missing data as pathology NOT PRESENT. The result of this recording produces a grossly distorted picture of the health of the Ocean Hill-Brownsville student population. Moreover, it is the main reason for non-statistical significance of many of the pathologies selected for this study. The school depends on much of this information from outside agencies, it never seems to get done or it is not recorded.

Therefore, schools or clusters of schools should be directly associated with a clinic. The clinic must have parents prior consent. The whole family should be known to the clinic. The school should receive copies of health records from the clinic. Modern record-keeping

techniques should be employed such as tapes, computers, and multiphasic examinations.

Preventative medicine, not crisis medicine is needed in areas such as that used in this study. Whether statistical significance between achievement and poor health is shown or not, the fact remains that too many children from low socio-economic backgrounds are victims of that condition. Good health is the right of all individuals and the school must make concerted efforts to guarantee that right.

The final chapter will be devoted to a concise summary of the research, conclusions, and suggestions for further research.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This final chapter will be devoted to a summary of the study followed by a discussion of the conclusions generated from the analysis of the data, and concluded with recommendations for further research.

Summary

Purpose of the Study

The basic purpose of this study was to survey the health characteristics of 8- to 9-year-old children attending school in a low socio-economic area and to investigate their relationship with age and academic achievement.

Limitations of the Study

1. As is true of any study, the validity of this study is affected by the degree of frankness and sincerity of response to the instrument administered.
2. The research is limited to all children presently enrolled in an Ocean Hill-Brownsville school in

New York City, age 8 to 9, who took the Metropolitan Achievement Test.

3. The study of children is limited to health characteristics, age, and achievement.
4. The acquisition of complete health information on all students in the sample was precluded by three conditions beyond the control of the writer:
   a. The improper procedures used in keeping health records.
   b. The heavy case load of the school doctor and nurse.
   c. The high mobility of students in the school.
5. The finding of a relationship between health characteristics and school achievement of the sample will be viewed as correlational and not as causal.

Review of the Literature

A review of the literature for this study consisted of a description and discussion of health studies, age, and achievement studies and studies concerning the relationship between these.

A major finding of these studies which was particularly significant is as follows:

The main story about the ghetto is that an increasingly larger proportion of youth fail to perform

up to grade level. But none of the controversy about the schools in the ghetto seems to focus on the end product. While the end product is of concern, an understanding of ghetto pupils must make the deterioration the focus, if an effective ameliorative program is to be developed.

Design of the Study

In order to investigate the relationship between health characteristics of children aged 8 to 9 attending school in a low socio-economic area and age and achievement of these students, it was necessary to review the cumulative health records of all students in the sample and to measure the school achievement of these youngsters. The instrument used to measure achievement level was the Metropolitan Achievement Test.

Conclusions

One must conclude, using the findings of this study and assuming the validity of the data, that health pathologies are not a significant predictor of academic achievement.

Need for Further Study

This thesis has raised some thought-provoking questions. It is felt by the writer that there is a need for further studies to answer some of these questions, i.e.,:

1. The effects of stress and strain on the ghetto student and its effect on a course of study.
2. The effects of parent's poor health on the student and its relations to education.
3. The effects of density, homogeneous ghetto grouping, and a course of study.
4. The effects of psychophysiological symptoms of a child and its relationship to a course of study.
5. How is health distributed and how can it be better distributed to bring about success in a child undertaking a course of study?
6. What are the teacher certifying institutions doing to appraise perspective teachers of behavior pattern, attitudes, and health of children in a low socio-economic area?
7. A project should be undertaken to insure valid and accurate health information on each student in a poverty community. The import being one of further substantiation of the findings of this study while removing some of the skepticism which may surround this study.
8. Investigation of alternatives to assessing academic achievement should carefully be considered. This is almost crucial in the inner-city since the student's verbal flexibility is usually poor and

consequently the student's scores on nationally named exams will be low and is misleading.

Last, but not least, Frances Bentzen pointed out that "at the chronological age of six when most youngsters begin to attend school, girls are approximately twelve months ahead of boys in developmental age; by the time they are nine years of age, this developmental differential increases to about eighteen months."

In our public schools system, however, which claims to be dedicated to the concept of the whole child and the importance of individual differences there is little or no differential between sexes or planning for the variation in the biosocial readiness of children to learn how to learn and how to behave.[1]

Reflections

Although this study affirmed several of the writer's interested beliefs which had formerly been based upon speculative thinking, the major outcome of the study, however, was of an unexpected nature. It had been assumed, as expressed in the research hypothesis, that a relationship between health pathologies and school achievement would be found. This seemed a logical assumption since

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[1]Frances Bentzen, "Sex Ratio in Learning and Behavior Disorders," American Journal of Orthopsychiatry, XXXIII, No. 1 (January, 1963), 97.

previous studies have pointed to the possible existence of such a relationship.

However, all the writer can conclude is that statistically no significant relationship was shown but through personal experience and professional perception such a relationship is obvious.

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