

A REVIEW OF LITERATURE IN THE FIELD OF HEALTH
EDUCATION FOR SUGGESTED IMPROVEMENT
OF HEALTH INSTRUCTION IN THE
OATES PRAIRIE SCHOOL

THESIS

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TABLE OF CONTENTS

Page	1		TITLE PAGE
	11		ACKNOWLEDGMENTS
	111		TABLE OF CONTENTS
CHAPTER			PAGE
I. NATURE AND AIMS OF THE STUDY	.....		1
Introduction	.....		1
Significance of the study	.....		2
The problem	.....		2
Purpose of the study	.....		3
II. REVIEW OF PERTINENT LITERATURE IN THE FIELD			
OF HEALTH EDUCATION	.....		4
Literature revealing the need of improvement			
in health education instruction	.....		4
Literature that serves as a guide in			
teaching health education	.....		11
III. LOCATION OF THE PROBLEM - THE OATES PRAIRIE			
SCHOOL	.....		16
The setting	.....		16
The terrain	.....		17
Population of the Oates Prairie Community	..		17
IV. TECHNIQUES FROM THE STUDY OF LITERATURE			
APPLICABLE TO TEACHING HEALTH IN THE			
OATES PRAIRIE SCHOOL	.....		19
Caring for the ear, eye, and teeth	.....		21

Studying the prevention and control of communicable diseases	28
Studying better food habits	33
Learning better first aid and safety first practices	36
Learning to coordinate physical education with school activities	41
Learning to develop better mental attitudes.	54
V. SUMMARY AND CONCLUSIONS	58
Summary	58
Principal findings	59
Perspective for the future	60
BIBLIOGRAPHY	61

CHAPTER I

NATURE AND AIMS OF THE STUDY

I. INTRODUCTION

For the past ten years the writer has been engaged as an instructor in the field of health and physical education; this experience has revealed that there is a general need for an extensive study to be made in order to improve our present methods of health education. In many localities health education has not been recognized as a major part of the curriculum, nor has it been given the proper place in the school program.

When the state of Texas passed the law in 1930, requiring all standardized schools to provide health instruction in the physical education program, few teachers knew the true meaning of the term "health education." The lack of a thorough understanding of proper health education instruction has impeded the progress of education as a whole.

School administrators have recognized the importance of health education, and much has been written on the subject. Schools have received much good from the athletic program, but many teachers have failed to see the opportunity of teaching health habits through health activities.

II. SIGNIFICANCE OF THE STUDY

Good health is the major factor contributing to the progress of education in the public schools of America, while poor health is the greatest enemy to high scholastic rating and better daily attendance. There can be little improvement in the progress of our schools until an improvement is made in health education instruction. The need for better health education instruction was revealed in the five year study made by Heinrich,¹ and the results of this study are summarized as follows:

The amount of sickness among public school pupils seems to increase from the opening of school in September to the month of March of the same school year. Whether this condition is due to high humidity, low temperature, lack of sunshine, or confined conditions, all are unanswered. The fact remains that despite our present health program, and the efforts made in supervision to preserve the health of pupils, there are certain influences that cause a drain on the health of pupils.¹

III. THE PROBLEM

The problem is to make a study of literature on health and physical education for the purpose of discovering suggestions for the improvement of such instruction in the Oates Prairie Junior High School. The study includes a

¹ Marie H. Heinrich, The Research Quarterly, 1201 Sixteenth Street, Washington D. C., March, 1941, pp. 238.

survey in health and physical education, since physical education is the larger field of health education, and in this study hereafter health education is understood to include physical education. All suggestions are of an instructive nature, rather than prescriptive, and the aim is to increase the health progress of the school.

IV. PURPOSE OF THE STUDY

The aim of the writer in undertaking this study is to acquire the necessary information in order to make suggestions for the improvement of health instruction in the Oates Prairie Junior High School. All information relative to the study is of importance, but that information which suggests an improvement in health instruction will be used. Some contributions by professional leaders in the field of health education will be studied. Coordinating the methods of instruction, as discovered in literature, to the specific health needs of the school will be the major objective of this study.

CHAPTER II

REVIEW OF PERTINENT LITERATURE IN THE FIELD OF HEALTH EDUCATION

I. LITERATURE REVEALING THE NEED OF IMPROVEMENT IN HEALTH EDUCATION INSTRUCTION

The vast number of studies in the field of health education is an indication that there is a wide-spread interest in the problems that are concerned with better teaching methods in health education.

It is the purpose of the writer to give the points of view of several of the recognized leaders in the field of health education, rather than to give a detailed summary of the many studies. The theme in much of the literature on health education is the improvement of instruction discovered by health authorities.

In addition to the many books and periodicals written in the field of health education, the United States Office of Education has contributed much in the Physical Fitness Through Health Education bulletins. These bulletins are valuable as a background and bibliography in making this study. Our government has realized the necessity of better health education in our schools, and has supplied the nation with much free literature.

Literature and research material are the important sources of information in making this study. Research bulletins reveal what has been done in the field of health

education in recent years. This idea is well expressed in Ruch and Segel.¹

It is a far better plan to assemble a fairly large number of representative books and periodicals at the outset by the process of careful selection, than to add to the study the published researches as they are offered. Late copyrights are to be preferred, because books go out of date.¹

Health studies and experiments made in a period of several years are most valuable in the study of health education. Long periods of study show a definite conclusion to a solution. This is revealed in Ruch and Segel.

Poor health was the contributing factor in continued maintenance of poor scholarship, for within the I. Q. range, low health scores were found among the larger portion of students with low scholastic rating. Lack of interest in subject matter and poor health were found in the group making poor scholastic rating.²

Many authors and writers in the field of health education list advantages of a health education program in public schools, but few have given sufficient data in a scientific study in order to show this is essential in public schools, and also to show that health education does

¹ Giles Ruch and David Segel, Minimum Essentials in Health Guidance, Washington, D. C., Bulletin 220, 1939, pp. 42.

² Ibid., pp 44.

have a definite relation to scholastic rating. The University of Indiana sponsored a study of 12,000 pupils in 1934-35 in order to find a definite relation of health to scholastic rating, and the result is summarized as follows:

One characteristic found in a group of pupils participating in a daily health activity program was the progress made in scholastic rating of the group. This group was studied in comparison to a similar group not participating in any health activity program. In many instances it was found that poor health was obviously a single contributing factor in continued maintenance of poor scholastic rating. Without one exception, health was found to be an important factor in modifying scholastic rating, for within each I. Q. range, low health scores were found among the larger portion of the students with low scholastic rating. Lack of interest in subject matter, and poor health were found in the groups making poor scholastic records.³

Practically all health authorities agree that health education should be given in terms of health needs. Every student must qualify for better citizenship in life to come. All physical handicaps and mal-adjustments are the factors most important in a health education program.

Health education teachers of today must realize the rapid progress made in the past few years in medicine and science. This is a challenge to health teachers that unless they keep pace with the new and skillful methods of health education, our schools will fail in their ultimate aims. In

³Marie Heinrich, Research Quarterly, American Association of Health Recreation, 1201, Sixteenth Street, Washington, D. C., March, 1943, p. 604.

the study of Duell,⁴ the thought is well revealed as follows:

American schools are undergoing a profound change in health education instruction. New methods are being presented each day to teachers and administrators that involve improved methods in health education.⁴

The study by Heinrich⁵ justifies the skillful methods of instruction in the following excerpt:

Twenty-five per cent of pupils enrolled in physical education and health classes in a group of 18,000 schools in Illinois had physical impairments. The seventy-five per cent in the non-impaired group made a five per cent improvement in scholastic rating each year when health education was required in the school program.⁵

Heinrich's study was made in a period of five years, and pupils enrolled in health education classes for this period of time made a 25 per cent progress increase.

One outstanding fact appearing above all others in this study is "Preparedness." This expression is a direct result of good instruction in health education, and is well expressed in the following statement:

The word "preparedness" assails us from every angle. With our high standard of living has come the question of whether we have developed a race of people who have the courage, endurance, and physical abilities to meet

⁴ Kent S. Duell, Journals of Education Research, National Bureau of Standards, "Superintendent of Documents," Washington, D. C., 1943, p. 45.

⁵ Marie H. Heinrich, Research Quarterly, 1201 Sixteenth Street, Washington, D. C., 1943, p. 411.

the needs of our present time.⁶

Throughout the study the following statements provide a foundation for suggested improvement of health education: The school's responsibility in maintaining a health education program is (1) correction of physical impairments of pupils, (2) prevention and control of diseases, (3) formulating good habits in relation to eating and nutrition, (4) providing of safety instruction, and (5) planning daily for an effective physical education program.⁷

Information in health records varies in many schools, but the principal data usually contained is a health history of the child's past health rather than the actual condition of the pupil at the present time. Four Michigan colleges -- Albion, Central State Teachers, Michigan State, and Al-Olivet -- secured information in a study of several thousand pupils. Data were made available on 104 of the pupils. Twenty six of these pupils, or 25 per cent, were given a clean bill of health by the medical staff. Eighteen of the remaining group made comment on health difficulties of themselves, and these statements were made as follows:

"I had typhoid fever when I was nine, and lost a

⁶ Kent S. Duell, Journals of Education Research, National Bureau of Standards, Superintendent of Documents, (Washington, D. C., 1945), p. 55.

⁷ Ibid., p. 515.

half-year in school."

"I have been ill since last June, had an operation in August of last year. They told me that it would require a year for me to completely recover. I am often fatigued and worn out. By the end of this summer I am sure I will be at tops."

"I have a little sinus trouble and it causes me to have frequent headaches, and also tires my eyes."

"I occasionally feel sick, but these sick spells are slight, and I am not bothered to any great extent, but I am a trifle deaf."

"I have hay fever about two weeks every summer, and I am underweight."

"I had scarlet fever my second year in school and lost several weeks from school. My grades have never been high since."

"I have a small hole in my nose, and this causes me to have colds quite often."

"There is a physical handicap in our family and this is said to be due to poor metabolism."

"I have headaches quite frequently and become nervous."

"I have athlete's foot; this becomes almost cured, and then re-occurs."

"I have hernia, and this keeps me out of physical education."

"I have back trouble and am under the doctor's care."

"I get tired very easily and am being treated by the County Sanitarium."

"I have flat feet."

"I have poor eyes and bad teeth."

"I am underweight and get tired easily."

"I have headaches, and I think it is due to my eyes."

"I have boils all over my body, and the clinic is treating me now."⁸

The above statements on individual health difficulties are common to all school children, but are seldom known to the teacher. The teacher must know the present physical conditions of her pupils in order to understand the true abilities and handicaps of them.

In the study of better teaching methods in health education, some of the methods are defined with reasonable clarity; for others the solutions are merely suggested, and for others the unsolved problem is all that has been discovered. It seems that the discovery of the most needed methods would be a starting point. A suggested plan for a starting point in exploring new information may be summarized as follows:

The first step, apparently, would be the setting-up of some plan by which interchange of information between the health service and other counselors and faculty members could be effected. This would place certain new responsibilities on members of the faculty and would necessitate a professional attitude on their part toward securing confidential information. It should be possible for any school to find a way to protect confidences, and at the same time provide intelligent health guidance to students whose health status is related to other problems of adjustment and achievement.⁹

⁸ L. H. Heaton and Vivian Weedon, The Failing Student, The University of Chicago Press, 1940, pp. 145-146.

⁹ Ibid., p. 157.

II. LITERATURE THAT SERVES AS A GUIDE IN TEACHING HEALTH EDUCATION

There must be an organization in the school that includes all teachers and health authorities that will define and arrange for better health instruction in the school. The best qualified person in the faculty should be selected to organize a health program that will coordinate with all activity of the school. The program should set up standards for the training of teachers. The group meetings should include representatives from the community organizations who will contribute to the better functioning of a health program in the school.¹⁰

The school health program should have the support of the administrative authorities, and this may be expressed in the following suggestions:

School administrators and health authorities should set up machinery for the actual carrying on of a health observation program. There must be provisions for health in the school environment. It is the school's responsibility to maintain health standards. Safeguards should be planned for shops, buildings, and highways related to school safety. A uniform health record system must be carried on in connection with other records. The physical education program and other recreation programs should coordinate in the school health program.¹¹

Recognition is due Heaton and Weedon¹² in the study made on the campuses of four Michigan colleges. Questions

¹⁰ James F. Rogers, Health Service in City Schools, Federal Security Agency, United States Office of Education, Washington, D. C., 1943, p. 5.

¹¹ Ibid., p. 7.

used in the study were expressed as follows: "How can we change the program so that our pupils will get more than they are now receiving from their scholastic experiences? What can we do to reduce the number of unnecessary failures? What implications are there in such study for the service rendered to all students?" The authors seem to express justification for health factors as evidence for a study to be made in health education; this is revealed in a summarized statement as follows:

There are certain notable examples where impaired health seemed to be the cause of retarded school progress. For this reason the investigator was led to give attention to what might be otherwise unreliable source of information, namely the student's own opinion of his health status.¹²

Pupils may develop erroneous conceptions of their own health. This was found by the author in his questionnaire in finding answers to questions: "How much of the time do you feel well?" The answers range from "all the time" to "never." It was interesting to note that 50 per cent of the failing group never felt at tops.

"Learning by doing" seems to be the key thought in the work of Cassidy and Wood.¹³ The work has won the admiration of many educators due to its philosophy as a basis for all learning. A better understanding of the work may be

¹² K. L. Heaton and Vivian Weedon, The Failing Student, (The University of Chicago Press, Chicago, Illinois, 1940), p. 140.

summarized as follows:

The main function of education perhaps is to train the human mechanism toward efficiency as an instrument of self-expression with reference to the various responsibilities and opportunities of life, and at the same time the child learns more of permanent thought value in what he does. This always means neuro-muscular action of some sort, rather than what he sees, hears, or perceives in any way directly with the five senses.¹³

Cassidy and Wood also show the need of better health education instruction by comparison of valuations in the past, with the more desirable methods of physical activity of the present. The need is more than physical development, for benefits are derived through mental, moral, and social guidance. Subject matter must give over its older character of rigidity, fixity, uniformity for growth, mobility, and responsibility. Finally, health education should express an idea, feeling, or emotion which seems worth expressing.

Good posture must not be minimized by providing the means to good appearance only by providing the full development of the pupil as a whole. Better means of good posture may well be summarized in the following suggestions: (1) Good posture must develop the erect carriage of the body, (2) it must provide for the full vigor and health of the body, (3) it must maintain the upright activities of life,

¹³ A. M. Cassidy and D. W. Wood, The New Physical Education (New York, The Macmillan Company, 1927), pp. 7-8.

and (4) correct posture will admit children to proper growth and development.

In Bancroft¹⁴ posture is given as the most essential factor of good physical development. Good posture is often confused with the ideas of extreme erectness, which is about as injurious as no instructions in the activity at all. Erect sitting is only one factor of good posture, and if not properly observed in relation to other relaxing movements, the one position alone may cause harm. Proper standing and walking are just as essential to good posture development as proper sitting. Many teachers have the erroneous idea that sitting rules are the only necessary training for better posture, because pupils sit the major part of their time at school. Time should be provided for a great part of the school hours to be spent in standing and walking, as this is a great opportunity for posture development.¹⁴

Health diagnosis should be pre-requisite of good health instruction. Many books are written on the subject, but in this study Morrison and Chenoweth seems to be a guide to better health diagnostic study. Discussions in the chapters dealing with posture, skin, muscles, ears, eyes, and other organs of the body are organized in a way that

¹⁴ Jessie H. Bancroft, The Posture of School Children (New York, The Macmillan Company, 1937), p. 2.

simplifies the teaching of health education. The first few chapters deal with health test. Those test which seem closely related to the diagnosis of the public school pupils are studied most. Health record forms, charts, and pictures are important in the health diagnosis study. The author seems to think that an approach to the subject of diagnosis should be functional rather than structural. The teacher should take a minor part in administering treatments, as this should be done by a trained physician.¹⁵

Healthful school conditions is a result of proper administering of good health instruction. This is well expressed in Williams¹⁶ in the following statement:

Healthful school living is a term that designates the provision of a wholesome environment, the organization of a healthful school day, and the establishment of such teacher-pupil relation ship that gives a safe and sanitary school favorable to the best development and living of the pupil and teacher.¹⁶

¹⁵W. R. Morrison and L. B. Chenoweth, Normal and Elementary Physical Diagnosis (Philadelphia, Lea and Febiger, 1941), p. 2.

¹⁶Jesse Feiring Williams, Methods and Material of Health Education, New York, Thomas Nelson and Son, 1936. p.10.

CHAPTER III

LOCATION OF THE PROBLEM — THE OATES PRAIRIE SCHOOL

I. THE SETTING

The Oates Prairie School became a part of the Houston Independent School District in 1938, and has made much progress since that time. The school began as a one-teacher school in 1918, and has grown to a modern, elementary and junior high school since that time. The enrollment of the school today is about 700 pupils. The location of the Oates Prairie School is in the heart of an oil field. In addition to the economic advantages, which have financially aided the school, it is also a great industrial center. The people of the Oates Prairie Community have realized the need of the best of educational training in the school, and have cooperated with the Houston Independent School District in providing the opportunities equal to other schools of that district. The needs have become greater each year due to the rapid development of industrial conditions. With the over-crowded conditions of the school, teachers and principals have realized the need for a better health education program.

II. THE TERRAIN

The Oates Prairie School is located on the Wallaisville Road, ten miles east of the Harris County Court House, about one mile east of the Beaumont Highway, and two miles north of the Goose Creek highway. The Goose Creek Highway, the Beaumont Highway, and Maxie Road form the boundaries of the Oates Prairie School District. This school district consists of about 25 square miles. A greater part of this land is prairie, while the other part is made up of small towns. These towns are separated in some instances as much as five miles. School children have free transportation supported by the Houston Independent School District. The general altitude is about 50 feet above sea level. Most of the land is fertile and is suitable for agriculture.

III. POPULATION OF THE OATES PRAIRIE COMMUNITY

The population of the Oates Prairie Community is estimated at five thousand people. Five community towns comprise the greater portion of the population in The Oates Prairie School District. These town communities are Oates Prairie, Greens Bayou, Meadow View, Harbor Dale, and O. S. T. Acres. These small communities are within a distance of five miles of each other, and they all make up the Oates

Prairie School District. The writer recalls the population of Oates Prairie School District in 1926 to have been composed of about one hundred people. The population of this school district has approximately doubled in number since the beginning of World War II, or since the year of 1941. These figures show reason for a great expansion in school enrollment. Due to war-time limitation of school building programs and school material, the school has had to make many temporary constructions and facilities to meet the rapid growth of the school enrollment. The Houston Independent School District has planned a modern building program for the Oates Prairie School immediately after the close of World War II.

CHAPTER IV

TECHNIQUES FROM THE LITERATURE APPLICABLE TO THE TEACHING OF HEALTH EDUCATION IN THE OATES PRAIRIE JUNIOR HIGH SCHOOL

From the literature reviewed the writer has selected a number of techniques which seem most applicable to the needs of the Oates Prairie Junior High School. Instruction generally includes the proper grouping for health testing. Health testing is usually done by a physician, or a well trained nurse, with the assistance of the home room teacher. The teacher asks pupils to furnish the school with all information concerning their past physical impairments. Suggestions are made that pupils furnish the teacher with any material that will aid in improving their health. Regular health activities are planned in coordination with the school health program.

Books and magazines which contain many suggestions for class room teachers are the following:

Morrison, W. R., and Chenoweth, L. B., Normal and Elementary Physical Diagnosis, Philadelphia, 1941.

Strang, Ruth, Student Personnel and Health Guidance, New York, 1940.

McReynolds, John O., Hygeia, Nutrition for Children, Chicago, 1939.

Bogert, L. B., Nutrition and Physical Fitness, W. B. Saunders and Company, 1939.

Burkh, Niels, Fundamental Gymnastics, New York, E. P. Dutton & Company, 1940.

Another technique in the health education program is the regular re-checking of the medical examinations. Physical traits not included in the medical examination must be included in the pupil health record. This record should follow the pupil from the beginning of his school career, until he has graduated.

In reference to the health examination techniques, the following rules may be suggested as a guide for providing better instruction:

(1) Follow-up the medical, surgical, and dental treatments as required for the purpose of locating later decay in teeth, failing of vision, and other physical defects; (2) provision for health necessities, such as food, clothing, and improved home care and supervision; (3) change in such routine living as choice of diet, rest, and proper amount of sleep; (4) program adjustment, including speech correction and a modified physical education program.¹

Good health techniques would necessitate at all times the following data on physical conditions of the pupil:

(1) History of growth and nutrition, (2) record of communicable diseases and immunizations, (3) record of operations, accidents, hospitalizations, and prolonged health difficulties, (4) report of teacher's observations on health attitudes, and (5) results of vision, hearing, growing, attendance record, findings, and recommendations to parents.²

¹ L. J. Bogert, Health Education, (Philadelphia, W. B. Saunders and Company, 1939). p. 3.

² Ibid., p. 5.

The primary aim of the teacher should be the providing of good health instruction. Suggestions appropriate for improvements in health teaching methods are summarized as follows:

1. Health education should be administered in terms of needs, interests, abilities, and opportunities of the pupils.
2. Health education must be available to all pupils at all educational levels.
3. Health education must be concerned with the best development of the individual.
4. Health education must aid the program to cure, prevent, and enrich.
5. The administering of health education insures planned services which are purposeful and unified.
6. The health education program should be administered so that health authorities can strengthen the teacher.
7. The health education program should help pupils so that they may become able to help themselves.³

II. CARING FOR THE EAR, EYE, AND TEETH

The high school health program gives attention to the care and protection of the eye and appraisal of the visual ability of the pupil. A study of the care and protection of the eye involves responsibility for protection against infection, eye examination, proper nutrition, proper lighting of the school room, and proper use

³ Giles Ruch and David Segel, Minimum Essentials in Health Guidance, Washington, D. C., Bulletin 220, 1939, p. 11.

of the eye. Class study of the eye should put much emphasis on good hygiene. Infections brought to the eye may be traced by pupils in citing public hand towels, unclean eye-cups, and unclean hands that often contact the eye. Towels used by others should never be used under any conditions, as this is an easy way of spreading eye diseases.

The eye test should be made to an advantage in the class room study. This aids the pupil in understanding the eye as first hand observation. The teacher should plan with each student in the way that will help him most in improving poor vision. The family specialist may be acceptable in performing examinations of certain pupils, with the cooperation of the parent. Pupils may find from daily class study of the eye their need for corrections, and in some instances, the proper fitting of glasses.⁴

Proper use of the eyes includes consideration of such items as proper lighting, correction of posture, correct angle of eyes in relation to work and reading material, and use of glasses when needed. In relation to each of these, students should review personal practices and attempt to improve those which need improvement. One should not assume that students who have impaired vision cannot expect to find

⁴ F. M. McCoy, "The Proper Fitting of Glasses," National Education Association, New York, 1935, p. 43.

useful work. Those with seriously defective eyesight, 20/70 or less in the better eye with the best correction, need adjustment of the educational program, and guidance in selecting an occupation in which they can function efficiently without further damage to their sight. Even blind people are often employed where in carefully chosen tasks they function as efficiently as do those with good eyesight. A permanent file card can develop the plan of students bringing in reports on occupations most interesting for them. These standards change and will need to be brought up to date each year. Each student may then ascertain and discuss with his counselor his visual fitness for particular progress.

Pupils may understand the eye as a part of the body and as a refracting mechanism. This study should include the development of the eye, the physics of light, and the refractive power of the eye. The study of the camera will offer an adequate similar illustration of the eye. The school lighting should be surveyed in order to recommend standards for the particular types of work carried on in the various school rooms. Meters for measuring light should be installed.⁵

⁵ Lawrence Chenoweth, School Health Problems (New York, F. S. Crofts and Company, 1940). p. 19.

In surveying the lighting of the room, these points need considering: Are the windows unobscured by dirty draperies, or directions? Are the lighting fixtures, walls, and ceilings clean, and are the latter light in color? Are shades properly installed with two rolling from the middle of the window? Are desks placed at an angle so that light can come over the shoulder opposite to the hand that is used, right shoulder for lefthanded, left shoulder for righthanded? Do the tops of desks tilt at various angles? Does one-sixth of the school room walls and ceiling consist of window lighting?

The guidance teacher should find out how many eye accidents have occurred at school, how they were caused, what first aid was given, what additional medical care was needed, how much school time was lost, what were the results, and if there were any permanent injuries to the sight. The health service should have at least part of this information and it should be tabulated from the records of individual pupils. With this information at hand, the counselor may then consider how these accidents might have been prevented, and assist the school in the elimination of eye hazards.⁶

⁶ L. L. McCoy, "Whom Shall I Consult, Optician, or Optometrist," National Educational Association and American Medical Association, Joint Committee on Health Problems in Education, Society for Prevention of Blindness, 1935, 1201 Sixteenth Street, Washington, D. C. pp. 24-28.

Hearing is one of the major sense organs in relation to learning. The ear is a delicate organ and should require proper procedure in examinations for impaired hearing. The examination should include a careful history of the case as well as the objective and subjective symptoms. The causes of defective hearing are both congenital and acquired. As with the eyes, it is usual to have both ears in functioning condition. Acquired impairments usually follow defects and diseases affecting the upper respiratory tract. Common diseases affecting this portion of the ear are measles, scarlet fever, whooping cough, and adenoids. These and other causes may be included in the health history. Included also may be the symptoms of middle-ear disease, such as pain, tenderness, and discharge from the ear.⁷

The teacher should be familiar with the observable evidences of defective hearing. The presence of any one of the following kinds of behavior is apt to indicate defective hearing: The child who seems to be habitually inattentive; the child who generally looks to see what other children are doing before beginning to follow directions; the child who watches the teacher especially closely while she is making assignments and giving directions; the child who seems to

⁷ W. R. Morrison and L. B. Chenoweth, Normal and Elementary Physical Diagnosis (Philadelphia, Lea and Febiger, 1941). p. 213.

favor one ear by turning the head while listening; and the child who often asks to have the assignment repeated.⁸

There are in general two kinds of auditory tests: speech and instrumental tests. In the speech test, the teacher stands about twenty feet away from the pupil. If the ear is normal, the whisper should be heard at that distance. The ears should be examined one at a time. Have the child stand with back to examiner and close one ear by holding the hand over it. The sound is made and the same test is repeated for the other ear. The pupil should not face the examiner, as the pupil may be able to read the lips of the examiner. If the pupil cannot hear at a distance of twenty feet, then the examiner should come closer and repeat the same procedure until a usable measure is obtained. If the pupil hears normally at twenty feet, then he is regarded as 20/20. If the pupil hears well at fifteen feet, he is regarded as 15/20, etc.

The instrumental test is valuable because the watch is both common and convenient. The pupil closes the eyes and holds the palm of the hand over the ear. The distance to the watch is three feet. The test is made with the other ear in like manner. There is a variation in opinion as to proper distances, but the distances vary from 2½ to 5 feet.

⁸ Ibid., p. 221.

If the child is deaf, but can hear when the watch is placed on the mastoid position, it means the trouble is in the conduction apparatus. The audiometer test is a very popular test, and should be used along with other methods.⁹

The dental program for the school should begin first with a definitely arranged schedule for getting necessary dental examinations and dental work done. It might be well to plan with the dentist for the arranged appointments so that groups may be taken care of in the school clinic, and avoid many trips for pupils who might need transporting to the dental office. Plan publicity on the dental health needs of the group which will stimulate their interest in having corrections made as soon as possible and which will arouse the interest of the public toward making facilities available for corrections. Assemble authentic material on dental health in the library and class room for students and teachers. The dental society of the community may work with the superintendent in school health coordination along with other health agencies for carrying on this program.

Find out the number of dentists in and near this community and secure the record each may have on treatment and corrections made in other schools. Compare these records

⁹ W. R. Morrison and L. R. Chenoweth, Physical Diagnosis, "The Ear," (Philadelphia, Lea and Febiger, 1941). p. 212.

and standards of approximately two thousand students as prescribed by The American Dental Association. These records may be compared to records of rejections made by the United States Army in selecting men for military service.

Invite a representative of the state or local health agencies to speak to student groups. Ask him to explain the X-ray showing the growth of teeth from the temporary set to the permanent. Discuss the need of sterilization and cleaning of teeth. Discuss the necessary time and need of the temporary teeth to be removed, avoid the danger of lateness in removing these teeth, and irregular or misshaped teeth.¹⁰

III. STUDYING THE PREVENTION AND CONTROL OF COMMUNICABLE DISEASES

The control of communicable diseases is always important in time of war, as well as in time of peace. War creates the conditions conducive to the increase of diseases. Movements of population and overcrowded war production centers favor its spread. Physicians and nurses are taken into the armed forces, and there is likely to be a drain on

¹⁰ John O. McReynolds, Hygeia, "Nutrition for Children," 528 North Street, Chicago, Illinois, 1939. p. 19.

hospitalization and medical supplies.

Four common diseases are discussed for class study. Three of them, the common cold, malaria, and influenza, are most important, because the U. S. Public Health Service says they are most significant in war time from the standpoint of high school students. Smallpox is mentioned because it is representative of communicable diseases which may re-occur at any time in epidemic form if protective measures are not enforced. An understanding of these diseases will give concreteness and reality to the causes, methods of spreading, prevention, and control of diseases in general. Information on other diseases likewise is significant, especially in wartime, such as typhoid fever, and typhus fever.¹¹

The common cold is the leading cause of absenteeism from school and work. In addition to incapacitating people from essential work, the cold makes increasing demands upon already overburdened medical and nursing services. People are likely to dismiss colds as being of little significance. A cold in itself is never fatal, but a cold prepares the ground for influenza and pneumonia.¹²

¹¹ Robert Olesen, Physical Fitness Through Health Education, Federal Security Agency, Washington, D. C., 1943. p. 53.

¹² Ibid., p. 18.

Early symptoms of such diseases as measles, scarlet fever, and diphtheria resemble early symptoms of a cold. Many of the allergies to pollens, dust, food, and other substances also resemble the cold in symptoms. If a cold lasts over a week, one should find out whether he has some other condition.

To help prevent colds, each high school student can assume certain responsibilities. He can follow hygienic habits of diet, rest, sleep, exercise, and recreation which help keep his body in the best physical condition. If the cold develops to a noticeable extent in a pupil, he should remain at home in bed until the acute symptoms disappear. He is more likely not only to cure the cold quickly, but also to avoid exposing others to his infection. By attacking a cold early, he may also save the physician a visit -- a consideration not to be overlooked in either war-time or peace-time.

If a cold is severe, with acute symptoms of headache, chills, fever, aching joints, or if a more serious disease is suspected, the physician should be called at once so that the proper treatment or quarantine measures may be applied. When colds recur at frequent intervals, or if there is pain in the ears, a physician's advice should be sought.¹³

¹³ D. B. Armstrong, National Education Association, Personal Growth Leaflet No. 156, 1942, Washington, D.C., p. 15.

Malaria is spread from man to man by the Anopheles (malaria) mosquito. It is most prevalent in the southern part of the United States and in tropical and subtropical zones of other countries where the Anopheles mosquito thrives.

Malaria incapacitates large numbers of people for effective service as well as high school students. It causes illness which weakens people, making them incapable of doing an effective day's work. It also makes them more susceptible to other diseases. Malaria must be considered as holding a major place among communicable diseases. Many people today are being exposed to malaria for the first time, due to the lack of knowledge and understanding of the disease.

The United States Public Health Service has a vast program of malaria control in malaria districts. The control measures employed include removal of mosquito breeding places by draining and filling or rendering these places safe from breeding, spraying the surface of the water with oil of Paris green dust, screening houses and making them mosquito proof, treatment with drug, and community education on malaria prevention and control.

If malaria cases occur in the community, try to find out if the Anopheles mosquito is present. Make a survey of the homes and buildings which need to be screened or made mosquito proof, and the elimination of all mosquito breeding

places.¹⁴

Smallpox occurs chiefly in scattered epidemics. Its distribution varies widely according to the degree of immunization of the population of an area and the exposure of the people to infection from without. Shifting populations increase the danger of smallpox in places where few individuals have been protected by vaccination.

There is no need of anyone having smallpox today. Regardless of regulations, every high school student should have been vaccinated successfully for smallpox within the past five years. Revaccination every five years is essential to assure continual protection from the preventable disease. These requirements are required in the Oates Prairie School and other Houston Schools for entrance.¹⁵

With the assistance of the school health committee and local health authorities, a plan may be worked out to familiarize all students in the need of immunization, and with the cooperation of the home, smallpox may completely disappear. A knowledge of state health laws and how these laws govern local communities of the state, may arouse

¹⁴ H. R. Carter, Public Health Service Supplement, United States Public Health Dept., 1935, Washington, D.C. p. 18.

¹⁵ J. P. Leake, Report on Research and Standards, United States Health Service, Bulletin #1597 (Washington, D.C., U. S. Gov. Printing Office, 1939). p. 55.

interest in the community to promote better health for all. Students at all times should report any cases of illness in the community where such cases have not been reported to proper health and school authorities.

IV. STUDYING BETTER FOOD HABITS

Food is a "weapon of war" contributing to the personal and well being of every one in work, play, or school; exertion accompanies greater physical activity. Without good food, this is impossible. It is important that scientific knowledge of nutrition be applied in home, industry, and schools. High school students can be helped to contribute to their own health and efficiency, to that of their families, and to the community through which they participate. Three ways in which they may participate will be discussed in the class room: (1) Improve personal nutritional status by following day by day the practices leading to good nutrition; (2) cooperate in the community and home food conservation programs, in order that all may be sufficiently nourished with good food, and that the nation may receive benefit in time of war and scarcity; (3) assist with nutrition programs and groups, such as the school lunches.¹⁶

¹⁶ J. P. Leake, United States Office of Education, School Lunch Program, Washington, D. C., 1943. p. 22

Today millions of Americans have diets that are lacking in some necessary food factors. According to a survey made by the Bureau of Home Economics, United States Department of Agriculture, more than a third of our population had poor diets, while one-half had diets classed as good. There are many factors which affect nutritional status: Faulty diet due to a lack of knowledge of food selection, poor family incomes, and illness and certain physical impairments. One may also list poor hygiene — including the failure to prepare balanced daily food programs.¹⁷

Whether the noon meal is selected in the school lunch room, bought in a near-by store or cafe, eaten at home, or packed at home to be eaten at school, it should supply approximately one-third of the individual's daily food requirement. In actual practice among high school students, lunches often fall short of this.

The lunch itself should be well prepared, interesting, and palatable. A suggested plan for a high school student's lunch is: A main dish containing meat, fish, cheese, eggs, sometimes beans, peas, or nuts; one or more vegetables and fruits; whole-grain bread with butter or fortified margarine; one cup of pasteurized milk, or this amount in soups,

¹⁷ Ibid., p. 48.

custards, or other dishes made with milk.¹⁸

The packed lunch will be eagerly anticipated if it is selected and packed by the same attention that is given to a meal to be eaten at home. Sandwiches with a variety of fillings, including eggs, meat, and cheese can be made of whole-grain bread or bread enriched with minerals and vitamins. Many vegetables, such as carrots, celery, green peppers, turnips, and cabbage, and most fruits are easy to pack, attractive, palatable, and high in food values. Cold milk can be carried in a thermos bottle. If students bring a packed lunch, they should be encouraged to supplement it as needed with milk, vegetables, and other protective foods, instead of spending their money for candies and non-nutritional foods.¹⁹

Students may gain the understanding which should lead to practices resulting in better nutrition through a school organization that provides for the teaching of nutrition to all. The counselor can have the classes design a meal record chart which may be used by student in a class group in appraising his eating habits. Pupils may plan changes needed to insure a better diet and work out ways to

¹⁸ J. P. Leake, United States Office of Education, The Administration of The School Lunch, Washington, D. C., 1941. p. 48.

¹⁹ Ibid., p. 50.

incorporate these practices in daily living. Another plan is to prepare nutrition exhibits for the school which interpret the newer knowledge of nutrition. These exhibits should be simple and should answer one question, such as: Why should we use whole-grain products, restored cereals, and enriched breads? What is an adequate day's diet at low cost? With the restrictions on the use of meats and butter, what foods may be used as substitutes? The teacher must make a study of food selections in grocery stores and food markets, in order to instruct pupils in proper buying of necessary foods. Observing the lunch trays in the cafeteria to discover whether all students are getting their money's worth in food values is another important plan. If students are not choosing a good lunch, suggestions should be made on securing better lunches. The community should cooperate with the school in providing the proper milk necessary for adequate lunches.²⁰

V. LEARNING BETTER FIRST AID AND SAFETY FIRST PRACTICES

It has never been easy to teach young people to be careful. Perhaps it has never been desirable if "being

²⁰ L. J. Bogert, Nutrition and Physical Fitness,
W. B. Saunders Co., Philadelphia, 1939, pp. 60 - 70.

careful" is thought of as an end in itself. Now, when youth are being asked to undertake the most dangerous task the world has ever known, they must realize that safety is a means to an end, the end being to get the job done. If carelessness causes the loss of a man in the armed forces or in industry, it is a criminal waste. These accidents aid the enemy. Doing things carefully means concentrating all one's power on the desired goal. Doing things expertly and carefully means using time, effort, machines, and human life to the fullest, and not wasting needlessly. Our high school youth will respond to this appeal, and, for the first time in history, safety first can be successfully taught.²¹

Students can participate in a planned program to keep the trend in automobile accidents moving downward. An activity would be to analyze the causes of automobile accidents -- poor eye sight and other physical handicaps, inattentive or angry state of mind, lack of consideration of others, alcohol, speed, faulty cars, and bad roads. A good project could collect authentic information and prepare a specific plan of action on these points: (1) The man behind the wheel, (2) the man on foot, (3) care of the car, (4) the highway, (5) common courtesy, and (6) social

²¹ D. B. Armstrong, American Association of School Administrators, National Education Association, Safety Education, 18th Yearbook, Washington, D. C., 1942. p. 54.

responsibility.²²

Teachers should prepare talks and programs on safety bicycle riding that will appeal to boys and girls. Demonstrations of safety bicycle riding will to a great extent eliminate such practices as disregard for highway signs, weaving from side to side of the highway, riding on the roads at night without lights and the making of turns without signaling. Bicycle inspection should be made at school. With the teacher's help, students may develop an auto driving course which will train pupils to drive safely. They may plan with the parent and club sponsors substitutes for recreation that will limit the necessary use of cars, as, for example, picnics near home, games at home, radio programs, working in gardens, and appropriate community recreation.

Accidents come first as the cause of deaths (approximately 28% of all deaths) among school children of all ages. It is noticeable that accidents among students have been interfering with the total war effort by requiring medical and nursing care, by reducing the real service that students can be rendering, and by decreasing potential reserves of man power. Vigorous physical education programs in school will tend to reduce many accidents, because the safety and welfare of the student is part of the program. Teachers will be reminded that good form in

²² Ibid., p. 56.

physical instruction tends to reduce carelessness which leads to many accidents.

With the increasing number of students taking work in various shops, the need for safety education is more evident than ever. Items to which special attention should be given include flying hair, loose sleeves, aprons, neckties, or any other clothing that might be caught in revolving machinery. The wearing of goggles and protection of eye injuries, proper machine guarding, shop cleanliness in order, and safe practices in the operation of machine and hand tools are other items which the teacher should stress. If the pupils obtain a conviction of the importance of safety measures in the shop and get into the habit of using them, the student will be better prepared to work without accidents in later life.²³

Three projects in which students will be interested in engaging are: (1) Study safety situations as they arise in the school, using some of them in group discussions; (2) make a continuous survey of accidents that occur to students, class by class, in the school; (3) work out ways of appealing to other students in the school to prevent accidents, from tripping, skating, careless throwing of balls, and crossing streets when loading busses. The suggestions for safety may be made in assembly and home room programs, featuring charts, dramatization, and pictures; in the school

²³ Ibid. , p. 57.

newspapers or in a series of mimeographed leaflets on such subjects as good form in ball games.²⁴

No other activity requires as much safety instructions as does the fire drill. This program requires definite organization by the various rooms and groups of the school. This planning should require the definite uniform instructions formulated by a faculty member who understands the process of evacuating school buildings. A map of the building and the campus should coordinate the evacuation of the building without delay or disturbance in the process. When the fire drill signal is given, there should be a normal reaction. Captains of each room should immediately lead the group in file from the building to the position assigned. Each captain should carry a card designating the number of the room and the name of teacher. When the required time is up for evacuation of the building, the coordinating teacher or principal should tabulate the number of cards in order to account for the various rooms and teachers. No talking or noise should be made by any student. Each room should have a definite position to assemble, and to be made in a definite time.

In war areas the fire drill is a good procedure in

²⁴ James F. Rogers, Health in City Schools, Federal Security Agency, United States Office of Education, Washington, D. C., 1941. p 21.

disciplining the school for the desired evacuation. The whole school should have safety representatives from the various grades to patrol corridors and auditoriums when the occasion is necessary. Classes in first aid are of importance, but these classes may be better coordinated with science and physical education classes.²⁵

VI. LEARNING TO COORDINATE PHYSICAL EDUCATION WITH SCHOOL ACTIVITIES

Exercise is the most important aid to physical fitness. Many exercises are offered which will help high school boys and girls increase their strength and endurance for the task that lies ahead. Although most students can participate in a vigorous program of exercise, there will be a few for whom the program will need to be modified. Only a good examination can determine which students can take the work, and which should have special consideration. Students will aid the school greatly in its task of making this decision if they will report willingly to the teacher, or physician, or nurse, information on all former illnesses and all present illnesses or physical defects.²⁶

²⁵ James F. Rogers, Health in City Schools, Federal Security Agency, United States Office of Education, Washington, D. C., 1941. p. 95.

²⁶ Ruth Fedder, Physical Fitness Through Physical Education, Federal Security Agency, Washington, D. C., 1943, p. 41.

Naturally, a student will prefer to participate in his favorite activities along with the other students. In order to bring himself to his highest possible level, it is sometimes necessary to leave off this pleasure for the time being. A modified physical education class can be arranged for students who need an adapted program so that they can carry on their individual activities but still have the social benefits of being in a group. Sometimes arrangements may be made for a student to carry on his individual program of exercise during the regular period of physical education class period. Following an illness or an accident or for other reasons, rest may be more suitable for the individual than activity. Under these circumstances, the student's entire school program may have to be adapted to meet his individual needs.²⁷

The four activities for a program of strenuous training are aquatics, gymnastics, combative activities, and sports and games. The objectives of an aquatic program are to stay afloat for a long period of time, to swim under water, to swim long distances without tiring, to enter the water without submerging, to be at home in the water fully clothed, and to render assistance to another person in water. Swimming classes should not exceed fifty boys, and

²⁷ Ibid., p. 17.

they should be subdivided into small groups. Boys may be paired as "buddies" and required to stay near each other in the water. The teacher should keep an adequate check in and check out of swimmers for the sake of safety. Boys may be taught to stay afloat by breathing and breath-holding exercises, by sculling, by treading water and by floating. The fundamental strokes are the side stroke, breast stroke, trudgeon stroke, the endurance swimming, swimming under water, and swimming fully clothed.²⁸

Gymnastics are used to improve muscle tone and body development. The objectives are to develop endurance, to increase strength, to develop agility, and to develop specific skills. The most important activity consists of marching and running. Attention should be given to all the military commands when teaching marching. Running develops endurance as does no other activity. One should exercise special care when requiring pupils to run 100 yards or more.²⁹

The grouping of pupils by the teacher of physical education classes should be based on three factors: Case history, physical inspection, and careful observation during the first weeks of training. The precise case history of

²⁸ Niels Burkh, Fundamental Gymnastics (New York, E. P. Dutton and Company, 1928). p. 32.

²⁹ Ibid., p. 34.

the student is very important, for it reveals all former illnesses and temporary disturbances. A comprehensive case history furnishes most of the considerations which the physical education teacher needs for his selection. The teacher cannot be persistent enough in getting this history before he inspects each student. One should obtain this material from the student himself, from his parent, and from medical documents. The evaluation of the reports is not too difficult if the teacher spends time and thought on it. He may select, and mark with colored pencil, items which are important for the student's present condition. It is wise to disregard measles or even diphtheria if they have been overcome years before without after effects being reported. However, one must be keenly aware of an old heart disease, tuberculosis, or any other nervous disease. In other words, it is best to mark all facts which may be of influence upon the present condition of the student. Then make a summary to these facts with a pencilled note at the end of each report. With this report at hand and any previous medical report, a teacher is well prepared to inspect the student a day or so later.³⁰

Each student may start a personal program for

³⁰ Ruth Fedder, Physical Fitness Through Physical Education, Federal Security Agency, Washington, D. C., 1943. p. 48.

physical conditioning by setting aside a certain amount of time each day for physical activity such as a brisk walk in addition to the regular physical education periods at school. If the child is unaccustomed to physical exertions, it is advisable to start with short periods, perhaps about one-half hour in length, and increase the time gradually, week by week, until at least an hour of appropriate out-of-door activity is used. The class will be interested in comparing notes on types of activities undertaken and on the way individuals feel about these activities.

A good means of understanding the importance of maintaining an equilibrium between exercise and rest is to collect information on the difference between muscle fatigue and mental fatigue, the physical and chemical changes that take place in muscles during exercise, the need for rest following exercise, and the procedures that should be followed for the development of endurance and the control of fatigue. Few teachers consider the idea of coordination of body movement with the goal or object in the activity, and teachers often fail to develop the mental attitude along with the physical. The boys' and girls' schedule should be arranged in order to make efficient use of the facilities, equipment, and the supplies available. A gymnasium may be so arranged as to give both boys and girls a period each

day for activity, though arranged at different periods.³¹

The physical inspection in this program has only one objective and that is to decide whether or not the student is able to take the strenuous program of physical training. After the inspection, if the student seems entirely healthy, he may be admitted to a program of vigorous training. If any physical impairment is found, then the parent should be informed and the student must bring a letter from a physician.

A modern teacher of physical education is familiar with the idea that training should be adapted to the individual student. There must be at least two groups and they consist of the one which is physically fit to begin training and the one which is not physically able to take it. This grouping does not mean that each individual does not receive equal attention.

This physical education program should consist of five periods each week of instruction for all high school pupils. The teacher should continually observe all pupils who appear to deviate from the normal. There must be an increased emphasis on interscholastic and intramural athletics, hard physical labor, hiking, and camping. The use of vigorous and rugged activity should replace many of

³¹ W. J. Pitts, Training Through Recreation, New York, Bureau of Publication, Columbia University, 1942, p. 57.

the recreational sports that have been used in the past.³²

Before permitting pupils to run long distances, several weeks of preliminary training should be given. Training in long-distance running must be preceded by medical examination by physician. No boy in the ninth grade should be permitted to run distances greater than two hundred and twenty yards. In general, the training program should be characterized by starts, short burst of speed, and jogging of the grass during the preliminary period of training. In no instances may pupils be permitted to run one hundred yards at top speed before the second week.³³

Hiking develops the ability to cover long distances in the shortest possible time. The starting distance should be from three to five miles. This hike is a brisk walk, and it must be made with a steady gate. At each practice the distance should be covered in less time, and gradually increased until the boys are able to hike from eight to ten miles. There must be no rest periods, and the boys should be taught to breathe deeply and naturally. Cross country hikes are the most vital, and the course may be laid over hills, through woods, over open fields, or over any open

³² Ibid., p. 175.

³³ Loyd W. Olds, Track Athletics and Cross Country, New York, A. S. Barnes and Company, 1928, p. 35.

country. This activity provides opportunity to correct and develop posture.³⁴

Relay races add interest and competition to the recreation program as well as vigorous exercise. It is best for the teams not to number more than eight members so only a few will be standing idle. Relays should be long enough to require the players to put forth a sustained and vigorous effort. Distances involved in the different relays may be gradually increased as the boys improve in physical condition.

The three best types of conditioning drills are a general conditioning drill, a grass drill, and ranger activity. The exercises can be adapted to indoor or outdoor use in limited space and require no equipment. Strength and endurance are developed quickly through the regular use of these drills if there is a steady increase in the number of times each exercise is performed. The general conditioning drill starts with the feet about a foot apart, the knees slightly bent, and the arms raised backward. Count one -- swing arms forward and jump upward. Count two -- swing arms backward and jump upward. Count three -- swing arms forward and upward and jump upward about one foot. Count four -- swing arms backward and jump upward. Repeat from five to

³⁴ Ibid., p. 41.

ten times. There are many other similar exercises for this general conditioning drill.

The ranger activities are patterned after movements which ranger troops use. The formation is a single circle if less than thirty boys, and a double circle if between thirty and sixty boys; each boy stands eight feet behind the one in front. The procedure is simple for the boys merely walk forward at a slow relaxed pace.³⁵ The circle formation is kept, but the class does not walk in step; the instructor stands in the center of the circle, calls the name of an exercise, demonstrates it, and then commands, "Start." Each boy immediately starts to perform the exercise as he continues to move around the circle. The exercise is performed for about 20 seconds; when the teacher commands, "Relax," all resume the original slow walk. After 5 to 15 seconds, the teacher names and demonstrates a new exercise which the class performs in like manner. Some of these different exercises are "Leap frog," "Bear walk," "All fours," "Duck waddle," "Indian walk," and "Crouch run."

The grass drill was originally used as part of the training for football squads to develop agility and endurance. The exercises are given in varied order at the will

³⁵ Ruth Fedder, Physical Fitness Through Physical Education, Federal Security Agency, Washington, D.C., 1943, pp. 51-52.

of the instructor, and upon his command. At the command "Front," the class falls to the ground quickly, face down, breaking the fall with the hands. On the command, "Up," they leap to their feet and run vigorously in place. On the command "Back," they bend forward and fall back, breaking the fall by rolling to a seat and then lying on their backs. On the command "Front," they change to a position of face down, hands toward the front of the class. The order of the commands should be varied so that the boys cannot anticipate the next movement.³⁶

Physical fitness is as important for girls and women as for boys and men. Boys must meet the needs in military service, as well as the physical requirements of life. Girls must be prepared to carry on work which is directly related to the war, and to become the best physical examples for future life.

High school girls must be ready to assume the responsibilities which the times place upon them. The educational program for girls must be changed to prepare them to meet these responsibilities, just as the program for boys is being changed to meet their needs. Since the needs of girls are so different from the needs of boys, it follows naturally that the program must be different.

³⁶ Niels Burk, Fundamental Gymnastics (New York, E. P. Lutton and Co., 1923), pp. 13-18.

The program here offered is a guide to teachers of physical education whose responsibility it is to carry on activities which contribute to the physical fitness of girls. This program recommends vigorous participation. It stresses activities which develop endurance, stamina, and skill.

This development of skill brings with it a sense of achievement. Achievement builds morale. The program for girls must give opportunity to achieve, to succeed, and to increase morale. With large number of boys and men leaving their homes and communities for military service, the responsibility for maintaining morale both in home and in the community is, therefore, placed largely upon the shoulders of the girls and women of America. Education must prepare them to face this task.

The girls' physical education program should consist of gymnastics as basic activity. Good muscles should be an objective achieved through a balanced running and stretching, hanging, and other activity skills. The great value of gymnastics is that movement can be directed toward development of specific parts of the body. The direction and the intensity of the activity can be controlled.

Common sense and caution must be the guide in any game selections, and the method in game contests. Competition may be against time, individual against individual, or

group against group. Group teams should never be large, in order that none may be idle for a long period of time. Coordination should be an objective in all physical activity; many pupils exert more effort in game tasks than is sometimes necessary, whereas, if the proper mental activity is used, greater achievement can be reached with even less energy. No physical education program can be complete without various accompaniments suitable for the particular activity. The piano, drum and bugle corps, victrola music, and the radio may be used as accompaniments in many activities. These accompaniments give coordination to games that otherwise would seem somewhat of little interest. Music in games, as the march tunes, may create grace and skills.³⁷

All normal girls should participate in the program prepared for this school. The following requirements and restrictions should be observed: Women teachers should teach the girls program; certain restrictions should be made in certain periods of each girl's life.

Endurance is developed only as the result of vigorous activity carried beyond the first onset of fatigue. Effort should be sustained, even though the girls may become somewhat tired. It is imperative that teachers watch their

³⁷ Ruth Fedder, Physical Fitness Through Physical Education, Federal Security Agency, 1943, Washington D.C., p. 35.

students carefully so that they may not become overtired. Such signals as falling frequently, dropping objects, bumping into others, and awkward gait should warn the teacher that the pupil should cease activity.

Intramural sports should be organized so that a maximum number of girls are included. The round-robin tournament program should provide the greatest amount of participation and it should be used in preference to other forms of sports. If the interscholastic sports are organized, the intramural programs should not be sacrificed. The desirable practice is to make the interscholastic program an outgrowth of the intramural program.³⁸

Major games that require much preliminary training and guidance are speedball, volleyball, basketball, tennis, soccer, softball, and field hockey. There are many other games that are just as important and vital in the physical education program, but these games are adequate games to carry on intramural activities. The physical education program is not complete with just these games, but the opportunities they may afford are many. They may be used to afford prizes, trophies, letter distinctions, and other awards. These games may be carried on by students themselves when out of school, or in parks and at home centers.

³⁸ Ibid., pp. 52-53.

No game is worth the time it requires if it does not promote growth, endurance, and sportsmanship. Proper attitudes are essential in any educational growth, and the attitudes students acquire in school games follow them throughout life, though they may be good or bad.

The teacher's personality should not be underestimated. Pupils are many times a living example of their former teachers. If the teacher is fairminded, tolerant, firm in mind, and prompt in any decision, the outcome is encouraging. If the teacher does not possess these qualities, pupils may become dishonest, narrow, and unco-operative. The opportunity for character building is greater than any other courses or subjects taught.³⁹

VII. LEARNING TO DEVELOP BETTER MENTAL ATTITUDES

Art, music, and literature help to relieve tension through creative activity. English courses may be modified to include more books which illuminate our lives and our time. Certainly every part of a school curriculum has its part in developing mental hygiene.⁴⁰

To assist the students in organizations that will aid them in acquiring much needed information, will relieve the teacher of much unnecessary work. In the various clubs

³⁹ Ibid., pp. 53-55.

⁴⁰ Lawrence Chenoweth, School Health Problems (New York, F. S. Crofts and Company, 1940) Second Edition, p. 419.

of the school, the teacher would advise the students in the proper channels of securing information. A committee from a club can be assigned to writing for literature, pamphlets, and picture films giving vital information on subjects that the school can seldom afford. Much free literature is given away by the government. The many associations of America will supply many requests for information needed in the following: health problems by the American Medical Association, dental hygiene by the American Dental Association, and advice to young girls and boys from the various departments of the government.

First, a concise statement should be made to any place where the information may be made available, the problem and nature of the study, and what the club needs most with the amount of money they can afford to spend. This will in many cases receive a more definite response. The community organizations in connection with the school, as the P. T. A., may assist in financing the film programs and other expenses pupils cannot afford financially.⁴¹

The development of sound mental attitudes is of equal importance when teaching guidance. In no other aspect of health education does the teacher play so important a part as a pattern of example, as a guide or counselor in his

⁴¹ Ibid., p. 425.

teacher-student relationship, and with his person-to-person relationship with students. Attitudes are caught more surely than they are taught. It is quite important that the teacher consider his own adjustment to the teaching situation. Teachers are persons; they have fears, worries, satisfactions, annoyances, expectations, ideals, and purposes. They cannot hide from the high school student these qualities. Therefore, counseling becomes a joint quest, a formal learning situation.⁴²

The success of this kind of guidance depends largely upon the student-teacher relationships. Thus the teacher's responsibilities are to maintain sound mental attitudes himself, provide a classroom respect for each personality, and the consideration for one another, confer with individual students who come to him individually for guidance, and refer to expert sources available, as the teacher would many times not have the proper knowledge to help adequately. Therefore, the mental attitudes develop all through the school days. The teacher's personality and outlook may influence the student in many ways. In history, they may view the present, and hope for the future. In science, a respect for truth may be developed with right solutions for all good

⁴² Ruth M. Strang, Student Personnel and Health Guidance (New York, The Macmillan Company, 1941). p. 335.

mental attitudes.⁴³

⁴³ Ibid., p. 360.

CHAPTER V.

SUMMARY AND CONCLUSIONS

I. SUMMARY

The aim of the writer was to make a study of literature in the field of health education in order to discover suggestions for the improvement of health instruction. The object was also to acquire in the study the necessary information for the improvement of health education in the Oates Prairie Junior High School. The research literature was a good source of information for showing the primary need of improvement in health instruction.

In addition to the literature that revealed the need of improvement in health education instruction for a school such as the Oates Prairie Junior High School, there was also the aim to show from the leading authorities in the field of health education techniques suggested for the improvement of health instruction in the school.

From the literature studied, it appears to the writer that the home room is the beginning of the school's effort toward group classification for health testing. In many reports of experiences in other schools, health activities were planned in the home room and were coordinated with other activities of the school program. The health record chart is usually made from all the information the parent and child can supply the school on the child's health history. The health history seemed necessary before the proper grouping could be accomplished.

Other techniques employed in health instruction were the teaching of good health habits in relation to the proper care of the body, the prevention of the most common diseases, better nutrition, safety practices, and a well planned physical education program.

II. PRINCIPAL FINDINGS

Important findings revealed by the study are briefly stated as follows:

- (1) Good physical condition in children has a definite relation to high scholastic rating, and good attendance records.
- (2) Health studies made over a period of several years are more valid than those made in a short period of time.
- (3) Research study is a profitable source of health literature.
- (4) The studies reveal that there is a definite need for improvement in health education instruction.
- (5) Children learn more of permanent value by doing, than by seeing or hearing.
- (6) Good health instruction provides thorough integration of health teaching with all other subjects of the school program
- (7) Health education should be a part of the school program.
- (8) All teachers should have a part in the daily health program of the school.

III. PERSPECTIVE FOR THE FUTURE

Only a part of the writer's goal was reached in this study, and it is his sincere hope that the investigation will continue toward finding other suggestions for the improvement of instruction in the Oates Prairie Junior High School.

The first prerequisite for improving health instruction in the Oates Prairie Junior High School, it seems to the writer, is the employment of a full time health and physical education teacher for boys and girls. Lavatories, shower baths, and private student lockers are essential in the school. A complete health history record should be made of each pupil, and should follow the pupil when transfer is made to other schools.

Finally, the school should organize a faculty committee for the purpose of studying the health conditions of the school, and to make recommendations to the parent and teachers as to health needs in their school.

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