

AN INVESTIGATION OF THE STATUS OF PHYSICAL
EDUCATION AND INTERSCHOLASTIC SPORTS IN
GRADES FOUR THROUGH SIX IN THE
STATE OF OKLAHOMA

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1965

Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the degree of
DOCTOR OF EDUCATION
May, 1970

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PREFACE

The controversy of physical education versus interscholastic sports is one of long standing. Much has been done in regard to evaluating each of these areas separately but very little accomplished in comparison of the two programs in relation to their values and what they produce. The writer has proposed to investigate the status of physical education and interscholastic sports in grades four through six in the state of Oklahoma.

It was my desire that this study would cause many individuals in the state of Oklahoma to realize the condition of physical education and interscholastic sports programs in grades four, five, and six. It has been my sincere hope that the differences of the two programs would be clearly understood and carefully evaluated by interested individuals and especially school administrators.

I appreciated the acquaintances that were made while collecting the data. Since the study required approximately 4000 miles of travel for personal visitations, I was fortunate to have seen many different parts of Oklahoma as well as quite a variety of educational systems. This was an education in itself. I have gained more knowledge in relation to Oklahoma's schools and also have learned more about the state in general.

Appreciation is expressed to my advisory committee, Dr. Aix Harrison, Dr. Albin Warner, Dr. John Bayless, Dr. John Hampton,

and Dr. Richard Jungers for their guidance and understanding in the development of this study. I am especially indebted to the school administrators and teachers for their assistance and cooperation in revealing data from their schools and making the study possible.

I am very thankful for the patience and understanding shown by my children, Tami and Todd. Deep appreciation is expressed to Ramona, my wife, for her perseverance, her interest in the study, and her confidence in me. Acknowledgement is also due to my father-in-law, Charles Vanderwork, for his continual encouragement and his interest and assistance in many aspects during my academic program.

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CHAPTER I

THE NATURE OF THE PROBLEM

Introduction

One of the most controversial issues in the field of Health, Physical Education, and Recreation today is interscholastic sports in the elementary school as compared to the emphasis on physical education at the same level. It must be understood that many who advocate interscholastic sports may also advocate physical education, but it is the emphasis of one over the other that becomes very important in this study.

Educators, doctors, and parents all disagree as to when a child should begin playing interscholastic sports at a competitive level. Most of these people agree, however, that a well-rounded physical education program is needed in elementary school and on through high school. The problem is that many schools have competitive interscholastic programs beginning in the third or fourth grades but have very little, if any, physical education for their students. This type of situation produces the age-old argument of "a program for a few" versus "a program for all." The development of competitive sports activities outside the school has also caused many disagreements among professional groups and parents. These programs constitute mainly what is known as "Little League

Programs" which may involve competitive sports in basketball, baseball, and football.

Charles Bucher, a well-known and respected educator, made the following statement concerning the problem,

There should not be any interscholastic athletics at the elementary school level. In grades kindergarten to six physical activities should be geared to the developmental level of the child. Starting with grade four, it may be possible to initiate an intramural program on an informal basis. However, there should not be undue emphasis on developing skill in a few sports or requiring children to conform to adult standards of competition.¹

The American Academy of Pediatrics has set guidelines for elementary and junior high school students in regard to competitive sports. These were:

1. All children should have opportunities to develop skill in a variety of activities.
2. All such activities should take into account the age and developmental level of a child.
3. Athletic activities of elementary school children should be part of an over-all school program.
4. Athletic activities outside of the school program should be on an entirely voluntary basis without undue emphasis on any special program or sport, and without undue emphasis upon winning.
5. Competitive programs organized on school, neighborhood and community levels will meet the needs of children twelve years of age and under.
6. Body-contact sports, particularly tackle football and boxing, are considered to have no place in programs for children of this age.
7. Competition is an inherent characteristic of growing developing children. Properly guided it is beneficial and not harmful to their development.
8. Schools and communities as a whole must be made aware of the needs for personnel, facilities, equipment and supplies which will assure an adequate program for their children.
9. All competitive athletic programs should be

¹Charles A. Bucher, Administration of School and College Health and Physical Education Programs (8th ed. St. Louis, 1967), pp. 615-616.

organized with the cooperation of interested medical groups who will insure adequate medical care before and during such programs.

10. Muscle testing is not, per se, a valid estimate of physical fitness, or of good health.
11. Participation in group activities is expected of every child.
12. Leadership for young children should be such that highly organized, highly competitive programs would be avoided.²

There are arguments for and against interscholastic sports for young children. Many parents, coaches, sports writers, and even physical education teachers present the following arguments in favor of interscholastic sports:

1. Because children will play these games anyway in sand lots and streets, why not teach them how to play so fewer will get hurt.
2. Because these are national games, children should learn how to play them well early in life.
3. Better high school and college players will be developed if we can teach players early in life and, thus, the game will be more thrilling to play and watch.
4. The individual player who is beyond his age in growth and skill should not be held back by being forced to play baby or sissy games.
5. It is better to be skilled in one or two sports than just an average player in several.
6. We live in a highly competitive society and the sooner a child learns how to compete, the more successful he is apt to be as an adult.
7. The program gives children a chance to represent their school and to develop school spirit as well as good sportsmanship.
8. Such a program will help eradicate juvenile delinquency.
9. Our children are maturing earlier, are taller and heavier than their predecessors, and thus need more challenging activities.
10. Competition is good at any grade level, and highly organized athletic contests can stimulate some children as does an advanced academic class challenges the mentally superior child.³

²Ibid., p. 616.

³Maryhelen Vannier and Mildred Foster, Teaching Physical Education in Elementary Schools (Philadelphia, 1968), pp. 422-423.

Arguments against interscholastic sports as seen by physicians, physical educators (with a philosophy other than the pro interscholastic sports physical educator), parents, and coaches are:

1. Children may receive permanent bone and ligament deformities from playing these adult games while they are in a period of rapid growth and body change.
2. There is very little carry-over value in these games, for the modern world offers little opportunity to play these games throughout life.
3. The games are superimposed upon children by adults, often for their own selfish gains.
4. The games tend to reward professionalism by demanding ever increasing specialization and thrills.
5. Children should learn to do things set aside for children, to have something toward which to look forward when they become adults.
6. Such a program for a few already "good" diverts attention from all children, thus causing the already "poor" to become poorer.
7. Children should be exposed to many generalized activities, whereas specialized activities should be reserved for older children who have more emotional maturity.
8. Although children naturally protect themselves from fatigue and stress, in such sports they are often very pressured by their coaches, team, or others to push themselves beyond their physical and health limits.
9. Too often much emphasis is placed upon winning, advertising, gate receipts, and concessions rather than upon children.
10. We should devote our energies to broaden and strengthen all existing programs rather than entering into such controversial ones.⁴

In the past, the American Association for Health, Physical Education, and Recreation; the American Medical Association; and the American Society for State Directors of Health, Physical Education, and Recreation have all said, "No," to interscholastic sports competition below the senior high level, especially in grades four, five, and six.

⁴Ibid., p. 423.

Turning from the discussion of interscholastic sports in grades four through six, the writer will discuss some of the advantages offered through a physical education program. The specific goals of physical education are: physical fitness development; an increase in skill range and accuracy; knowledge development; a development of attitudes and appreciations; and the knowledge of how to better use one's leisure time. In regard to physical fitness, it has been pointed out that children need approximately four hours of big-muscle activity daily through play in order to develop physically and to be and stay healthy. Through activity, the rate and force of the heart beat is increased; breathing becomes deeper and more rapid; heat production and body waste are stepped up; appetite is improved; and accelerated energy build-up and breakdown result. Skill and accuracy result when the whole body is trained to coordinate properly. Maturation is involved in the learning of skills and should be weighed very carefully when teaching children various activities. The goal of knowledge development involves the increasing ability to make correct judgments, to do things well, and to know about other people as well as one's self. In the development of attitudes and appreciations, people tend to do things that they most like to do and that they do best. If children can be taught to like their physical education classes and to feel successful in playing various activities, these activities will then, more than likely, carry over into later life. Developing a better use of leisure time is very essential for children this age. Teachers must do a better job of teaching a variety of skills

that will be carry over skills for later life as this is certainly the answer to offering children something to do during leisure hours.⁵

A good physical education program should consist of the broad areas of: rhythmic activities, games of low organization, relays, movement exploration, camping, aquatics, lead-up games to various sports, and stunts and self-testing activities. Some specific values that are offered by well-organized physical education programs and are documented by scientific evidences are: (1) there is a strong correlation between vigorous health and educational progress and success; (2) play activities are directly related to good mental and emotional health; (3) the status of a child in school in relation to his peers is dependent to a great extent upon his motor skills and sportsmanship; (4) the problem of obesity begins early in life and is due as much to underactivity as to overeating; and (5) regular activity increases the density of bones of the body and produces organic changes that increase resistance to stress and strain and improve the function of organs and systems of the body.⁶

There have been various research studies by educators and men involved in medicine to support the above statements by Vannier and Foster. Hein and Ryan have found important evidence (derived from clinical observations and experimental studies) pointing to definite values for exercise. Their conclusions were:

⁵Ibid., pp. 8-13.

⁶Ibid., pp. 107, 127.

1. Regular exercise can play a significant role in the prevention of obesity and thereby indirectly influence the greater incidence of degenerative disease and shortened life span associated with this condition.
2. A high level of physical activity throughout life appears to be one of the factors that act to inhibit the vascular degeneration characteristics of coronary heart disease, the most common cause of death among cardiovascular disorders.
3. Regular exercise assists in preserving the physical characteristics of youth and delaying the onset of the stigmata of aging and probably exerts a favorable influence upon longevity.
4. Conditioning the body through regular exercise enables the individual to meet emergencies more effectively and so serves, in turn, to preserve health and to avoid disability and perhaps even death.⁷

Rarick has found through his studies that physical education activities are very beneficial to youngsters. Through his studies and the review of research by others, he suggested: (1) exercise affects muscle tissue by causing it to increase and fatty tissue to decrease; (2) exercise affects the diameter of bone tissue; (3) long bone growth is affected by exercise; and (4) the heart and kidneys (stress situation organs) have shown positive growth responses to exercise in animal experiments and, thus, could do the same for humans. Rarick further stated,

Each area of subject matter in the school curriculum plays its part to fulfill the main purpose of education, the fullest possible development of the total individual. The unique contribution of physical education to the education process is made through the medium of human movement, or large muscle activity. It is the only field of study offering physical exercise as a means to complete education.

Two interrelated generalizations emerge from the analysis of this unique contribution: (1) that

⁷Fred V. Hein and Allan J. Ryan, "The Contribution of Physical Activity to Physical Health," American Association of Health, Physical Education, and Recreation Research Quarterly, May, 1960, p. 279.

exercise has a direct bearing upon growth and development, and (2) that exercise is needed for the maintenance of physical fitness.

These generalizations are no longer mere assumptions. Supporting evidence is found in the research biology, anthropology, genetics, nutrition, physiology, medicine, kinesiology, and biochemistry. These fields constitute the biological backgrounds of physical education.⁸

Kraus and Raab have discussed the mental and emotional aspect of physical education in their writings. They stated,

Various observations indicate a close relationship between mental and physical health. Parents and teachers as well as psychiatrists have seen children's moods change almost miraculously if they have sufficient opportunity for active play.

Important transformations of the feeling can occur after exercise -- states of tension and fatigue tend to lessen; anxiety and depression are often diminished; violent emotions such as hatred and anger are reduced.

This alleviation, sometimes very great, is not the only change after exercise. The conduct, too, may improve and become more sensible and purposeful. In many instances, the powers of concentration increase and various bodily activities, such as sleep and digestion, are restored. Where these changes occur, the person, be it child or adult, has a much better chance to achieve emotional equilibrium.⁹

Wolffe revealed evidence that regular organized exercise is very beneficial to the human body. In studying athletes who had taken part in regular exercise, he found: (1) a marked improvement in cardiovascular efficiency; (2) a slower pulse rate; (3) lowering of systolic blood pressure; (4) prolonged

⁸G. Lawrence Rarick, "Exercise and Growth," Background Reading in Physical Education, ed. Edmond C. Hallberg and Ann Paterson (New York, 1965), pp. 323-337.

⁹Hans Kraus and Wilhelm Raab, Hypokinetic Disease (Springfield, Ill., 1961), p. 148.

diastole with resulting better utilization of oxygen; and (5) a shortened recovery period after exercise.¹⁰

There are definite advantages to both interscholastic and physical education programs. Disadvantages are quite numerous in regard to interscholastic sports programs in grades four through six but the writer found no stated disadvantages to organized physical education programs. It would appear that the only disadvantages of having physical education activities for children in grades four through six would be if poor teaching were involved. In this instance, the writer would suggest that possible physical and emotional harm could occur and the child would have been better to have not engaged in the program. However, the emotional injury is very apt to occur in an English, history or math class as well. There are poor physical education teachers just as there are poor English, history, and math teachers. A well-organized physical education program consisting of qualified leadership is usually free of any criticism. Interscholastic sports programs are less criticized when under the direction of qualified leadership, but the fact remains, many educators and physicians still feel it is risky for children at this age level. The writer will relate specific examples of these criticisms in chapter two.

Little League programs (mainly baseball, football, and basketball) for children in grades four through six have become very popular within the last two decades. The writer was quite

¹⁰Joseph B. Wolffe, "Prevention of Disease Through Exercise and Health Education," Background Reading in Physical Education, ed. Hallberg and Patterson (New York, 1965), p. 78.

concerned about these programas as they were closely related to interscholastic sports programs that have been criticized by many in the schools. Many of these Little League programs were connected with the school and many felt this was the answer to several of the problems, however, there have been various criticisms brought against school sponsored Little League programs. Schools will often provide the coaches and administrators of the program but many times these coaches are so set on winning (carry over of winning emphasis in the schools) that they are more harmful to the children than individuals that coach who are not associated with the school.

There have been newspaper articles written recently concerning how some individuals feel about the present Little League programs. Bud Tucker, of the San Gabriel Valley Tribune (a California newspaper), wrote an article following an interview with Joe Gordon, a former star second baseman with the New York Yankees. Gordon made the following remarks to Tucker,

The trouble with Little League baseball is that there are too many little people connected with it [Joe was not talking about the kids]. The adults who run the program make it bad for the kids. To begin with, they place too much emphasis on winning. The first thing a youngster should learn about baseball is to love it. Certainly, a winning attitude is desirable but that can come later. A boy of nine is too young to be brainwashed. At that age, he should be having fun and enjoying himself. He can't do this when his manager has him scared to death of losing.

Gordon concluded his statement in regard to the Little League program by saying,

I think it should be completely overhauled. As it is right now, it does more harm than good.¹¹

Another newspaper article concerning Little League programs appeared in The Enid Morning News. The article was edited by Ben Boren but actually written by Gary Warner who said,

This sign is found at all ballparks: GIVE A BOY A BAT AND A BALL AND A PLACE TO PLAY AND YOU WON'T FIND A JUVENILE DELINQUENT. They should amend it to read: GIVE A BOY A BAT AND A BALL AND A PLACE TO PLAY -- AND KEEP THE ADULTS AWAY -- AND YOU WON'T HAVE A JUVENILE DELINQUENT.

Put a ball and a bat on the corner sandlot today and they probably would lie unused. Someone failed to tell the adults that kids ought to stay kids for awhile -- and junior doesn't understand what being little is all about. Whatever happened to workup? Whatever happened to 28-27? Whatever happened to pants with holes in the knees and hats over the eyes and gloves with no pockets and baseballs that whine and trail a stringy tail?

If it isn't Little League in your town then the YMCA has a league or at least the Cub Scouts or even the church. And now baseball's blessing is being passed on to football and basketball. Might as well get the hoop off the garage. Junior won't be able to stand the sight of it in a few years.

Ten boys start playing together in Little League. They drill, they have training rules, they learn about squad cuts (what does it do to an eleven-year-old when he's informed that his contract has been sent to a minor league club? A minor leaguer at 11! Put that in your psyche at that age), they miss vacations, they put up with a frustrated athlete for a father and another for a coach, they have their own uniforms and a \$15 glove and a World Series. By the time they reach senior high a significant number are bored by organized sports. They're looking for other action. Of the 10 neighborhood buddies who started in Little League, maybe two or three have an interest in high school sports.

Kids are forced to grow up too fast. If junior hasn't the makings of a Carl Yastrzemski at age 12, Dad just shakes his head and apologizes, "Well, he's still a nice boy," you know, as if he might grow up to be a scientist or something. In suburbia, my team has nicer uniforms than yours and our stadium is nicer

¹¹Bud Tucker, "Little League Does More Harm Than Good," San Gabriel Valley Tribune, San Gabriel, California, March 22, 1966.

and we have lights. Junior has become a community pawn. Burned out kids with no incentive or desire and laced with the psychological scars -- that's the debris in the trail of over-organization. We'd like to add a passage of Scripture. Proverbs 22:6 says, "Train up a child in the way he should go" and we'd add, "and walk that way yourself."

Warner summed up his feelings by saying,

Perhaps the structured "little this or that" in your area is beyond the point of recall. In that case, try to keep it in the proper perspective. Remember that the kids are kids and not professionals. Remember that the game is only that and nothing more important. Whether you're a coach or a parent or just a fan, keep it fun and don't apply pressure.

And if you still have the chance in your community, let's give the corner lot and the ball and bat back to the kids. Let's give them the privilege of being young and innocent for a few years. Let's allow them some fun before we dump the world into their laps. They might just do the same for our grandchildren.¹²

Many good things happen to some boys during the course of a Little League season but harmful incidents happen to these little lads also. The following incidents occurred during one Little League season in the Chicago area -- and are considered quite typical of vocal detractors of children's baseball.

A father noisily encourages his twelve-year-old who stands at the plate facing an eleven-year-old pitcher on the mound: "You gonna let that little ___ strike you out!"

A boy stands on first base, crying as the rest of his team leaves the field. He had dropped a thrown ball, and his error lost the game. "I can't go home! My daddy will be mad."

Two neighbors stop speaking to each other after one of them (a volunteer umpire) had called the other's boy out on strikes. (It was a questionable decision, but the reaction was ridiculous.)

¹²Ben Boren, ed., "Little This and That," by Gary Warner, The Enid Morning News, April 20, 1969.

A mother shoves her Little Leaguer into her car after the game. "You embarrassed me in front of all my friends!"¹³

The illustrations above point to many of the problems that Little League and interscholastic sports in schools are facing. Many of these problems do not exist for boys at the junior high to high school age, but for children of ages eight through twelve, they are a reality.

This study became involved with all three areas discussed above. Physical education, interscholastic sports, and Little League competition were all important in what the writer investigated at the grade levels of four through six.

Laws Governing Elementary Physical Education and Interscholastic Sports Programs in Oklahoma

The State Department of Public Instruction assumes control of physical education in elementary school curriculums throughout the state of Oklahoma. Section 156 under Article XI in the 1965 School Laws of Oklahoma states,

Courses of study formulated, prescribed, adopted or approved by the State Board of Education for the instruction of pupils in the public schools of the State shall include such courses as are necessary to insure:

The teaching of health, physical fitness, and safety through the study of proper diet, the effects of alcoholic beverages, narcotics and other substances on the human system and through the study of such other subjects as will promote healthful living and help to establish proper health habits in the lives of school children.¹⁴

¹³Jim Brosnan, "Little Leaguers Have Big Problems -- Their Parents," Atlantic Monthly, March, 1963, pp. 117-118.

¹⁴Oliver Hodge, School Laws of Oklahoma, State Department of Public Instruction, (Oklahoma City, 1965), p. 82.

The Oklahoma Secondary School Activities Association works with the State Department of Education in Oklahoma to control interscholastic sports activities at all grade levels. In regard to elementary interscholastic sports (grades four through six), section 12 of the administrator's handbook states,

A limited competitive athletic program for elementary school is encouraged. An elementary school student shall not participate in more than fourteen interscholastic games in more than one sport and not more than three tournaments in any sport each year.¹⁵

Statement of the Problem

A large number of school systems have been very negligent as to the type of activity program offered their elementary students. Many administrators, boards of education, and parents in reality have not realized the problem that exists of having "activity for all" or "activity for a few." Very seldom has either program been questioned due to ignorance or indifferent attitudes on the part of the parents. Most people have not really understood what constitutes a good physical education or interscholastic program.

It was the purpose of the writer to investigate the status of elementary schools in Oklahoma in regard to interscholastic sports and organized physical education programs in grades four through six. Although the writer was prejudiced somewhat toward strong physical education programs, he felt that unbiased comparison of the two programs could and should be carried out.

¹⁵D. D. Creech, Annual Bulletin for Elementary and Secondary Schools (Administrator's Handbook), State of Oklahoma Department of Education, (Oklahoma City, July, 1968), p. 33.

The writer was unable to find a similar study that had been attempted in Oklahoma. Dean Karns, Assistant Director of Health, Physical Education, and Recreation in the State of Oklahoma, was administering, at the same time this study was underway, an evaluation of physical education programs in grades one through twelve in Oklahoma. His study was not making comparisons with other types of programs such as interscholastic sports. Other studies have attempted to determine attitudes, personality development, and sportsmanship tendencies of children in grades four through six but the writer found no studies that had compared interscholastic sports and physical education programs at this level.

Sub-problems in the Study

Sub-problems investigated within the study were:

(1) Evaluation of the validity of a questionnaire sent to all elementary school administrators in Oklahoma in the Fall of 1968.

(2) Determination of specific values that each school claimed their program offered the students.

(3) Comparison of the difference in the number of skills offered by schools with physical education programs, interscholastic sports programs, and those with both types of programs in their system.

(4) Comparison of the interscholastic won and lost records of the local junior and senior high schools in correlation with the type of program they offered.

(5) Comparison of the number of children in grades four through six that participated in each type of program.

(6) Comparison of the number and types of injuries that occurred in each type of program.

(7) Comparison of the facilities allocated for each type of program.

(8) Evaluation of the role Little League programs played in local communities.

Scope of the Study

The population from which the samples were taken for this study included all the elementary school districts in the state of Oklahoma. There were 690 of these districts in the state. Questionnaires were sent to each school district in the Fall of 1968, so that each school could be classified in regard to the type of program that they offered. There were 472 questionnaires returned to the writer from the 690 school districts.

Because there were more elementary schools in the state of Oklahoma with less than 250 pupils, obviously, more small schools were visited. Therefore, a stratified random sample was used in selection of the schools to be visited. The writer visited six elementary school districts with over 1000 students enrolled, four elementary school districts with 500 to 1000 students enrolled, ten elementary school districts with 250 to 500 students enrolled, and thirty elementary school districts with less than 250 students.

Definition of Terms

There is often considerable confusion as to the meaning of physical education and interscholastic sports programs in the public school today. The terms are often used synonymously and this has resulted in a definite injustice to both programs. For example, many school administrators have believed that because they offer varsity sports for their elementary students, they have a well-rounded physical education program, when in reality, they were serving the needs of only a few. In addition to school administrators, many parents really believe that the two programs are the same and, therefore, remain complacent.

For the purpose of this investigation, the writer felt the following definitions were appropriate:

(1) Physical Education --- directed, purposeful activity provided for all youngsters through a specifically assigned instructional period during the course of an academic day. This excluded the practicing of varsity sports during this period.

(2) Interscholastic Sports --- competitive sports activities held between schools outside of an academic day.

(3) Little League Sports --- competitive sports for youngsters after school hours and during the summer. These activities are generally sponsored by civic groups or other interested laymen or organizations (occasionally by the school) within the community.

Limitations of the Study

In a study of this nature, it was sometimes difficult to obtain opinions and feelings that were completely reliable. One must realize that personal opinions play an important rôle in determining solutions to many of the problems. Certain of the sub-problems must be studied on the basis of personal feelings of those being interviewed. Thus, the study was limited to a degree in regard to the complete acceptance of its conclusions as is the case of many philosophical studies of this nature due to very strong feelings that many people have toward the subject.

Also, there was the possibility that various civic group programs could be an external factor involved within this study. It was very difficult to know just how much they detract or add to the specific values within physical education and interscholastic sports programs.

One other limitation was the fact that only 279 of the original 690 questionnaires could be used for sampling purposes (472 were returned) for reasons such as: 51 schools stated that they had no type of program, 34 schools requested that the writer not visit them (possibly because of a very limited program), various other school systems failed to fill out the entire questionnaire, and some had only sixth grade programs. Consequently, the loss of so many of the original 472 schools restricted some of the generalizations which the writer had hoped to make.

Summary

There has been much controversy in regard to the place of physical education, interscholastic sports, and Little League programs for children between the ages of eight years to twelve years of age. Competition has been a very necessary element in the lives of young children, as well as older adolescents, but how this competition has been carried out and for what purposes were the controversial issues.

This study was undertaken to determine the status of physical education and interscholastic sports programs in grades four through six in Oklahoma's schools. The writer also carried out a sub-study of Little League competition for the same age group in relation to the community in which the schools were located.

CHAPTER II

REVIEW OF RELATED LITERATURE

There have been many articles written concerning interscholastic sports and physical education in grades four through six. Many of these articles were merely the philosophies of various authors and some relate to specific research completed in regard to sports activities. The writer has found no research comparing interscholastic and physical education programs. There were a few studies relating to attitudes and sportsmanship of young children in regard to various sports activities.

The writer has divided the survey of related literature into selections referring to physical education, interscholastic sports, and Little League programs. The survey of each group includes actual research findings and personal philosophies that have been expressed by educators, doctors, and other interested individuals and organizations.

Physical Education

A report of the President's Conference on Fitness of American Youth in June of 1956, revealed many interesting facts concerning our physical education programs in America. The Conference recognized the following points:

1. A fitness program is one which encompasses the total person -- spiritual, mental, emotional, social,

cultural, as well as the physical. Therefore, any stress on the physical element of youth development must be done in recognition of the interweaving of all personality factors.

2. Programs of fitness begin at birth and must be adapted to each stage of development of the child and youth.
3. Fitness programs influence habit formation and hence have a direct effect on the attitudes and aptitudes of young people toward fitness.
4. Many and varied programs concerned with fitness of youth now exist at National, State, and community levels, receiving the sponsorship, and support of public and private groups and accomplishing much for our American boys and girls.
5. Present programs of fitness for American youth are not reaching all youth. More cooperation and voluntary coordination are needed at all levels.
6. Too frequently, physical fitness programs in educational institutions are relegated to secondary positions in the curriculums or are nonexistent.
7. Stronger programs of physical education and recreation are needed in the school and outside (home, family, public, and voluntary agencies).
8. Programs to achieve and maintain fitness of youth are a continuing national responsibility -- in times of peace as well as in periods of national emergency.¹

From this Conference came a recommendation that every American boy and girl should have a balanced program of physical and health education and recreation.

In 1958, the President's Council on Youth Fitness suggested the following areas of action to be taken by communities, organizations, and individuals:

1. A prerequisite to obtaining local community action is the belief on the part of parents, teachers -- all members of the community -- that physical activity is a vital part of a person's pattern of life.
2. Youth is naturally physically active and will respond if provided opportunities to plan and participate in physical activities. Increased emphasis

¹President's Conference on Fitness of American Youth, "Highlights of Conference Findings and Recommendations," Journal of Health, Physical Education, and Recreation, March, 1957, pp. 33-34.

- should be placed, therefore, on wholesome and regular physical activity for boys and girls which should be presented in a manner appealing to them.
3. To encourage participation by the maximum number of youth in keeping with their individual capacities. The wholesome value of sports and other physical activity should be stressed by increasing, where needed, the number of variety of existing sports activities, particularly those that will carry over to later life.
 4. Since health attitudes, health habits, and fundamental skills for physical activity are developed in the early years, health education, including nutrition, in addition to physical education, should be strongly emphasized.
 5. A greater use of existing public and private facilities, and the provision of additional ones where necessary, must be encouraged. Such facilities include schools, youth and recreation centers, parks, designated streets, suitable water areas, and other appropriate spaces.
 6. Adult leaders, professional and lay, who understand and work well with young people, are essential in youth fitness programs. The active support of parents, and the entire community, must be obtained to assure such high quality leadership in sufficient number.²

Hall commented concerning physical education,

Many people think of physical education as being associated with the junior and senior high schools. If this observation be partially true, it suggests a weakness which is of great concern. Really, it is the early years of the child's life which are the most crucial. These are the important developmental and skill-learning years when children are possessed of the abundant energy, curiosity, and drives which propel them on and on to new experiences and the practice or repetition required for mastery of themselves. Many people are beginning to recognize and understand that one of the greatest untapped sources of education for total development of the elementary school child is physical education.³

²"The President's Council on Youth Fitness in Action," Journal of Health, Physical Education, and Recreation, April, 1958, p. 8.

³Vaughn L. Hall, "Physical Education -- Why Children Need It," The National Elementary Principal, April, 1960, p. 9.

Hunter suggested the following reasons why physical education is important in elementary schools: (1) children must be kept moving to maintain good conditions; (2) good posture habits are formed through proper development and use of various muscle groups; (3) the emotional development of the child is aided by well-supervised activities; (4) healthful socialization is developed through physical education programs; and (5) a wide range of activities is learned through the efforts of a well-rounded program. She also pointed out that obesity begins with the very young. Studies have shown that most obese children do not differ in food intake from the normal child, but that they are extremely inactive as compared to normal children.⁴

A study by Whittle revealed that good physical education programs have their advantages. Studying two groups of 81 twelve year old boys who were similar in chronological age, skeletal age, weight, and height, he found that boys in good physical education programs surpassed the boys in the poor programs in the Rogers Physical Fitness Index, Metheny-Johnson Test of Motor Educability, the Indiana Motor Fitness Test, and the Vertical Jump. Boys in each group who were involved extensively in a lot of out-of-class physical activity showed much superiority over those who participated very little in activities outside of class.⁵

⁴Adelaide M. Hunter, "A Chance to Grow," The Texas Outlook, September, 1960, pp. 26-27.

⁵H. D. Whittle, "Effects of Elementary School Physical Education Upon Aspects of Physical, Motor, and Personality Development," American Association of Health, Physical Education, and Recreation Research Quarterly, May, 1961, pp. 249-260.

Many people felt that if a child was getting one or two recesses during each school day with some physical education, he was receiving an adequate amount of activity. Frank disagreed with this philosophy as he commented,

It is assumed that a brief recess and a period of physical training or organized exercise will be sufficient to satisfy this hunger, especially since children will have an opportunity for play after school. A careful assessment of recess and gym periods may show that many children are building up tensions not adequately discharged by these intervals or after-school play. Recess and gym periods are far from sufficient for large numbers of urban-dwelling children. The fore-going has given rise to serious questioning of the present conception of programs for physical fitness as not meeting the needs of the young child. Spontaneous play seems to be highly desirable -- if not essential -- to wholesome development and for relieving the stress and tensions of urban living and the increasing demands for intellectual achievement.⁶

Children need an extensive amount of physical education and free play-time. Programs need to be planned that will satisfy as much of these needs as possible during the school day and then, hopefully, the youngsters will have a place to go after school hours to create their own fun.

Wilkinson (former director of the President's Council on Youth Fitness) has set some basic goals for good school physical education programs. These goals were as follows:

1. Physical education should be a five-day-a-week proposition from kindergarten through the 12th grade.
2. Every child who is physically able should have at least a session of vigorous physical activity every day. Although not necessarily recommended, this could consist of exercise and running-in-place in a classroom. Standing in right field, while ostensibly playing softball, does not do the job.

⁶Lawrence K. Frank, "The Role of Play in Child Development," Childhood Education, October, 1964, p. 72.

3. Every child must have a thorough physical examination -- not just height, weight, hearing and sight, but a thorough organic examination and a dental examination in school.
4. Physical education includes health education. We must teach about -- and insist on -- adequate rest, proper diet and habits of cleanliness.
5. Physical education programs must be aimed primarily at the 50 percent of the student body that has the least physical prowess. If you lack enough money to run both physical education and athletic programs, and must make a choice, drop the athletics. The children who take part in them have so much energy, they will get the exercise anyway.
6. The purpose of physical education is not to produce varsity athletes or Olympic champions. The purpose is to give each child a sound physique, a healthy cardio-vascular system and a proper skeletal structure.
7. The object of physical education programs -- beyond building a good healthy body -- should be to teach individuals "carry-over" skills -- skills that a person can use throughout his lifetime. Examples are tennis, swimming, golf, bowling, and bicycling.⁷

The American Medical Association's Committee on Exercise and Physical Fitness suggested that regular vigorous exercise was beneficial to everyone except for a few who were physically unable to participate. The Committee pointed out that continuing research and sports participation contribute significantly to good health by controlling obesity, rehabilitating the ill or injured and shortening recuperative periods. The Committee made this statement,

In some situations, varsity sports programs are given priority in attention and resources over intramural and physical education programs. This is undesirable and should not be the case. Each is an important

⁷Charles "Bud" Wilkinson, "How a Top Coach Would Run Your Phys Ed Program," School Management, August, 1965, p. 36.

part of the program and should share equitably in facilities and teaching personnel.⁸

Morgan felt that some important psychological considerations should be given to physical education. Surveys have indicated that approximately 50 percent of all medical patients suffer from illnesses that were primarily emotional in nature. Since physical education has often been suggested as a means of controlling tensions, maybe more research in this area is needed. Morgan further cited the fact that many theorists expected motor dysfunction in the emotionally unstable patient, and that motor activities used for therapy would possibly be beneficial. For example, it has been demonstrated that such activities as swimming, dancing, and weight-lifting were all capable of producing improved psychiatric states.⁹

Williams suggested that physical education activities have now assumed an increasingly important role in programs designed to improve the cognitive or intellectual development of the retarded or slow learner. She mentioned that correlational studies have suggested that there may be a rather low but positive relationship between motor efficiency and general academic achievement. Also, in studies where IQ and activity levels of younger children have been correlated, results have revealed that IQ

⁸American Medical Association's Committee on Exercise and Physical Fitness, "Need for Varied Activities in Physical Education Programs," Journal of Health, Physical Education, and Recreation, June, 1965, pp. 6-8.

⁹William P. Morgan, "Psychological Considerations," Journal of Health, Physical Education, and Recreation, November-December, 1968, p. 26.

and other measures of intelligence are not related to the general activity level of the youngster. Williams further stated,

Recent research indicates that the mentally retarded individual may derive a number of important benefits from planned programs of physical activity. For example, mentally retarded individuals show significant improvements in physical abilities when given specialized training or instruction in systematized programs of physical education.¹⁰

Physical education has been considered an ideal program for the development of social skills for children. Kenyon has pointed out that research suggested that physical prowess for males tended to be associated with popularity and social prestige. He made the statement,

If planned for and deliberate attempts are made there is no reason to doubt the proposition that instructional programs in physical education could contribute to socializing children into a variety of specific roles, such as the player, the substitute, the referee, the team captain, or perhaps the intelligent spectator.¹¹

It appeared that it was very difficult to measure the degree of how much socialization that was developed due to physical education programs. Some felt that engaging in physical activities contributed to the development of specific roles in our society but to say that a complete socialization took place because of physical education was possibly being too extreme.

Physical education certainly has its place in the public schools of today. It has been a recommendation by committees

¹⁰Harriet G. Williams "Learning," Journal of Health, Physical Education, and Recreation, November-December, 1968, pp. 28-29.

¹¹Gerald S. Kenyon, "Sociological Considerations," Journal of Health, Physical Education, and Recreation, November-December, 1968, pp. 32-33.

of national prominence that schools provide physical education for all their students. In 1951, a report of the National Conference on Physical Education for Children of Elementary School Age, expressed these thoughts,

Most persons who work with children now believe that all subjects taught in the elementary school must be brought to the child in a way that will permit him to grow broadly-- mentally, physically, socially, spiritually, and emotionally. Physical education helps children to develop in all of these ways and not be considered a special subject or something apart from other more traditional fields. Physical education activities must be woven into the daily program in the same way as are experiences in other fields. This necessitates devoting definite time to the teaching of physical education, just as time is provided by good teachers for reading or arithmetic.¹²

Interscholastic Sports

The question of interscholastic sports competition in grades four through six was where the controversial issues became apparent. The disagreements involved such problems as what type of sports to allow at this age level, types of training sessions, length of training sessions and who should do the coaching of these teams. In most cases, medical doctors and physical education personnel have few disagreements on these problems. The most serious disagreements usually seemed to exist between the lay people of the community and the physical educators and doctors.

In 1933, many of the same problems existed. Hussey pointed out the differences in the organic development of the child in

¹²Athletic Institute, Report of the National Conference on Physical Education for Children of Elementary School Age, "Physical Education for Children," Physical Education for Children of Elementary School Age (Washington, January, 1951), p. 32.

elementary school. His heart differs as to shape, size, position, and endurance while he is growing and gradually approaches the adult condition at the age level of 18 years. She felt the important point was the level of endurance of the young child. The small heart can only do so much work and the energy reserve is quite small, thus fatigue sets in very rapidly. Hussey stated,

It is true that because of publicity and general conversation there is an induced interest in kicking a football around or "fooling with a basketball." Still, the child's play with these balls is simple and elemental. The tendency of childhood in the natural play groups is to stop an activity before unduly fatigued or to change to another activity less vigorous. When a highly technical activity is organized by adults the very organization tends to stimulate the child emotionally so that he exerts himself beyond his strength. Thus an organized program of basketball, field hockey, and football tends to spur the child to excessive effort.

We deplore the age that dressed the child like a miniature adult and taught him the intellectual activities of the adult, assuming that his interests and thinking processes were the same, only on a smaller scale. And yet, have we not tended to a similar procedure in organizing elementary school children in athletic activities adapted to an older period of life?¹³

In relation to what Hussey said, various other investigators (Beneke, Lesgaft, and Schmidt) have emphasized the factor that there is a discrepancy between the development of the heart and the large arteries of a child. These same investigators also felt that at the age of seven, the child reaches a critical period in his physical life as his vigor begins to diminish due to this discrepancy. Karpovich disagreed with some of the conclusions of the above investigator's reports. For example, Beneke compared the volume of the heart with the circumference of the vessels.

¹³Marguerite M. Hussey, "Adaptation of Athletic Activity," Journal of Health, Physical Education, and Recreation, February, 1933, pp. 31, 60-61.

Karpovich agreed with his observations but not with his comparisons in relation to the idea that arteries develop more slowly than the heart. Karpovich stated,

If, for instance, the circumference of an artery increases twice, the volume of the blood going through it will increase not twice but four times, or in proportion to the square of the radius or diameter; in other words, in proportion to the area of cross section and not to the circumference Thus physiological considerations regarding restriction of physical activities of children, especially at the age of seven, have been proved to be unfounded. Yet even now, 30 years later, there are still books that perpetuate the old fallacy. It is fortunate that children do not read these books, and just keep on playing.¹⁴

Rice, in 1937, encouraged educators and parents to give children in grade school a wide variety of activities so that they would have various physical skills which would last a lifetime. He emphasized the importance of keeping the box-office and the high pressure competitive programs out of their lives at this young age.¹⁵

Kubie suggested the possibility of organizing athletics into two functions: one would be for those students who were especially gifted, and the other would be for students who were unskillful in using their body effectively. It has certainly been true that children do mature at various ages and their needs and interests vary enormously. Kubie warned of competitive sports

¹⁴Peter V. Karpovich, Physiology of Muscular Activity (Philadelphia, 1966), pp. 160-162.

¹⁵Thurman B. Rice, "Sane Views of Sports and Their Uses in Elementary Schools," National Elementary Principal, April, 1937, p. 149.

for children who were not physically ready or emotionally mature to play.¹⁶

In 1938, a questionnaire was sent to school superintendents and administrative directors in the larger cities in all states. One hundred sixty-nine replies were returned and the information was then used to formulate recommendations to be used at the City Administrative Directors group at the Atlantic Convention in April, 1938. These recommendations were accepted by the group and the study was to continue to gather more data. A second questionnaire was mailed to superintendents of schools and administrative directors to make specific comments. Eighty-nine questionnaires were returned to this second group. On the question concerning interscholastic sports below the tenth grade, the following conclusions were found:

1. A few schools begin in the fourth grade; some schools begin in the sixth grade; and some schools begin in the tenth grade.
2. The trend is toward organizing intramural programs for all students below the tenth grade and not beginning interschool competition until the tenth grade.
3. It is recommended that there should be no interschool athletic competition below the tenth grade.
4. There are honest differences of opinions among administrators regarding this question of competition. Some feel that competition in the sixth grade may be desirable and beneficial. Others feel that an intramural program for students below the tenth grade would permit the department to place more emphasis on the students who are in greatest need of this type of program.¹⁷

¹⁶Lawrence S. Kubie, "Athletics and Aggression," Child Study, May, 1938, pp. 236-238, 254.

¹⁷Committee on Interscholastic Athletic Standards for Boys, Report of the Committee, "Interscholastic Athletic Standards for Boys," Journal of Health, Physical Education, and Recreation, September, 1939, pp. 371-374.

The Society of State Directors for Health and Physical Education, in 1946, passed the following resolution,

Inasmuch as pupils below the tenth grade are in the midst of the period of most rapid growth, with the consequent bodily weakness and maladjustments, partial ossification of the bones, mental and emotional stresses, physiological readjustments, and the like, be it, therefore, resolved that the leaders in the field of physical education should do all in their power to discourage interscholastic sports competition at this age level because of its strenuous nature.

Be it further resolved that where school systems continue to foster a program of interscholastic sports competition for pupils below the tenth grade, that they be urged to limit it to pupils who are physiologically mature as measured by roentgen pictures of the degree of carpal bone ossification, advanced chronological age plus beard growth, or some other indication of physiological maturity.¹⁸

In regard to the resolution stated above, it was felt that an opinion of the leading orthopedic surgeons throughout the country would be of great value as a guide to coaches and physical educators. Thus, in 1946, a questionnaire was sent to 900 orthopedists requesting their opinions concerning the resolution of the State Directors regarding the limitation of competitive sports. On the question of whether or not children below the tenth grade should play interscholastic sports, of the 346 doctors committing themselves, 77.1 percent were in agreement that they should not be encouraged to play competitive sports at this age. Fourteen percent (57) gave no response to the question. There were 12.4 percent of the doctors disagreeing, thus, saying it was appropriate for children of this age to engage in competitive sports. Some of the comments from both sides were:

¹⁸C. L. Lowman, "The Vulnerable Age," Journal of Health, Physical Education, and Recreation, November, 1947, p. 635.

I have seen too many boys and some girls seriously disabled (two killed by broken necks with cord crushing due to football) by unnecessary athletics.

I have personally treated more than 12,000 fractures and many of these cases come from the teen-age group. I believe it is a tragic situation when any school permits the students to participate in football in the tenth grade or below.

It is my opinion that competitive sports among children in school has a very definite place and is to be encouraged. I cannot help but feel that the difficulties of the system are due to professionalism of the sport which is, of course, most strongly represented by football.

My own boys played football all through prep school and while it is true they both had semilunar cartilage injuries which require excision, they both made complete recovery and are as well today as before. I think they gained certain knowledge and discipline from participating in organized sports which has been good for them.¹⁹

In 1949, the president of the American Association of Health, Physical Education, and Recreation, Ruth Evans, appointed a committee to study the practices and trends of interscholastic competition at the elementary level. A questionnaire was sent to various educators in specific districts throughout the country, and schools in 47 of the 48 states responded. Some of the findings were: (1) ninety-six percent (of 113 schools) claimed to have a planned program of physical education with a time allotment averaging approximately 30 minutes (range was from 15 to 60 minutes); (2) more than half the schools (59 percent) reported the classroom teacher to be the one in charge of the program; (3) fifty-seven percent had no intramural program and 26 percent claimed to have one. The remainder said they had a limited program; (4) forty-one percent said they had interscholastic sports

¹⁹Ibid., pp. 635-636, 693.

programs with the most frequently mentioned sports being (for boys) basketball, softball, track, baseball, and volleyball; (5) grades four through eight participated in these programs with the greatest number in the sixth grade; (6) teams were coached mostly by physical education teachers with classroom teachers being a close second; (7) reasons given for sponsoring interscholastic sports for elementary children ranged from the desire to create more competitive attitudes within the children for the high school coaches (most frequent reason) to competition aids in developing a child's growth; (8) of the 46 schools reporting interscholastic competition, only seven played out-of-town games; (9) forty-two percent felt the current trend was toward interscholastic competition in elementary schools and 33 percent felt the trend was moving away from competitive sports at this level (a moderate percent omitted the question); (10) reasons given for the trend toward an increase in sports were misguided public interest in athletics and influence from outside agencies. Reasons given for a decline in this elementary competition were because of recommendations by the American Medical Association, other agencies, and opinions based on local experience.²⁰

Dodson felt that interscholastic athletics should definitely be confined to senior high schools. He suggested that children of this age were in such a developmental change in size that there was only partial ossification of bones, with a healing

²⁰American Association of Health, Physical Education, and Recreation, Report of President's Committee, "Interschool Competition in the Elementary School," Journal of Health, Physical Education, and Recreation, September, 1949, pp. 371-374.

hazard after injury that must not be disregarded. Intramural programs were the answer to competitive play at this age and Dodson pointed out that school administrators must take the initiative to see that their schools have these programs.²¹

After three years of thoroughly studying the problem of interscholastic sports for elementary and junior high school age children, the Joint Committee on Athletic Competition for Children of Elementary and Junior High School Age, in 1952, recommended the following: (1) there should be a broad program of physical education for all children; (2) there should be an informal program of intramural activities for boys and girls in the upper elementary grades; (3) play days involving informal games between two or more schools are not to be encouraged; (4) children below the ninth grade should not be allowed to participate in interscholastic sports; (5) high pressure tactics such as leagues, championships, publicity, etc. are not to be allowed; (6) programs should be evaluated frequently by answering pertinent questions devised by the Committee; and (7) cooperative planning should be undertaken between school and community people.²²

In 1951, a committee was appointed by the National Recreation Association to consider organized competition in sports and athletics for boys under 12 years of age. Its primary purpose

²¹Taylor Dodson, "Elementary Interschool Athletics" School Activities, October, 1951, pp. 59-60.

²²Report of the Joint Committee on Athletic Competition for Children of Elementary and Junior High School Age, Desirable Athletic Competition for Children, American Association for Health, Physical Education, and Recreation (Washington, November, 1952), pp 3-6.

was to determine the general sports programs of recreation departments and the current thinking of administrators of these programs of competitive sports for boys of this age. On the basis of 304 questionnaires received, the following conclusions were:

(1) a large majority of recreation departments did approve of city-wide competition but only when adequate controls were administered; (2) a high percentage of these departments were opposed to state and national competition for this age child; (3) modification of playing areas was used by most departments; (4) the majority of the departments did not require special uniforms for the sports programs; (5) there were mixed feelings between those who did require uniforms and those who did not. The ones who required special attire said desirable results were obtained, while those who did not practice this method claimed uniforms caused undesirable effects upon the children and the extent of participation; (6) a high percentage of the departments were not a part of any national tournament or promotion scheme; (7) approximately 20 percent reported that the Little League program was a part of their community and about eight percent of the departments sponsored local Little Leagues; (8) of those replying to the questionnaire, 36 out of 304 approved national competition in baseball for boys below the age of 12; and (9) less than half of the departments reported that young boys' teams playing in the intra-city competition were sponsored by commercial groups. The Committee felt that more studies should be made

of the problem of competitive sports as many questions concerning the problem remained unanswered.²³

Anderson suggested that the real problem involving interscholastic sports for elementary school children was the simple fact that educators have failed to inform parents of the harm that exists in competitive sports. He pointed out,

Because there is doubt about the effects, however, we should proceed slowly in dealing with our children's future health and happiness. This does not mean elimination of all competition but rather adoption of a safe and sensible approach in our athletic programs for children.²⁴

Many coaches and parents believe that if a youngster would specialize in one sport at an early age that he would develop into a superior athlete in that sport. Knapp and Combs differ with this philosophy. They contended that superior high school basketball players would result from a good physical education program which did not include interscholastic basketball. Many potentially good players have been overlooked at an early age due to the level of their readiness and neglect by the coaches due to their size and ability at that particular time in their lives.²⁵

²³Standards Committee, "Competitive Athletics for Boys Under Twelve," Recreation, February, 1952, pp. 489-491.

²⁴G. F. Anderson, "What's the Score in Athletics in Elementary Education," National Education Association Journal, January, 1953, p. 17.

²⁵Clyde Knapp and Harry A. Combes, "Elementary Interscholastic Basketball --- Does this Produce Superior High-School Players," Journal of the American Association of Health, Physical Education, and Recreation, November, 1953, pp. 12-13.

Scott studied various attitudes of parents, teachers, and administrators toward athletic competition in grades four through six. She found the following results:

1. A majority of all three populations marking the scale tended to be favorable in attitude toward intensive competition at the elementary school level.
2. The wide range of scores indicated wide differences of opinion on this question. The difference is more apparent among teachers and administrators than among parents.
3. Statistically significant differences were found in the attitudes of parents, teachers, and administrators. The parents were most favorable toward intensive competition at the elementary school level and the administrators were the least favorable.
4. The men in the study indicated more favorable attitudes toward intensive competition than did the women.
5. Individuals in this study who have had experience with competition expressed greater favorability toward it than those with no experience.
6. There is some agreement between attitudes of administrators and parent-teacher groups in the same city.
7. No definite geographic differences in the distribution of attitudes were discovered in cities or in the states included in this study.
8. Attitudes of all respondents toward outcomes of intensive competition in the four areas of development showed greater favorability in the skill area and less favorability in the safety area. Administrators and teachers did not differ in their estimate of the outcomes in human relations and personality development, but parents considered outcomes in all areas much more favorably than did the other two populations.²⁶

More general conclusions from Scott's study above were:

- (1) it seems as though the majority of the parents, teachers, and administrators have accepted intensive athletic competition in grades four through six;
- (2) although acceptance was shown

²⁶Phebe M. Scott, "Attitudes Toward Athletic Competition in Elementary Schools," American Association of Health, Physical, Education, and Recreation Research Quarterly, October, 1953, pp. 352-357.

by the majority, a high degree of favorability was lacking, thus people could easily be caused to change their attitudes through a well-planned public relations program; and (3) unless a public relations program to educate people about the good and bad points of competitive sports at this age has been formulated, the trend of intensive sports would continue to increase.²⁷

In May, 1953, various principles concerning interscholastic sports were discussed at the National Conference on Program Planning in Games and Sports for Boys and Girls of Elementary School Age. The Conference consisted of representatives of 27 organizations, including physicians, physiologists, psychologists, educators, recreation leaders, and others. After several lengthy discussions, the following principals were agreed upon: (1) competition was important in the growth and development of a child but, depending on many factors, could be harmful or beneficial to the youngster; (2) programs of games and sports activities should be based on the developmental level of the child; (3) a variety of activities should be provided for all children; (4) neighborhood and community levels would suffice any competitive programs rather than competing on a state or national basis; and (5) educators and recreation personnel should provide the basis of leadership for community programs.²⁸

²⁷Ibid., p. 357.

²⁸George Maksim, "A Pediatrician's Views on Sports for Children," Education Digest, January, 1954, p. 43.

In regard to "pernicious practices" in competitive sports for boys between the ages of 8 and 12, Morris felt sound educational experience must contend the following:

1. Children must not be continually placed in situations where they are certain to fail.
2. Emphasis on artificial rewards must be avoided.
3. A child must not be obsessed with the importance of outdoing others.
4. Children must not become involved in commercial promotions nor proselytized and trained for future varsity competition, especially at elementary school age.
5. There must be no inequality of rewards for useful service.
6. Every child should be placed in a situation where he can attain a feeling of achievement.²⁹

Morris expressed his feelings very strongly by saying,

America is a land that caters to sudden whims and fads in an extraordinary manner. In recent years we have undergone the chain letter, mammoth give-away shows, Little Audry stories, goldfish eating, and flag-pole sitting. Today, the fad is glamorized midget athletics for boys between the ages of eight and twelve, often-time for even younger groups. Little league baseball has spread like wildfire through forty-four states; biddy basketball attracts youngsters for national championships; Pop Warner football finds youngsters playing in bowl games. A top television show stars tiny boxers.

Physiologists, psychologists, sociologist, and prominent medical men are divided in their opinions as to the harmful effects of midget athletics. Some disapprove of all kinds of competition for youngsters under twelve, while the majority are only vehement in their objection to high pressure athletics.³⁰

Many people have argued against interscholastic sports for young children on the basis of possible injury to the end portions of the bones. Krogman, director of Philadelphia Center for Research in Child Growth, made this statement,

²⁹Mortimer H. Morris, "Too Many Midget Athletics," New York State Education, April, 1954, p. 516.

³⁰Ibid., p. 514.

As a rule, there is a central portion or shaft (the diaphysis) and two end portions (the epiphyses). Each epiphysis is separated from the diaphysis by cartilage; the area of separation is called the epiphyseo-diaphyseal plane. This is the main zone of bone growth; when this zone (the e-d plane) finally ossifies growth is no longer possible.

Long bone growth is at its maximum in the pre-adolescent (prepubertal) period. This means that the e-d plane is working the hardest to turn into bone the mineral salts mobilized by the blood stream. And, since it is working so hard, since the entire area is usually rich in blood supply, it is especially liable to injury, vulnerable to and untoward stimulus (blow, twist, wrench, dislocation, and so on). Furthermore, the vulnerability may express itself as an inflammatory reaction in the e-d plane ("epiphysitis"), and the upshot of which may be premature union of the epiphysis and diaphysis involved -- which means no more bone growth at that site, e. g., lower end and femur. The end result: Interference with normal joint function; asymmetry in a limb. Rather a high price for an ill-timed and vigorous "exercise!"³¹

McCraw contended that the facts relating injury incidence to young boys were somewhat invalid. He suggested that a study of high school football injuries in four states revealed 54 percent of all injuries occurred in boys 16 and under. However, more boys were playing at this age than any other age. McCraw suggested that more information was needed to substantiate the declaration that young boys should not play competitive sports. He agreed that there were some anatomical and physiological bases that children in elementary school were more susceptible to injuries, but not enough injury rate evidence was available.³²

Powers studied the effects of interscholastic athletics on the physical well-being, mental health, and social acceptance

³¹Wilton M. Krogman, "Child Growth and Football," Journal of Health, Physical Education, and Recreation, September, 1955, p. 77.

³²Lynn W. McCraw, "Athletics and Elementary School Children," Texas Outlook, June, 1955, pp. 12-13.

of boys in grades four through six. The conclusions he derived from this research were:

1. Physical well-being of interschool athletes was not different from that of intramural athletes at the conclusion of this study. If intramural athletics are accepted as contributing to the physical well-being of elementary school boys, it is equally logical to claim comparable status for interschool athletics.
2. Changes in social acceptance were not different for the boys who participated in interschool athletics when they were compared with those who played intramural athletics. In general, one can assume that interschool athletics alone will not adversely affect the social status of the participating athletes.
3. Mental health assets of interschool athletes are as stable as those of boys who participate in intramural athletics.
4. Mental health liabilities tend to be more consistently eliminated by interschool athletes than by intramural athletes.
5. Intramural athletes progress in acquiring motor skills at a rate which is equal to that of interschool athletes in grades four, five, and six.³³

Hale, director of research and vice president of Little League Baseball, Inc. has done extensive research into the problem of interscholastic sports competition for young boys. He has concluded,

The present evidence indicates that pre-high school age children are not harmed but rather benefit considerably from interscholastic athletic experience. Physiologically, strenuous physical activity will not harm a child who is normal. Psychologically and sociologically, none of the manifestations of behavior difficulties, disturbances of social adaptations, unsatisfactory character traits, psychogenic disturbances of physiological function, or any traditional forms of psychoneurotic reactions have been found. Rather, children who participate in competitive athletics achieve high social status and prestige, are extremely

³³Eugene P. Powers, "A Study of the Effects of Interschool Athletics on the Physical Well-Being, Mental Health, and Social Acceptance of Boys in Grades Four, Five, and Six" (doctoral dissertation, Temple University, 1955).

popular, exhibit many desirable personality traits, and are better adjusted.³⁴

Willgoose emphasized the vital importance of finding out if highly competitive contact activities for younger children were good or bad. He pointed out that elementary students are playing football and ice hockey now, not just baseball. It appeared that research was very insufficient and evidence very inconclusive. Competitive sports for the young were definitely becoming a big business in communities. Willgoose stated,

Midget football and ice hockey are growing in many communities. To some it appears to be the perfect outlet for the competitive spirits of young boys; to others it is an unhealthy trend at best. Good or bad, it is continuing and it is time educators and school physicians did more than talk about it.³⁵

The Committee on Research Aspects of Competitive Athletics (American Public Health Association) has studied quite thoroughly the assets and liabilities of competitive sports programs for youngsters. The Committee has carefully reviewed philosophical articles and actual research completed on the subject. From these reviews, the Committee stated the following suggestions: (1) much more emphasis should be put upon physical education and athletics, with better supervision and facilities being stressed; (2) more emphasis upon individual sports on a community basis so that those few in Little League or other teams would not attract so much attention; (3) chronological age is a poor method of dividing children

³⁴Creighton J. Hale, "Athletics for Pre-High School Age Children," Journal of Health, Physical Education, and Recreation, December, 1959, pp. 21, 43.

³⁵Carl E. Willgoose, "Health Implications of Highly Competitive Sports at the Elementary-Junior High School Level," The Journal of School Health, June, 1959, p. 225.

for competitive games; (4) swimming because of its carry-over and exercise values should be emphasized more in school programs; and (5) other sports that give maximum exercise and have carry-over values should be promoted.³⁶

The Committee on Research Aspects of Competitive Athletics further recommended that more investigation be done on the following: (1) time allowed per day and week for physical education and/or athletics; (2) qualifications of personnel teaching in physical education and/or athletic programs; (3) type of facilities allocated for specific programs; (4) opinions of school and non-school people in regard to their physical education and/or athletic programs; (5) the number of injuries occurring in specific activities; and (6) ways to make individual sports more attractive to children.³⁷

The general public has usually accepted opinions of the medical field much more readily than from educators, thus, medical doctors have been writing articles pertaining to competitive sports and giving their opinions concerning the values and liabilities that were involved. Some of the medical doctors that showed interest in this controversy were McGuigan, Judge, Siffert, Levy, Larson, McMahan, Tyler, and Allman. Even the medical profession disagreed to some extent on this subject, as one will observe as he reads the following surveys.

³⁶H. S. Hoyman, "Report of the Committee on Research Aspects of Competitive Athletics of the School Health Section of the American Public Health Association," The Journal of School Health, June, 1959, pp. 228-230.

³⁷Ibid., pp. 231-232.

McGuigan felt too much stress was being placed upon competitive sports for younger children. He suggested that children who should be receiving attention in physical development were not being included. He pointed out,

As physicians, we can do a great deal to reduce the emphasis on competitive athletics and to increase the physical health of our people. We can stress at every opportunity the ideal of greater physical activity for our children. We can encourage more games for more children. We can stress variety rather than concentration. We can urge the playing of games which can be continued in adult life. We can deplore any tendency to develop "varsity" type teams in the ages below high school. We can continually urge the de-emphasis of spectator sports and encourage participation. And we can continually, emphatically and repeatedly speak out against such games as football for young children and organized competitive sports for children below high school.³⁸

Tyler disagreed to an extent with his colleague, McGuigan. He felt that the small number of injuries that occurred in children while playing competitive sports should not be allowed to outweigh the benefits attained by participation. However, Tyler did say,

More important, however, is the fact that the high schools and midget programs frequently mimic the colleges and the pros -- and therefore they also teach spearing [head tackling]. Most youngsters cannot possibly have adequate musculature to protect them properly during this type of activity. Even if acute injury is avoided, chronic changes are sure to occur if the practice is continued throughout the years of football competition.

Organized leagues in baseball are now available for youngsters beginning at age six. If a boy is good he will usually go from one league to another, play for his school in the spring and the league in the summer. Many young pitchers throw curve balls, sliders and fast balls, but few are taught the importance of warming up slowly and cooling off slowly. Prolonged

³⁸R. A. McGuigan, "Athletics and the Child," Archives of Pediatrics, February, 1961, p. 47.

pitching over many years without adequate conditioning, and pre and post performance care of the arm, will surely result in degenerative changes about the elbow and shoulder.³⁹

Judge emphasized that competitive sports for small children would be fine if they were properly controlled. His claim was that "fun" had been taken out of games for children due to emphasis on winning and the selection of only a few to participate.⁴⁰

Siffert and Levy pointed out that, as compared with adults, there were few injuries of the serious nature that occurred before puberty from athletics. This raised the question, was it safer to allow children in grades four through six (and below) to engage in contact competitive sports than for junior high and high school students to do so? In many instances, this appeared to be the reality of the situation, as far as injuries were concerned, but when other factors entered in then the issue became clouded once again.⁴¹

Larson and McMahan tended to agree with Siffert and Levy in regard to injuries to the young child as compared to the older child. One of the main objections to the younger child engaging in athletics was the possibility of permanent damage to bones and joints (especially the epiphyses or bone ends). A study

³⁹Fred L. Allman, "Competitive Sports for Boys Under Fifteen Beneficial or Harmful," Journal of Medical Association of Georgia, November, 1966, pp. 464-465.

⁴⁰D. J. Judge, "Reflections Concerning Children and Organized Sports," Journal of the Medical Association of the State of Alabama, October, 1965, pp. 267-268.

⁴¹Robert S. Siffert and Roger N. Levy, "Athletic Injuries in Children," Pediatric Clinics of North America, November, 1965, p. 1027.

of 1338 athletic injuries, seen by four orthopedists, showed that the younger children had fewer injuries than older athletes.

This study revealed that 20 percent of the injuries occurred in this age group of 14 years old and younger and 40 percent in the group of 15 to 18 years of age. Only 6 percent of all the injuries that occurred in boys 15 years old and below were epiphyseal. Larson and McMahan stated,

A more vigorous type of life will produce more wear and tear on joint surfaces than a sedentary one. However, the benefits derived by children participating in athletics, such as physical fitness, learning to meet competition, and the discipline of an organized athletic program, outweigh such an indefinite potential.⁴²

Tyler agreed that sports activities for children were good, only if they were properly directed. He stated ideas that seemed to continually be expressed by the medical profession. A few of his expressions were:

Competitive sports programs as they currently exist tend to encourage the already physically well-developed child to push him to the point of exhaustion, to unwisely accept repeated chronic injuries, to pursue one-sided development rather than the acquisition of other physical skills and to become a compulsively rigid robot as he requires more and more skill in his major athletic pursuit.⁴³

One can plainly see that the medical profession has been divided as to their philosophy on competitive sports for younger children. However, they have suggested similar types of guidelines

⁴²Robert L. Larson and Robert O. McMahan, "The Epiphyses and the Childhood Athlete," Journal of American Medical Association, May 16, 1966, p. 99.

⁴³Edward A. Tyler, "Competitive Sports for School-Aged Children," Journal of the Indiana State Medical Association, October, 1965, p. 1162.

to follow to correct the present situation, regardless of their own personal feelings.

In 1964, an opinion poll was taken through a sampling of 16,000 school administrators in 50 states. This survey brought a 48 percent response from the educators on two important questions. The first question pertained to the amount of emphasis then being placed on high school varsity athletics, and the second question was seeking to find out if the educators felt organized athletic competition for elementary age children (such as Little League) was acceptable. In regard to the former question, 56 percent of the administrators felt too much emphasis was being placed on high school sports, 43 percent said the amount of emphasis was just right, and 1 percent said not enough emphasis was occurring. To the latter question, 38 percent of the administrators favored organized sports for younger children and 62 percent did not favor this type of competition.⁴⁴

Bucher had some very strong feelings concerning elementary children and interscholastic sports. He suggested that adults were pushing children too quickly into activities for the purpose of entertainment and glory. Bucher stated,

In other areas and fields of specialization in the schools we seem very much concerned about having a sound educational program which uses the developmental aspect of child growth and guidelines and we demand progression and sequential development of subject matter. Yet when it comes to athletics, we become

⁴⁴"Soft-Pedal the Accent on Sports, Majority Urges," Nation's Schools, November, 1964, p. 57.

indifferent, bowing to community pressures and ignoring the way children grow and develop.⁴⁵

Interscholastic sports competition for elementary children in grades four through six has been very controversial. Educators, doctors, and parents will continue to disagree until more research can be completed. More conclusive evidence is needed, and even then, disagreements within and between groups will very likely continue.

Little League Programs

Although Little League sports have been included to an extent in the survey of literature discussing interscholastic sports, the writer will review a few writings that specifically relate to Little League programs.

Bucher has disagreed with the Little League program mainly because of the way it was organized and the emphasis being too much on winning. He suggested that the physical and emotional strain becomes too great for young children, parents are poor spectators and the majority of the coaches lack training to teach a young boy basic concepts.⁴⁶

A questionnaire was given to all of the parents of Little Leaguers in Fresno, California to fill out. The results that the parents returned were as follows:

⁴⁵Charles A. Bucher, "A New Athletic Program for Our Schools," National Association of Secondary School Principals Bulletin, April, 1966, p. 203.

⁴⁶Bucher, "Little League Baseball Can Hurt Your Boy," Look, August 11, 1953, pp. 74-75.

1. Did Little League play cause your son to loose sleep? Yes: 3, No: 147
2. Did Little League play make him restless at night? Yes: 5, No: 144
3. Did Little League play make him nervous? Yes: 9, No: 140
4. Do you feel that Little League hurt him? Yes: 3, No: 143
5. Would you let him play again next year? Yes: 149, No: none
6. Do you feel that Little League Baseball is a good thing for boys? All 150 parents answered in the affirmative.⁴⁷

One of the main criticisms of people who have been against Little League baseball was that it placed too much physical and emotional strain on boys. Skubic, however, found that youngsters were no more stimulated by competition in league games than they were by competition in regular physical education classes.⁴⁸

Shaffer suggested that children from 8 to 12 years of age were ready for competition. The danger with children of this age group, however, was that they were likely to go beyond their normal fatigue point, especially when excited. Experienced leadership has been very important for youngsters at this age so that youngsters can receive help in understanding their limits both physically and emotionally. Shaffer pointed out,

Most of the undesirable features of the "Little Leagues" could be eliminated by discontinuing sponsorship of teams by business organizations, by eliminating tournaments except on a community-wide championship schedule, by requiring a medical examination at the start of the season and during the season if accident

⁴⁷"Athletic Competition for Children," Athletic Journal, January, 1954, p. 18.

⁴⁸Elvera Skubic, "Emotional Responses of Boys to Little League and Middle League Competitive Baseball," American Association of Health, Physical Education, and Recreation Research Quarterly, October, 1955, pp. 350-351.

or illness occurred, and by requiring trained experienced individuals in positions of leadership.⁴⁹

McNeil felt that parents can either help or hinder Little League competition and the greatest help would probably be to leave the Little Leaguer alone. He cited reasons for his views by the following account,

We stress the will to win, and we believe that enthusiasm, even an occasional rhubarb is a part of baseball. And we think that parents should be encouraged to support their boy and the team on which he plays. But some parents have exaggerated ideas of what constitutes support. In front of teammates, managers, coaches and other parents, fathers and mothers abuse their boys for not fielding like Red Schoendienst, hitting like Mickey Mantle, or pitching like Vernon Law. They humiliate them with constant nagging criticism.

My blood still boils as I recall the mother screaming epithets at her eager little boy of ten who unluckily got caught off first base for the third out. And the foghorn-voiced father who dictated from the stands, by shouts and hand signals, what pitches his boy should make when in trouble out on the mound. And the fathers who pay money for hits: extra money for extra base hits -- ten dollars for a home run in one family I know. At this point, Little League baseball loses its purposes.⁵⁰

Since the development of Little League and Pony League baseball programs for boys in the age group of 9 to 15 years, the vulnerable epiphyses of young boys have been subjected to much strain. Repetitious throwing at this young age subjects these bone ends to severe treatment that they often cannot withstand. Adams did an extensive study of the "Little Leaguers Elbow" and then made these recommendations: (1) restrict pitchers from

⁴⁹Thomas E. Shaffer, "Are Little Leaguers Good for Children," Pennsylvania Medicine, April, 1956, pp. 448, 450.

⁵⁰Donald R. McNeil, "Little Leagues Aren't Big Leagues," Reader's Digest, June, 1961, pp. 142-143.

throwing but just a few innings at this age (Little Leaguers were limited to two innings); (2) encourage pitchers to report any pain in shoulder or elbow area; (3) encourage pitcher not to practice extra at home, during and before baseball season as this is simply too much throwing; (4) do not allow curve ball throwing at this age; and (5) establish medical advisory boards at the local and national levels.⁵¹

Summary

The survey of related literature revealed various problems that have been causing controversies on the subject of "sports programs for a few" versus "sports programs for many." Very little, if any, criticism was made of school physical education programs in grades four through six. The only real criticism toward physical education was the quality of teaching that the schools gave the students or the lack of a program or facilities. Where a strong well-rounded program was in existence, very few criticisms were made.

Competitive interscholastic sports programs in grades four through six have been causing much controversy. Educators, doctors, and parents disagreed with each other very openly. However, doctors and educators have, seemingly, come much closer together over the years as to what should be physically and emotionally good for children at this age. Many parents probably will continue to maintain a wide gap between the education and medical

⁵¹Joel E. Adams, "Little League Shoulder," California Medicine, July, 1966, pp. 22, 25.

professions due to their objectives of competitive sports being different from the latter's.

The arguments of Little League competition have been similar to those of interscholastic competition for grades four through six. Little League programs have been more extensively carried out in the summer months, thus, being separated from the school. However, both educators and parents must be aware of the possibility of these programs becoming even more commercialized as far as objectives are concerned due to the emphasis of winning being so vividly stressed.

Until more research and plain evidence is given the groups involved, much controversy will continue. This writer feels that even after more evidence is found, favoring one side or the other, many parents and educators will still not change their philosophies as to what is best for children at this age.

CHAPTER III

METHOD AND PROCEDURE

Classification and Selection of Schools

In the Fall of 1968, the writer devised a questionnaire (see Appendix, p. 109) that would reveal the type of organization of sports and activity programs in grades four through six within the state of Oklahoma. A questionnaire was sent to all of the 690 elementary school districts in the state and 472 responses were returned. From the returns, the writer was able to classify each school's program as being a physical education program, interscholastic sports program, or a combination of physical education and interscholastic sports. The school districts were set up into four groups according to how many students were enrolled in their system. These were: below 250, between 250-500, between 500-1000, and over 1000.

In order to validate the questionnaire results and study various sub-problems within this investigation, the writer chose to visit 50 of the elementary schools that responded to the evaluation. Since several of the 472 schools stated on the evaluation form that they would rather the writer not visit their school and due to the failure of some schools to answer specific questions on the questionnaire, the number from which the writer

had to select was less than the total number returned. Other reasons why the writer refused to use various schools in the sample were: if they had only sixth grade programs in operation; if the current sports program in grades four through six had been operating less than three years; and if the school designated no program at all. These invalidations allowed the writer to use only 279 of the original 472 schools that returned the questionnaires. Although many of the schools were invalid in relation to the writer's visiting them, a vast amount of important information was obtained from them and used in percentage tables (see Appendix, p. 113 for results).

Three stratified random samples were drawn from the 279 eligible schools. The samples' sizes consisted of: 15 from schools having only physical education, 15 from schools having only interscholastic sports, and 20 from schools offering both physical education and interscholastic sports programs in grades four through six. The reason for the writer's visiting more schools with a combination type program was because this type of program was more numerous than the single programs of either physical education or interscholastic sports.

The writer used the formula N/n to arrive at the number of schools to draw from each classification, where the numerator equaled the number of schools in each class and the denominator equaled the sum of all classes within the classification. The breakdown is shown in Tables I, II, and III.

(Explanation: After the division of each, the quotient was taken times the weight of the classification which was 15

for physical education, 15 for interscholastic sports, and 20 for combination programs; this permitted the writer to arrive at the number of schools to draw from that specific group. Also, this procedure gave a proportionate stratified sample.)

TABLE I
PHYSICAL EDUCATION CLASSIFICATION

Size of School	Number Validated	Number Needed	Total Schools
Over 1000	13	$\frac{13}{52}$	4
500-1000	8	$\frac{8}{52}$	2
250-500	13	$\frac{13}{52}$	4
Below 250	18	$\frac{18}{52}$	5
Total	52		15

TABLE II
INTERSCHOLASTIC CLASSIFICATION

Size of School	Number Validated	Number Needed	Total Schools
Over 1000	3	$\frac{3}{50}$	1
500-1000	2	$\frac{2}{50}$	1
250-500	6	$\frac{6}{50}$	2
Below 250	39	$\frac{39}{50}$	11
Total	50		15

TABLE III
 PHYSICAL EDUCATION AND INTERSCHOLASTIC
 CLASSIFICATION

Size of School	Number Validated	Number Needed	Total Schools
Over 1000	9	<u>9</u> 177	1
500-1000	13	<u>13</u> 177	1
250-500	35	<u>35</u> 177	4
Below 250	120	<u>120</u> 177	14
Total	177	—	20

The number of schools needed from each classification was randomly drawn from their specific containers. This system allowed the writer to draw schools from all over the state of Oklahoma.

Visitation of School Systems

A Standard Evaluation Form was formulated by the writer to use at each school. The form contained questions relating to the sub-problems within the study (see Appendix, p. 122).

An attempt was made to visit those answering the questionnaire within each school. The writer contacted this school official approximately one week before the visitation to be certain that his time of arrival was acceptable. Since the original questionnaire was sent to elementary administrators, the writer visited with the person holding this position in most cases. Basically, the interviewees consisted of 34 elementary

administrators, 4 physical education teachers, 7 superintendents of schools, 2 elementary coordinators (large systems), 1 high school principal, 1 assistant superintendent of schools, and 1 coach (classroom teacher). Thus, 45 out of 50 of the interviewees were administrators.

The writer carried a tape recorder to use in each interview. This piece of equipment allowed him to review each school program more thoroughly and to be more precise with valuable quotations in certain sub-problem studies.

The map of Oklahoma in the Appendix (p. 120) reveals the geographic location of the schools visited by the writer. Approximately one-half of the schools were located on the east side and one-half on the west side of Interstate Highway 35. Also, approximately one-half of the schools were located on the north side and one-half on the south side of Interstate Highway 40 (Interstate Highway 35 approximately splits the state in half east and west and Interstate Highway 40 is an approximate median north and south).

Treatment of the Data

The writer found that most of the data returned within the questionnaire was reasonably accurate. Of the 50 schools visited, only four schools had revealed programs that the writer felt were inaccurately labeled. After readjustment of this situation, the number of schools within the physical education, interscholastic sports, and combination program classification respectively were: 14, 14, and 22.

Statistics that were used in analyzing the data were percentage tables, chi-square analysis, analysis of variance, and the Newman-Keuls method to reveal specific differences. An IBM 1130 Computer was used to run the chi-square analysis and the analysis of variance statistics. The writer employed the services of a trained statistician and computer programmer to aid in feeding the data to the computer and in analyzing the results. The following are the sub-problems within the study and the statistics used for analysis purposes:

(1) Values of specific sports programs -- a chi-square analysis was used on each separate classification of physical education, interscholastic sports, and combination physical education and interscholastic sports programs.

(2) Comparison of differences in the number of skills offered by each classification -- an analysis of variance was used to determine if there were significant results in the total scores of each classification. The Newman-Keuls method was used to relate specific differences:

$$\bar{X}_L - \bar{X}_S > \frac{Q_s}{\sqrt{n}} \text{ with corrected SE} = \frac{s^2}{ab} \left(\frac{1}{n_1} + \frac{1}{n_2} + \frac{1}{n_3} \right).$$

(3) Comparison of the interscholastic won and lost records of schools within each classification -- the chi-square was used to compare the theoretical with a hypothetical frequency of a school's record in the sport of basketball, baseball, and football:

$$\chi^2 = \frac{(O - E)^2}{E}.$$

(4) Comparison of the number of children participating in each type of program -- a percentage table for each classification was used to reveal differences.

(5) Comparison of the number and types of injuries occurring in each type of program -- a percentage table was used to reveal the kind and frequency of various injuries.

(6) Comparison of facilities available in schools of each of the classifications -- a separate analysis of variance was run on indoor, outdoor, and a combination of indoor and outdoor facilities to determine if there were a significant difference in these facilities. (The writer obtained raw scores by using the method of evaluating facilities on the Laporte Scorecard, see Appendix, p. 124.)

(7) Evaluation of sports found to be most popular in Little League programs -- a percentage table was used to show results.

(8) Comparison of types of coaches being used in Little League programs -- a percentage table was used to reveal different types.

(9) Evaluation of the feelings of administrators in regard to Little League sports in their communities -- quotations taken from the writer's tape recordings were logically printed to show support or frustration within their program.

CHAPTER IV

RESULTS

The writer has formulated the results of his investigation into tables involving chi-square analysis, analysis of variance, and simple percentages which have been used to formulate conclusions to the sub-problems. In cases in which the writer was concerned with significant or non-significant differences between or within the physical education, interscholastic sports, and combination physical education and interscholastic sports, a null hypothesis was assumed. The five percent level of confidence was used as the cut off point in determining the significance of results, but in instances in which the one percent level of confidence was also found, the writer revealed this information within the tables.

Tables and Explanations

The writer felt that one of the most important and interesting segments of the study was the sub-problem which involved the school official's ranking of specific values (selected by the writer), that they felt their type of program was offering the student (see Appendix, p. 122). A chi-square analysis (results revealed in Tables IV through VI) was run on each classification to determine if there were significant differences between the values within each classification. The hypothetical frequency used for the analysis was 8.5.

TABLE IV
VALUES OF PHYSICAL EDUCATION PROGRAMS

No.	Obs.	Exp.	O - E	Chi-Square		No.	Obs.	Exp.	O - E	Chi-Square	
				$\frac{(O - E)^2}{E}$	E					$\frac{(O - E)^2}{E}$	E
1	50	119	- 69	40.00		9	100	119	- 19	3.03	
2	153	119	+ 34	9.71		10	144	119	+ 25	5.25	
3	92	119	- 27	6.13		11	68	119	- 51	21.86	
4	102	119	- 17	2.43		12	141	119	+ 22	4.07	
5	135	119	+ 16	2.15		13	105	119	- 14	1.65	
6	139	119	+ 20	3.36		14	190	119	+ 71	42.36	
7	102	119	- 17	2.43		15	165	119	+ 46	17.78	
8	150	119	+ 31	8.08		16	68	119	- 51	21.86	
Total							1904	1904	0	192.15	

Chi-Square = 192.15
Significant at .005 level of confidence

Degrees of Freedom = 14

TABLE V
VALUES OF INTERSCHOLASTIC SPORTS PROGRAMS

No.	Obs.	Exp.	O - E	Chi-Square		No.	Obs.	Exp.	O - E	Chi-Square	
				$\frac{(O - E)^2}{E}$	E					$\frac{(O - E)^2}{E}$	E
1	72	119	- 47	18.56		9	82	119	- 37	11.50	
2	131	119	+ 12	1.21		10	124	119	+ 5	.21	
3	105	119	- 14	1.65		11	98	119	- 21	3.71	
4	129	119	+ 10	.84		12	84	119	- 35	10.29	
5	143	119	+ 24	4.84		13	104	119	- 15	1.89	
6	128	119	+ 9	.68		14	157	119	+ 38	12.13	
7	134	119	+ 15	1.89		15	186	119	+ 67	37.72	
8	169	119	+ 50	21.00		16	58	119	- 61	31.27	
Total							1904	1904	0	159.39	

Chi-Square = 159.39
Significant at .005 level of confidence

Degrees of Freedom = 14

TABLE VI
VALUES OF COMBINATION PHYSICAL EDUCATION
AND INTERSCHOLASTIC SPORTS PROGRAMS

No.	Obs.	Exp.	O - E	Chi-Square		No.	Obs.	Exp.	O - E	$\frac{(O - E)^2}{E}$
				$\frac{(O - E)^2}{E}$	E					
1	75	178.5	-103.5	60.01		9	135	178.5	- 43.5	10.60
2	257	178.5	+ 78.5	34.52		10	202	178.5	+ 23.5	3.09
3	129	178.5	- 49.5	13.73		11	93	178.5	- 85.5	40.95
4	163	178.5	- 15.5	1.35		12	190	178.5	+ 11.5	.74
5	192	178.5	+ 13.5	1.02		13	128	178.5	- 50.5	14.29
6	197	178.5	+ 18.5	1.92		14	287	178.5	+108.5	65.95
7	205	178.5	+ 26.5	3.93		15	255	178.5	+ 76.5	32.79
8	240	178.5	+ 61.5	21.19		16	<u>108</u>	<u>178.5</u>	- <u>70.5</u>	<u>27.84</u>
Total							2856	2856	0	333.92

Chi-Square = 333.92
Significant at .005 level of confidence

Degrees of Freedom = 14

Each of the tables (IV-VI) showed that most administrators generally agreed. The values at the top and bottom of the list were ranked very similarly by the administrators in a non-random selection.

After having applied the chi-square analysis, the writer was able to rank the values within each classification from high to low as the total number of points (low number being the better rating) indicated within the raw data. Tables VII through IX indicate the rankings within each class. Physical fitness, development of good mental and emotional health, development of attitudes and appreciations, and the student developing mentally and physically with growth were ranked very high by all three classifications. The values that appeared in the middle of all the selections were: increased skill and accuracy, development

of sportsmanship, stimulation of children, development of school spirit, creation of challenging activities, improvement of use of leisure time, and the development of competitive attitudes. Values that were less sought after through the different programs were: development of above average athletes, juvenile delinquency limited, decreased absence from school, development of better high school and college players, and the increase of knowledge and judgment.

TABLE VII
RANK OF VALUES WITHIN PHYSICAL EDUCATION CLASS

Value	Rank	Group Mean	Total Points
Physical fitness	1	4.214	59
Develops good mental and emotional health	2	4.857	68
Student develops mentally and physically with growth	3	4.857	68
Develops attitudes and appreciations	4	6.500	91
Increases skill and accuracy	5	6.571	92
Better use of leisure time improved	6	6.571	92
Develops sportsmanship	7	7.000	98
Stimulates children	8	7.071	99
Increases knowledge and judgment	9	8.500	119
Creates more challenging activities	10	9.928	139
Develops school spirit	11	10.000	140
Develops competitive attitudes	12	10.071	141
Develops above average athletes	13	10.642	149
Aids in defeating juvenile delinquency	14	10.714	150
Decreases absence from school	15	11.785	165
Develops better high school and college players	16	13.571	190

TABLE VIII
RANK OF VALUES WITHIN INTERSCHOLASTIC
SPORTS CLASS

Value	Rank	Group Mean	Total Points
Student develops mentally and physically			
with growth	1	4.143	58
Physical fitness	2	5.143	72
Develops attitudes and appreciations	3	5.857	82
Develops competitive attitudes	4	6.000	84
Develops good mental and emotional health	5	7.000	98
Develops sportsmanship	6	7.357	103
Increases skill and accuracy	7	7.500	105
Develops school spirit	8	8.857	124
Stimulates children	9	9.214	129
Develops above average athletes	10	9.357	131
Creates more challenging activities	11	9.429	132
Better use of leisure time improved	12	9.571	134
Increases knowledge and judgment	13	10.214	143
Develops better high school and college players	14	10.929	153
Aids in defeating juvenile delinquency	15	12.786	179
Decreases absences from school	16	13.286	186

TABLE IX
RANK OF VALUES WITHIN COMBINATION PHYSICAL
EDUCATION AND INTERSCHOLASTIC
SPORTS PROGRAMS

Values	Rank	Group Mean	Total Points
Physical fitness	1	3.409	75
Develops good mental and emotional health	2	4.227	93
Student develops mentally and physically with growth	3	4.909	108
Develops sportsmanship	4	5.818	128
Increases skill and accuracy	5	5.864	129
Develops attitudes and appreciations	6	6.136	135
Stimulates children	7	7.409	163
Develops competitive attitudes	8	8.636	190
Increases knowledge and judgment	9	8.727	192
Creates more challenging activities	10	8.955	197
Develops school spirit	11	9.182	202
Better use of leisure time improved	12	9.318	205
Aids in defeating juvenile delinquency	13	10.909	240
Decreases absence from school	14	11.591	255
Develops above average athletes	15	11.682	257
Develops better high school and college players	16	13.045	287

Another sub-problem that was studied in the investigation was the number of skills that each type of program was actually offering the students. The writer used an analysis of variance format to determine if there were any differences between the three classifications. Table X shows that there was a significant difference in the classifications.

TABLE X
DIFFERENCE IN NUMBER OF SKILLS OFFERED BY
PHYSICAL EDUCATION, INTERSCHOLASTIC
SPORTS, AND COMBINATION PHYSICAL
EDUCATION AND INTERSCHOLASTIC
SPORTS PROGRAMS

Source	Analysis of Variance		Mean Squares
	DF	Sum of Squares	
Total	49	346.8799	. .
Between	2	104.6462	52.3231
Within	47	242.2337	5.1539

Calculated $F = 10.1521$ Numerator DF = 2 Denominator DF = 47
Tabulated $F = 3.195$ Significant at 5% and 1% levels of confidence

In order to establish which of the classifications of physical education, interscholastic sports, and the combination program were different from one another, the writer used the Newman-Keuls formula with a standard error adjustment for unequal numbers (see Table XI). The writer separated the various skills used in regard to each classification. The skills most popular within the physical education class were softball, rope jumping, basketball,

volleyball, dodgeball. Skills most popular within the interscholastic class were basketball, softball, baseball, and track. The combined physical education and interscholastic class favored such skills as basketball, softball, games of low organization, and dodgeball.

TABLE XI

FORMULA APPLIED TO DIFFERENCES IN NUMBER
OF SKILLS BETWEEN CLASSIFICATIONS

Newman-Keuls with adjustment for Unequal Groups	
Program	Mean
Physical education	7.4285
Interscholastic sports	5.1428
Combination	8.6363
(a) Difference between Combination and IS Programs	
	$8.6363 - 5.1428 = 2.4935$
	$Q = 3.426, SE = .56874$
	$= (3.426) (.56874) = 1.94850$
	$= 2.4935 > 1.9485$
	Significant at 5% level of confidence
(b) Difference between Combination and PE Programs	
	$8.6363 - 7.4285 = 1.2078$
	$Q = 2.8495, SE = .56874$
	$= (2.8495) (.56874) = 1.6206$
	$= 1.2078 < 1.6206$
	No significant difference
(c) Difference between PE and IS Programs	
	$7.428 - 5.1428 = 2.2857$
	$Q = 2.8495, SE = .56874$
	$= (2.8495) (.56874) = 1.6206$
	$= 2.2857 > 1.6206$
	Significant at 5% level of confidence

From Table XI one could assume that the programs involved with a combination of physical education and interscholastic sports were offering more skills at a significant level than the programs in the interscholastic sports classification. There were no significant differences in the number of skills involved in the combination (physical education and interscholastic sports)

programs as compared to programs offering only physical education. Also, physical education programs offered more skills at a significant level than interscholastic sports programs.

The writer used the chi-square analysis to determine the significance of won and lost records in senior and junior high schools in the sports of basketball, baseball, and football. If the school's current program had been in operation three to six years, the junior high school record was evaluated and if the program had been in operation seven years or over, the high school record was evaluated (boys only). The latter procedure gave each student a chance to have been in the current program when they were in grades four through six. The hypothetical frequency used by the writer was that each school won 50 percent of their games in each sport. The theoretical frequency was the number of actual wins by the school in each sport participated in at the senior or junior high school level. Each of the following tables has indicated if a school in a specific classification participating in a particular sport has significantly won or lost above or below the 50 percent frequency. Many of the schools within each classification did not play all three major sports.

TABLE XII

ANALYSIS OF BASKETBALL WON AND LOST RECORDS IN
SCHOOLS EMPHASIZING PHYSICAL EDUCATION

			Chi-Square		
School	Observed	Expected	School	Observed	Expected
1	17.0	12.5	7	21.0	10.5
2	37.0	18.5	8	15.0	12.0
3	56.0	39.5	9	32.0	46.5
4	39.0	28.0	10	12.0	16.0
5	23.0	12.5	11	11.0	10.0
6	34.0	18.5			

Chi-Square = 70.0118

Degrees of Freedom = 10

Significant at 5% and 1% levels of confidence favoring more wins
than losses

TABLE XIII

ANALYSIS OF BASKETBALL WON AND LOST RECORDS IN
SCHOOLS EMPHASIZING INTERSCHOLASTIC SPORTS

			Chi-Square		
School	Observed	Expected	School	Observed	Expected
1	25.0	37.0	6	40.0	30.0
2	53.0	44.0	7	23.0	38.0
3	74.0	52.5	8	46.0	35.0
4	21.0	31.5	9	102.0	57.0
5	24.0	23.0	10	31.0	32.0

Chi-Square = 66.3501

Degrees of Freedom = 9

Significant at 5% and 1% levels of confidence favoring more wins
than losses

TABLE XIV

ANALYSIS OF BASKETBALL WON AND LOST RECORDS IN
SCHOOLS EMPHASIZING A COMBINATION OF
PHYSICAL EDUCATION AND
INTERSCHOLASTIC SPORTS

School	Observed	Chi-Square		School	Observed	Expected
		Expected	Expected			
1	6.0	15.5		11	30.0	25.0
2	8.0	15.0		12	19.0	16.0
3	21.0	20.5		13	25.0	13.0
4	31.0	21.0		14	23.0	18.0
5	49.0	45.5		15	13.0	13.0
6	37.0	48.0		16	28.0	19.0
7	40.0	22.5		17	23.0	18.0
8	2.0	5.0		18	49.0	34.5
9	8.0	30.0		19	30.0	16.0
10	19.0	18.0				

Chi-Square = 89.1557

Degrees of Freedom = 18

Significant at 5% and 1% levels of confidence favoring more wins
than losses

than they won and this proved to be significant at the five percent level of confidence. The reason tables were not prepared analyzing baseball in the physical education classification and football in the classification combining physical education and interscholastic sports was that too few schools participated in these sports not allowing the writer to obtain sufficient records for analysis purposes.

Another sub-problem within the study was concerned with the percent of students in each of the three classifications that actually participated in their respective programs in grades four through six. Table XIX illustrates the comparison of the classifications involved with the percentages.

The data in Table XIX revealed that more students were participating in physical education activities than in interscholastic sports programs. This finding was not surprising to the writer as physical education is suppose to be designed for all students and interscholastic sports for the gifted and interested students. Those individuals who oppose interscholastic sports programs and support physical education classes consider the above information very supportive of their views. However, school programs involved with the combination of physical education and interscholastic sports were fulfilling the needs of both groups very adequately.

TABLE XIX

PERCENT OF STUDENTS PARTICIPATING IN PHYSICAL
EDUCATION, INTERSCHOLASTIC SPORTS, AND A
COMBINATION OF PHYSICAL EDUCATION AND
INTERSCHOLASTIC SPORTS PROGRAMS

School	Classification		PE - IS (combined)
	PE	IS	
1	1.00	.50	1.00-1.00
2	.68	.21	1.00- .60
3	.99	.73	.94- .54
4	1.00	.75	1.00-1.00
5	.90	.76	1.00- .75
6	1.00	1.00	1.00- .30
7	1.00	.50	1.00-1.00
8	.83	.90	.97- .33
9	1.00	.40	1.00- .50
10	1.00	1.00	1.00- .80
11	.59	1.00	1.00- .67
12	1.00	1.00	1.00-1.00
13	1.00	.54	1.00- .90
14	1.00	1.00	1.00-1.00
15	..	..	1.00- .68
16	..	..	1.00- .95
17	..	..	1.00- .35
18	..	..	1.00- .39
19	..	..	1.00- .50
20	..	..	1.00- .29
21	..	..	1.00-1.00
22	..	..	1.00- .50
Average Percent	92.8	73.5	99.6-68.4 84.0

The segment of the study related to the sub-problem involved with types of injuries occurring within each classification presented some complications for the writer. In most instances, the administrators seemed to feel that most of their serious types of injuries occurred on the playground during recess or at

noon hour. Also, the writer had intended to compare the injuries in relation to the sport being participated in; but, he found too many schools that were playing only one or two sports within the interscholastic classification (mainly basketball) and thus, only the three classifications as a whole are compared for the number and types of injuries in the following tables. The injuries were based on the past three years within grades four through six, however, a few could give the writer information on only the past year or past two years. (see Table XX).

All injuries reported to the writer were of a temporary nature with the exception of one in which a young boy was killed while participating in a physical education class. The cause of death was due to a head injury as the lad struck his head against the wall. Other temporary, but severe injuries were reported occurring at the recess period where supervision was not as efficient as in a physical education or interscholastic sports program. Examples of such injuries at recess were playground equipment or apparatus falls, getting hit in the head with a bat or ball, and scrapes and abrasions due to falling on the ground while playing.

TABLE XX

COMPARISON (IN PERCENTAGES) OF NUMBER AND TYPES
OF INJURIES IN PHYSICAL EDUCATION PROGRAMS

School	Broken Bones	Knee	Injuries Mild Sprains	Severe Sprains	Head	Mouth
1	.01	.01	. .	. .	. .	. .
2	. .	. .	.02	.01	. .	. .
3	. .	. .	.10	. .	. .	. .
4	.01	. .	.01	.01	.01	. .
5	. .	.01	.02	. .	. .	.01
6	. .	. .	. .	. .	. .	. .
7	. .	. .	. .	. .	. .	.01
8	.03	. .	.02	. .	. .	.01
9	.01	. .	.02	. .	. .	. .
10	. .	.01	. .	. .	. .	. .
11	.01	. .	. .	. .	. .	. .
12	. .	. .	.05	.02	. .	. .
13	. .	. .	.01	. .	. .	. .
14	. .	. .	.02	. .	. .	.01
Total	7%	3%	27%	4%	1%	4%
Average	.50%	.21%	1.21%	.29%	.07%	.29%

Note: Omissions in columns indicate no injuries of this type having occurred.

TABLE XXI

COMPARISON (IN PERCENTAGE) OF NUMBER AND TYPES
OF INJURIES IN INTERSCHOLASTIC SPORTS PROGRAMS

School	Broken Bones	Knee	Injuries Mild Sprains	Severe Sprains	Head	Mouth
1	..	..	..	..	..	..
2	.02	.02	.02	..	..	.02
3	..	..	.05	.01	..	..
4	..	..	..	.01	..	..
5	..	..	.02	.01	..	.01
6	.03	..	.02	..	..	..
7	..	..	..	..	..	..
8	.01	..	..	..	..	..
9	..	..	..	.01	..	..
10	..	..	.01	..	.01	..
11	.01	.01	.04	..	.01	.01
12	.01	..	.02	..	..	..
13	.01	..	.01	.04	..	..
14	..	..	.02	..	..	..
Total	9%	3%	21%	8%	2%	4%
Average	.64%	.21%	1.5%	.57%	.14%	.28%

Note: Omissions in columns indicate no injuries of this type having occurred.

TABLE XXII

COMPARISON (IN PERCENTAGES) OF NUMBER AND TYPES
OF INJURIES IN COMBINATION PHYSICAL EDUCATION
AND INTERSCHOLASTIC SPORTS PROGRAMS

School	Broken Bones		Knee		Injuries Mild Sprains		Severe Sprains		Head		Mouth	
	PE	IS	PE	IS	PE	IS	PE	IS	PE	IS	PE	IS
1	. .	. .	.01	.01	. .	.01	. .	.01	. .	. .	. .	. .
2	.01	.01	. .	. .	. .	.01	. .	. .	. .	. .	. .	. .
3	. .	.02	. .	. .	.02	.04	. .	. .	. .	. .	. .	.01
4	. .	. .	. .	. .	. .	. .	.01	.01	. .	. .	. .	.01
5	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
6	. .	. .	. .	. .	. .	.02	. .	. .	. .	. .	. .	.02
7	. .	. .	. .	. .	. .	.01	. .	.01	. .	. .	. .	. .
8	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
9	. .	. .	. .	. .	. .	.02	. .	. .	. .	. .	. .	. .
10	. .	. .	. .	. .	. .	.01	. .	. .	. .	. .	. .	. .
11	. .	. .	. .	. .	. .	.02	. .	. .	. .	. .	. .	. .
12	. .	. .	. .	. .	.03	.01	. .	.01	. .	. .	. .	. .
13	. .	. .	. .	. .	. .	.10	. .	. .	. .	. .	. .	. .
14	. .	. .	. .	. .	. .	.04	. .	.01	. .	. .	. .	. .
15	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
16	. .	. .	. .	. .	. .	.03	. .	. .	. .	. .	. .	. .
17	.02	.01	. .	. .	.03	.04	.03	.02	.01	. .	.03	. .
18	. .	. .	.01	. .	.10	.09	.03	.02	. .	. .	. .	.01
19	.02	. .	.01	. .	.01	.02	. .	.01	.01	. .	. .	. .
20	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
21	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
22	. .	. .	. .	. .	.01	. .	. .	. .	. .	. .	. .	. .
Total	5%	4%	3%	1%	21%	48%	6%	9%	2%	0%	3%	5%
Av.	.23%	.18%	.14%	.05%	.95%	2.18%	.27%	.41%	.09%	.09%	.14%	.23%

Note: Omissions in columns indicate no injuries of this type having occurred.

The writer evaluated both indoor and outdoor facilities of the schools involved in the study. Questions from the Laporte Scorecard were used to determine the number of points each facility received (see Appendix, p. 124). Tables XXIII through XXV reveal

raw data in relationship to school facilities and Tables XXVII through XXIX show an analysis of variance on the indoor, outdoor, and combined indoor-outdoor facilities of all three classifications of physical education, interscholastic sports, and combined indoor-outdoor facilities of all three classifications of physical education, interscholastic sports, and combination programs.

TABLE XXIII
EVALUATION OF FACILITIES UTILIZED BY
PHYSICAL EDUCATION PROGRAMS

School	Outdoor	Indoor	Total	School	Outdoor	Indoor	Total
1	8	2	14	8	13	0	13
2	9	6	15	9	13	0	13
3	7	0	7	10	12	1	13
4	12	8	20	11	7	9	16
5	4	10	14	12	14	9	23
6	17	0	17	13	9	12	21
7	10	11	21	14	11	9	20

Average = 15.9 of possible 42 points

Outdoor average = 10.4 of possible 24 points

Indoor average = 5.5 of possible 18 points

Note: Possible number of points equals 24 for outdoor and 18 for indoor.

TABLE XXIV
EVALUATION OF FACILITIES UTILIZED BY
INTERSCHOLASTIC SPORTS PROGRAMS

School	Outdoor	Indoor	Total	School	Outdoor	Indoor	Total
1	12	2	14	8	11	10	21
2	11	6	17	9	11	0	11
3	9	9	18	10	14	9	23
4	14	0	14	11	9	13	22
5	7	11	18	12	11	5	16
6	11	10	21	13	10	10	20
7	14	0	14	14	12	7	19

Average = 17.7 of possible 42 points

Outdoor average = 11.1 of possible 24 points

Indoor average = 6.6 of possible 18 points

Note: Possible number of points equals 24 for outdoor and 18 for indoor.

The writer observed that proportionally, the schools with a population below 250 students had better facility ratings than other schools with larger numbers. The main difference was related to indoor facilities as many small schools were fortunate enough to have access to a gym for each elementary school located in the district, note Table XXVI. For further comparison, see Tables XXVII through XXIX.

TABLE XXV

EVALUATION OF FACILITIES UTILIZED BY COMBINED
PHYSICAL EDUCATION AND INTERSCHOLASTIC
SPORTS PROGRAMS

School	Outdoor	Indoor	Total	School	Outdoor	Indoor	Total
1	14	12	26	12	12	12	24
2	14	4	18	13	10	9	19
3	11	8	19	14	14	9	23
4	14	10	24	15	13	12	25
5	7	8	15	16	7	12	19
6	14	9	23	17	11	13	24
7	10	8	18	18	10	9	19
8	14	4	18	19	14	15	29
9	12	12	24	20	9	9	18
10	14	9	23	21	9	8	17
11	10	7	17	22	5	9	14

Average = 20.7 of possible 42 points

Outdoor average = 11.3 of possible 24 points

Indoor average = 9.4 of possible 18 points

TABLE XXVI
 COMPARISON OF MEAN SCORES OF FACILITIES
 IN RELATIONSHIP TO SIZE OF SCHOOL

School Size	Outdoor Mean	Indoor Mean	Combination Indoor-Outdoor Mean
Below 250	11.37	8.63	10.00
250-500	10.90	7.10	9.00
500-1000	8.75	5.75	7.25
Over 1000	11.17	4.00	7.59

TABLE XXVII
 COMPARISON OF INDOOR FACILITIES ALLOCATED FOR
 PHYSICAL EDUCATION, INTERSCHOLASTIC SPORTS,
 AND A COMBINATION PHYSICAL EDUCATION AND
 INTERSCHOLASTIC SPORTS PROGRAMS

Source	Analysis of Variance		Mean Squares
	DF	Sum of Squares	
Total	49	854.4200	. .
Between	2	152.0368	76.0184
Within	47	702.3831	14.9443

Calculated $F = 5.086$ Numerator $DF = 2$ Denominator $DF = 47$

Tabulated $F = 3.195$ Significant at 5% level of confidence and
 Non-Significant at 1% level of confidence

TABLE XXVIII

COMPARISON OF OUTDOOR FACILITIES ALLOCATED FOR
PHYSICAL EDUCATION, INTERSCHOLASTIC SPORTS,
AND A COMBINATION PHYSICAL EDUCATION AND
INTERSCHOLASTIC SPORTS PROGRAMS

Source	Analysis of Variance		Mean Squares
	DF	Sum of Squares	
Total	49	366.0000	. .
Between	2	6.4935	3.2467
Within	47	359.5064	7.6490

Calculated $F = 0.4244$ Numerator DF = 2 Denominator DF = 47

Tabulated $F = 3.195$ Non-Significant at 5% level of confidence

TABLE XXIX

COMPARISON OF COMBINATION INDOOR-OUTDOOR FACILITIES
ALLOCATED FOR PHYSICAL EDUCATION, INTERSCHOLASTIC
SPORTS, AND A COMBINATION PHYSICAL EDUCATION
AND INTERSCHOLASTIC SPORTS PROGRAMS

Source	Analysis of Variance		Mean Squares
	DF	Sum of Squares	
Total	49	976.4200	. .
Between	2	210.2706	105.1353
Within	47	766.1493	16.3010

Calculated $F = 6.4496$ Numerator DF = 2 Denominator DF = 47

Tabulated $F = 3.195$ Significant at 5% and 1% levels of confidence

The analysis of variance tables above have indicated: there were no significant differences between the classifications in outdoor facilities; there were differences between classifications in relation to indoor facilities at the five percent level of confidence; and there was a significant difference between classifications when both the indoor and outdoor facilities were analyzed together at the five and one percent levels of confidence.

The writer was interested in who was teaching physical education classes and coaching interscholastic sports in the specific programs (although this segment of the study was not actually a sub-problem designated by the writer). Time allotments for each type of program were also calculated to compare differences. Tables XXX through XXXII portray data from this area of interest.

TABLE XXX

CLASSIFICATION OF PERSONS IN CHARGE OF PHYSICAL
EDUCATION PROGRAMS AND TIME ALLOTMENTS

Person in Charge	Number of Schools	Percent
Classroom Teachers	10 of 14	71%
Physical Education Teachers	3 of 14	22%
Coach	1 of 14	7%

Time Allotment: 34 minutes average per day, 3.4 average days a week

TABLE XXXI

CLASSIFICATION OF PERSONS IN CHARGE OF
 INTERSCHOLASTIC SPORTS PROGRAMS
 AND TIME ALLOTMENTS

Person in Charge	Number of Schools	Percent
Classroom Teachers	9 of 14	64%
Physical Education Teachers	3 of 14	22%
Principal of School	1 of 14	7%
Parents	1 of 14	7%

Time Allotment: 52 minutes average per day, 4.7 average days a week

TABLE XXXII

CLASSIFICATION OF PERSONS IN CHARGE OF
 COMBINATION PHYSICAL EDUCATION AND
 INTERSCHOLASTIC SPORTS PROGRAMS
 AND TIME ALLOTMENTS

Person in Charge	Number of Schools	Percent
Classroom Teachers	10 of 22	45%
Physical Education Teachers	10 of 22	45%
Principal of School	1 of 22	5%
Coach	1 of 22	5%

Time Allotment: 45 minutes average per day, 4.4 average days a week

As can be seen from the tables above, classroom teachers were teaching physical education and being in charge of

interscholastic sports programs at a higher rate than trained physical education teachers and coaches. The schools in the interscholastic sports classification allowed more time in minutes and days than the other classifications with the combination program being second in line and physical education last. One of the main reasons the combination program excelled in time allotment was possibly due to the fact that they had two programs to operate and thus, it took more time. Many of the combination schools had one designated time in which part of the period was given to physical education and the remainder of the time was for interscholastic sports. Some of these schools had a designated time period during school for physical education only and then practiced interscholastic sports after school hours.

A sub-problem within the study that concerned communities (parents, administrators, students, constituents, etc.) rather than grades four through six was the evaluation of Little League programs. Most of these programs were sponsored during the summers by interested business people or civic groups in the community. Occasionally, the writer found a program that existed throughout most of the year with several sports being sponsored. Tables XXXIII and XXXIV show the most popular sports within the communities and the classification of coaches of these sports programs.

TABLE XXXIII
POPULAR SPORTS IN LITTLE LEAGUE PROGRAMS

Classi- fication	Foot- ball	Base- ball	Basket- ball	Soft- ball	Track	Wres- tling	Tennis
PE	.36	.91	.09	..	..	..	..
IS	.40	.80	.40	.20	..	.20	..
PE-IS	.17	.94	.03	..	.01	..	.06

Notes: Based on percentages of those communities that had programs in existence.

Classification merely revealed the area of specific interest within the school or schools of the community.

In the classification of schools with physical education interest, 3 of 14 communities (21%) had no Little League programs; schools with interscholastic sports, 9 of 14 communities (64%) had no Little League programs; and combination physical education and interscholastic sports schools had 4 of 22 communities (18%) without Little League programs.

TABLE XXXIV
TYPES OF COACHES INVOLVED IN LITTLE
LEAGUE PROGRAMS

Classi- fication	Par- ents	College or H. S. Boys	Interested Men	PE Teachers	Coach or Teacher
PE	.73	.18	.09	..	..
IS	.40	.20	.20	..	.20
PE-IS	.67	..	.11	..	.22

Table XXXIV is also based on percentages of those communities that had programs in existence. The classification indicated the area of specific interest within the school or schools in the community.

The writer felt that the conversations he had with the administrators, coaches, and physical education teachers proved to be the most important evaluation guide in studying Little League programs. He found much controversy between officials of the school and the community programs. However, the school had little to say concerning these programs unless, of course, they were sponsoring them (schools occasionally were found sponsoring the community programs to the extent of allowing use of their facilities and equipment). As was mentioned earlier in this paper, a tape recorder was used by the writer while interviewing the school officials (with their permission). This method proved to be helpful in discovering attitudes of the officials concerning the Little League situation. The following quotations from different individuals were taken directly from the tapes and hopefully will serve as evidence of the mixed emotions that the interviewees possessed.

Favorable attitudes concerning community sports programs were expressed in the following words:

I would say that the over-all outcome is good. We do know that there are some coaches that over-emphasize winning but that isn't too bad either because everything is set up on that basis for life anyway. We realize it should not be to an extent that all other things are limited either. It has been very successful in our district and we encourage it and they use our facilities. We usually maintain several baseball diamonds for their use during the summer.

A lot depends on selection of coaches on various teams. A lot depends upon individuals. It helps us [school] with some of them and is detrimental with some of the others. Overall, I would say it is helpful. Those children get quite a bit of exercise. They work with them, practice them, and keep them off the streets alot. I'd say over-all, it is helpful but poor sportsmanship and all that depends upon the coaches.

We demand here that all kids get to play as much as possible -- to participate in all athletic sports. No, there is not too much emphasis on winning, it is more so to just let them get experience.

I think it helps our program [school]. We hire a fellow in town to coach them -- the Lion's Club does. They try to give them all an opportunity to play, but here, again, the emphasis is on winning the game. Participation is good and the support. Parents are good. There is very little dissention -- of course, you're going to have some but we don't have too much. I think the only drawback that I would say -- the worst thing that I would have against it -- it puts this competitive attitude in them and they win and they learn to win -- and they win trophies and what have you and as they get on up here, it gets to be just old hat. They don't look forward to it quite as much as they would -- but on the other hand, here in our situation, I think our baseball program here in school has been helped by it quite a bit and we haven't run into the problem here. Smaller schools are sort of unique here.

It is much different here than many places that I have been -- and I feel that we as much as anyone emphasize the total number -- that is all the children. Of course you would have to say, at least I would have to say, that too much emphasis is placed on winning -- but I'm proud that we have some people working with it that have been with this same program every since it started. As you get different people to coach, sometimes winning becomes too important, but we are better than most communities.

The coach we had was the boys' junior high coach before and he played every boy who played. He didn't play just to win. It was a good healthy atmosphere, and all the boys were down here early each morning for practice. The parents got out and had a rummage sale and sold cokes to buy suits for the boys -- and parents backed it 100 percent.

To me, in the summertime winning is what we're here for. When you're in a league that's league competition and I'm out to win, but there is a stipulation -- that you play everybody, so after all you've still got to include everybody.

It's strictly winning -- very few take part in that program [Little League], just the better ones. Of course, when I play my games here [school], that's my philosophy -- let's win -- but, we've got other things that go along with that, too. I don't believe it's worthwhile unless we instill a winning attitude within a child.

Unfavorable attitudes were expressed as follows:

The civic program was put into effect primarily to help the high school athletic program. I doubt if it's reaching its goal. We have meetings quite often and the coaches [school] feel the students have too much glory when they're young and thus, they have gone through these championship experiences, etc. and parents get more excited than they do for high school. Coaches [school] are questioning this program on two counts. One, the fact students have already experienced things normally reserved for high school students and secondly, the coaching is generally poor.

Parents run it and coach it -- suppose to be a thing where everyone gets to play and I think everyone does but it is still highly competitive. Arguments -- parents and kids get disgusted -- little kids do while parents are arguing. We think this thing is killing our high school baseball program. Only conclusion we can come to is that they are getting burned out on it. When they are little, their parents are pushing them into it and when they get up into high school, they won't come out because they've been playing maybe six years and won't take it. We have trouble getting out 10-12 kids. This use to be a baseball town and would have 300 running around here in the summer.

It is not run the way that I like it to be. My philosophy is that every child play, every child participate -- but, the coach wants to win. We've had several discussions.

Parents cause problems in coaching. [This same individual discussed with the writer a situation where a father came out on the field drunk one evening and chased the boys around the bases.]

I'm against Little League in one thing only -- baseball. They get too big of play in the paper and when they get out there to play and get in competition, they get discouraged and quit. Their parents are the ones that are coaching them and they, 90 percent, don't know what they're doing. In football, here, we're fortunate enough to have parents who are coaching it who know more what they're doing. We have a fellow who runs it who has played a lot of football, is on the Board of Education, and he comes over and gets our fundamentals -- what we taught. Much better than baseball.

Not enough discipline measures -- they do what they want and this carries over into school. They come down here and feel like they can do here what they do out there. When I blow the whistle, I mean for them to listen to me, but when they [Little League coaches] talk, some of the kids are scuffling, others are talking, etc. Most of the training they get is bad training for this reason -- I have heard the individuals go out and curse and use abusive language. Now the kids pick this up -- I know, I've called some of the ballgames -- this is no good. You've got to have someone out there with authority. It isn't the idea of winning or losing, it's the idea of getting along with other kids, etc. and learning to play as a group and the character you build among the kids.

It changes [in regard to emphasis in program]. It has always been on winning, but this last year, it has been chaos. A bunch of the fathers have taken it over. I don't know what they're trying to do. The school is staying clear of it. We don't want any part of that kind of business. They've been trying to turn it over to us. The only thing we are doing is we have two lighted fields and they take our equipment from our physical education and interscholastic sports programs at the high school and elementary schools and we furnish the field and equipment and furnish the electricity. It is their job to hire their own coaches and get the transportation. This program used to be a real good one, except, it didn't include girls. We used to win but we also played among ourselves -- everyone got to participate. It could be that way now. Now, they're not trying to win particularly and they're not playing everybody. I don't know what they're trying to do. A poor summer program will hurt you worse than no program from a coaching standpoint.

I feel like there is too much of this emphasis that I want to win -- but, I feel that when you have parents coaching it, there is too much emphasis to win

all the time, other than let them learn the skills for later on. It's ridiculous!

It takes us nine weeks after school has started in order to build the sportsmanship and attitude toward games that is completely lost during the summer. It is just ridiculous! There is not one of the coaches (school) that would tell you that the way we get our kids back is that we don't put up with parents hollering at our kids and we don't put so much pressure on the kids that they cry if they don't win -- and sportsmanship just goes to pot. They see their parents get upset and go out and chew out the Little League umpires and pretty soon they, themselves, think they can mouth about a decision and so things just go to pot. It is a point of contention with school people and I am sorely ashamed of people of my age, charging out onto a baseball field after a little ole high school boy -- they hire these little ole high school boys for \$3 a game and they're doing the very best they can -- and charge out there and chew them out and the mothers get mad at the coaches. It really tears me up!

Little League programs have been a very controversial issue in many communities. As the above quotations have revealed, the controversy is far from being solved. Some communities appeared to be running a fine program with quality leadership but others, just the opposite. Most of the problems (where they existed), centered around parents, attitudes toward winning, participation, and conflicts with objectives of the school within the community.

It is the desire of the writer that the results that have been shown in this chapter have caused each reader to have a better understanding of physical education and interscholastic sports programs in grades four through six as they currently exist in Oklahoma. It is hoped that attitudes concerning each of these programs will be re-evaluated as a result of the findings of this study.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This study has revealed data that will give interested individuals a better understanding of the status of physical education and interscholastic sports programs in grades four through six within the state of Oklahoma. There are many controversial issues pertaining to this subject and even though the data in this paper sheds many informative ideas on these issues, many individuals will continue to hold to their way of thinking in regard to what is best for children of this age.

In chapter two, much information was revealed in regard to the pros and cons of physical education and interscholastic sports programs for children between the ages of eight and twelve. However, the writer did not really realize the differences of opinions of school officials on this subject until he had confronted them face to face. An education in itself was awaiting him at each school he visited. The writer has gained many valuable insights into the controversies involved in this subject area and has made plans to use these in teaching future physical education teachers at the college where he has been employed.

The writer not only obtained valuable information concerning this area of study but much value was gained by meeting and visiting with professional teachers and administrators throughout

the state and viewing the many different types of facilities being used. The administrators and teachers visited were certainly very kind and generous people and it made the writer very proud to be a part of the teaching profession.

Conclusions

On the basis of the data collected in this study, the following conclusions were made:

(1) In regard to the status of physical education and interscholastic sports programs in grades four through six in Oklahoma, the writer found the following factors: an average of 75 percent of the elementary school districts stated that they had physical education in existence and 25 percent of these school districts designated that they had no programs in existence; an average of 56 percent of the school districts participated in interscholastic sports while 44 percent were not participating in interscholastic sports; a majority of school districts offered physical education five days a week (58 percent) while three days a week was the next most popular time frequency (22 percent); the most popular amount of time for each class period in physical education was 30 minutes with 40 minutes per class being the second most popular; 55 percent of the school districts that participated in interscholastic sports scheduled practice after school hours and 45 percent during school hours; the most popular interscholastic sports were basketball, baseball, football, track, softball, and wrestling, respectively; 56 percent of the school districts desired that physical education increase and interscholastic

sports decrease, three percent desired interscholastic sports to increase and physical education to decrease; physical education and interscholastic sports programs varied in the length of time in existence -- 27 percent being in existence nine years or over, 27 percent in existence for three to four years, 21 percent for one or two years, 15 percent for five to six years, and 10 percent with seven to eight years existence.

The remaining conclusions are involved with the sub-problems of the study:

(2) The values that were placed at the top and bottom as to order of importance to their programs by administrators and teachers were statistically significant within the separate classes of physical education, interscholastic sports, and combination programs. For example, development of physical fitness, development of good mental and emotional health, and development mentally and physically with growth were values listed high on all three classification rankings, while decreased absence from school, decreased absences from school, decreased juvenile delinquency, and better high school and college player development were values which appeared at the bottom consistently.

(3) Physical education programs included a larger number of skills than interscholastic programs. Thus, students in physical education received more variety in their training than students in interscholastic sports programs. Programs with both physical education and interscholastic sports (combination) also offered more skills and variety than interscholastic programs but were not significantly different than physical education

programs. For example, physical education schools were offering an average of 7.43 skills, interscholastic sports schools an average of 5.14, and combination schools averaged 8.64.

(4) In the sports of basketball and baseball, all three classifications of schools (physical education, interscholastic sports, and physical education and interscholastic sports combination) won more games than they were losing at the .05 and .01 levels of confidence. However, in football, schools with physical education programs won more (significant at .05 level of confidence) than schools with only interscholastic sports programs. The latter schools lost more games in this sport (significant at .05 confidence level). Thus, the arguments used by proponents of interscholastic sports programs that they produce winning teams and better players when they reach junior and senior high school proved to be fallacious. Physical education schools did not win more than schools in other classifications in basketball or baseball, but they won more in football as compared to the interscholastic sports programs. (No statistics were run on combination programs as only two schools played football.)

(5) There was more student participation in physical education programs than in interscholastic sports programs. Schools with the combination program of physical education and interscholastic sports included more students in their program as compared to the interscholastic sports program.

(6) Injuries were not a serious problem within any of the three classification. Percentages of injuries were much lower

than the writer had expected. Mild sprains, severe sprains, and broken bones were the injuries that occurred most frequently in all classifications. In all three classifications, the injuries occurred at approximately the same rate of incidence. The most serious injuries occurred on the playgrounds during recess periods according to the administrators.

(7) Schools differed mostly in indoor facilities as compared to outdoor surroundings. Proportionately, more smaller schools (below 500 students) had gymnasiums than larger schools for children in grades four through six to use. This was one of the main reasons why larger schools had a difficult time coordinating any type of physical education or interscholastic sports program.

(8) Classroom teachers that had not been specially trained to conduct physical education and interscholastic sports programs carried most of the load of instructing children in grades four through six in the activity areas.

(9) The length of time per period and the number of days per week were inadequate in most schools as far as physical education was concerned. Interscholastic sports programs made better allowances for their students in relation to minutes per day activities were offered and the number of days per week the periods were held.

(10) Baseball was the most popular Little League sport. Communities were involved in this sport more than any other with football ranked second and basketball, third.

(11) Parents were involved in most of the coaching chores in Little League programs with school coaches or classroom teachers,

high school or college boys, and interested men of the community doing most of the coaching when parents were not at the helm.

(12) Administrators and school officials were divided on the value of Little Leagues. Many were very bitter toward the programs and others were quite satisfied.

(13) In general, the writer felt that the results taken from the questionnaires sent out in the Fall of 1968, depicted an accurate picture of the majority of the 50 schools visited. Some school officials did not know just what a true physical education program consisted of, as a few felt that an interscholastic sports program in grades four through six was the same as physical education.

Recommendations

A few schools in Oklahoma (grades four through six) are doing a fine job in administering physical education programs, but many are accomplishing very little (in some instances nothing is being done). It appears, then, that most children in grades four through six in Oklahoma are not getting an adequate physical education program.

On the basis on the writer's experiences, interviewing of administrators, and survey of related literature, recommendations are:

(1) The existent physical education and interscholastic sports programs throughout the state should be regularly evaluated by administrators and coaches to determine if the values sought by each program are being achieved.

(2) Physical education programs for all students should be offered in all schools at all levels with a variety of skills taught.

(3) Interscholastic sports activities should be kept to a minimum in grades four through six and more emphasis placed on physical education and intramural programs at this level.

(4) All schools offering a physical education and/or interscholastic sports program should hire a qualified instructor to teach in these programs.

(5) Physical educators should be hired to supervise and instruct elementary children on the playground during the recess periods. The writer feels better organization and supervision would decrease the number of injuries occurring on the playgrounds as regular classroom teachers will not always realize the dangers involved in certain activities.

(6) All elementary schools should have a gymnasium for their children. Outdoor facilities should also be spacious and attractive and utilized when weather permits.

(7) Each child in grades four through six should be allowed to have some type of organized physical activity five days each week for a period of 30 to 50 minutes.

(8) Physical education teachers and administrators should be certain that boards of education realize the differences in physical education and interscholastic sports programs.

(9) Elementary schools having interscholastic sports in their programs should supplement these programs with physical education to obtain the best results.

(10) In programs consisting of both physical education and interscholastic sports, physical education should be scheduled during school hours and interscholastic sports after school hours.

(11) Little League programs should be taken over by the school system and run by qualified physical education instructors and/or coaches where they continue to exist.

(12) For a summer program to replace Little Leagues and create a more ideal situation for communities, the writer recommends that civic groups spend their money to build several large recreation fields throughout their city or community, and hire qualified men and women to run a program of activities where children have more freedom to play and everyone gets to play. In dealing with competition at this grade level (four through six), the writer recommends that parents be phased out of the program as much as possible, if not entirely.

Recommendations for Further Study

The following recommendations for further study are offered as a result of this study:

(1) a study should be carried out to compare physical education and interscholastic sports programs at the junior high school level. It would be interesting to correlate this elementary study with the junior high school study.

(2) It would be interesting to have a longitudinal study carried out on two groups of students, half of them in physical education classes only and half in interscholastic sports programs only. The study should cover the elementary through high school years.

(3) A more detailed study should be made involving injuries to players of various ages in specific sports. This study also

should be on a longitudinal basis in order to gather accurate data.

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APPENDIX A

QUESTIONNAIRE TO ELEMENTARY SCHOOL DISTRICTS
IN THE STATE OF OKLAHOMA

November, 1968

Mr. John Doe
Public Elementary School
Home Town, Oklahoma 00000

Dear Sir:

It is the purpose of this questionnaire to seek information concerning physical education and interscholastic sports programs in grades four through six in all elementary school systems in the state of Oklahoma. This information will be used by the writer in a doctoral thesis at Oklahoma State University. It would certainly be appreciated if you would take five minutes of your time to answer the questions and send them back as soon as possible in the enclosed self-addressed and stamped envelope. In order that a classification of elementary schools in the state can be set up for sampling purposes, it is very important that we get information back from all school systems.

In order to avoid confusion of terminology, the following "definition of terms" are presented to aid you in making decisions in answering the questions.

- (a) Physical Education -- directed, purposeful activity provided for all youngsters through a specifically assigned instructional period. This excludes the practicing of varsity sports during this period.
- (b) Interscholastic Sports -- competitive sports activities between schools.

Questions: (Please circle the appropriate answer for your school system.)

- I. The student population of your elementary school system is: a. below 250 b. between 250-500 c. between 500-1000 d. over 1000
- II. Does your elementary school system have physical education for grades 4-6? a. yes b. no
- III. Does your elementary school system participate in interscholastic sports in grades 4-6? a. yes b. no

If your answer was yes to Question 2, please answer the following:

- IV. Does your elementary school system employ special physical education instructors to teach in this area?
a. yes b. no
- V. How many days per week is physical education taught to each student? a. one b. two c. three d. four e. five
- VI. Each period of physical education consists of approximately: a. 20 min. b. 30 min. c. 40 min. d. 50 min. e. 60 min.

If your answer was yes to Question 3, please answer the following:

- VII. Does practice for interscholastic sports occur:
a. during school hours b. after school
- VIII. Circle each of the following sports participated in by grades 4-6: a. football b. basketball c. baseball d. wrestling e. other -- specify _____
- IX. In regard to your own feelings, which of the following situations would you like to see occur in your elementary school system in the future? a. PE increase and interscholastic sports decrease b. interscholastic sports increase and PE decrease c. both increase d. both decrease

Everyone please answer the following questions:

- X. How many years have grades 4-6 participated in the current program? a. one or two years b. three or four years c. five or six years d. seven or eight years e. nine years or over
- XI. Would you be willing to visit with the writer concerning your program if he were to visit your elementary school system in the near future? a. yes b. no
- XII. Would you like a copy of tabulated results and conclusions from this study upon its completion? a. yes b. no
- XIII. Do civic groups in your city or community sponsor competitive sports programs for children in grades 4-6?
a. yes b. no

If your answer was yes to Question 13, please answer the following:

- XIV. The coaches of these teams are predominately: a. parents b. trained PE instructors c. men of specific civic groups d. other -- specify _____

- XV. Sports that are sponsored by civic groups are: a. football b. basketball c. baseball d. wrestling
e. other -- specify _____

Thank you very much for your cooperation in filling out this questionnaire. If I can ever be of service to you in regard to information concerning this study, please feel free to contact me in c/o Oklahoma Christian College, Oklahoma City, Oklahoma where I am on the faculty. Also, if you feel the need to explain your program further in any way (especially if you feel you have a unique program), use the remaining space to write this explanation.

Sincerely yours,

Max Dobson

APPENDIX B
DATA FROM QUESTIONNAIRE RESULTS

DATA FROM QUESTIONNAIRE RESULTS

QUESTION II

DOES YOUR ELEMENTARY SCHOOL SYSTEM HAVE
PHYSICAL EDUCATION FOR GRADES
FOUR THROUGH SIX?

Enrollment	Yes	No
Below 250	.85	.15
250-500	.77	.23
500-1000	.71	.29
Over 1000	.67	.33

QUESTION III

DOES YOUR ELEMENTARY SCHOOL SYSTEM PARTICIPATE
IN INTERSCHOLASTIC SPORTS IN
GRADES FOUR THROUGH SIX?

Enrollment	Yes	No
Below 250	.75	.25
250-500	.60	.40
500-1000	.51	.49
Over 1000	.38	.62

QUESTION IV

DOES YOUR ELEMENTARY SCHOOL SYSTEM EMPLOY
SPECIAL PHYSICAL EDUCATION INSTRUCTORS
TO TEACH IN THIS AREA?

Enrollment	Yes	No
Below 250	.45	.55
250-500	.58	.42
500-1000	.57	.43
Over 1000	.62	.38

QUESTION V

HOW MANY DAYS PER WEEK IS PHYSICAL EDUCATION
TAUGHT TO EACH STUDENT?

Enrollment	Number of Days				
	One	Two	Three	Four	Five
Below 250	.01	.04	.12	.07	.75
250-500	.01	.19	.29	.03	.49
500-1000	.04	.14	.29	.07	.46
Over 1000	.03	.10	.17	.07	.62

QUESTION VI

MINUTES IN EACH PHYSICAL EDUCATION PERIOD?

Enrollment	Number of Minutes				
	20	30	40	50	60
Below 250	.11	.33	.22	.23	.11
250-500	.09	.43	.23	.19	.06
500-1000	.22	.37	.33	.04	.04
Over 1000	.30	.33	.07	.11	. .

QUESTION VII

DOES PRACTICE FOR INTERSCHOLASTIC SPORTS
OCCUR DURING OR AFTER SCHOOL HOURS?

Enrollment	During School	After School
Below 250	.80	.20
250-500	.67	.33
500-1000	.48	.52
Over 1000	.26	.74

QUESTION VIII

SPORTS PARTICIPATED IN BY GRADES
FOUR THROUGH SIX?

Enrollment	Football	Basketball	Baseball	Softball	Track	Wrestling
Below 250	.12	1.00	.54	.21	.24	.01
250-500	.41	1.00	.38	.13	.27	.05
500-1000	.43	.95	.33	.10	.24	.05
Over 1000	.44	.88	.25	.06	.31	.19

QUESTION IX

SITUATION PERSONALLY DESIRED IN YOUR
ELEMENTARY SCHOOL IN FUTURE?

Enrollment	PE Increase IS Decrease	IS Increase PE Decrease	Both Increase	Both Decrease	Stay Same
Below 250	.38	.04	.43	.01	.14
250-500	.63	.01	.30	. .	.05
500-1000	.55	.03	.26	.03	.13
Over 1000	.68	.04	.14	. .	.14

QUESTION X

HOW MANY YEARS HAVE GRADES FOUR THROUGH SIX
PARTICIPATED IN THE CURRENT PROGRAM?

Enrollment	Number of Years				
	1-2	3-4	5-6	7-8	9-Over
Below 250	.25	.24	.13	.06	.32
250-500	.23	.32	.08	.10	.26
500-1000	.17	.29	.14	.17	.23
Over 1000	.17	.23	.26	.09	.26

QUESTION XIII

CIVIC GROUPS SPONSOR COMPETITIVE SPORTS
PROGRAMS FOR GRADES FOUR THROUGH SIX?

Enrollment	Yes	No
Below 250	.43	.57
250-500	.65	.35
500-1000	.69	.31
Over 1000	.90	.10

QUESTION XIV

COACHES OF TEAMS ARE PREDOMINATELY?

Enrollment	Parents	Coaches of Teams		Other
		PE Instructors	Civic Group	
Below 250	.63	.13	.16	.08
250-500	.63	.12	.21	.04
500-1000	.54	.11	.35	. .
Over 1000	.71	.02	.17	.10

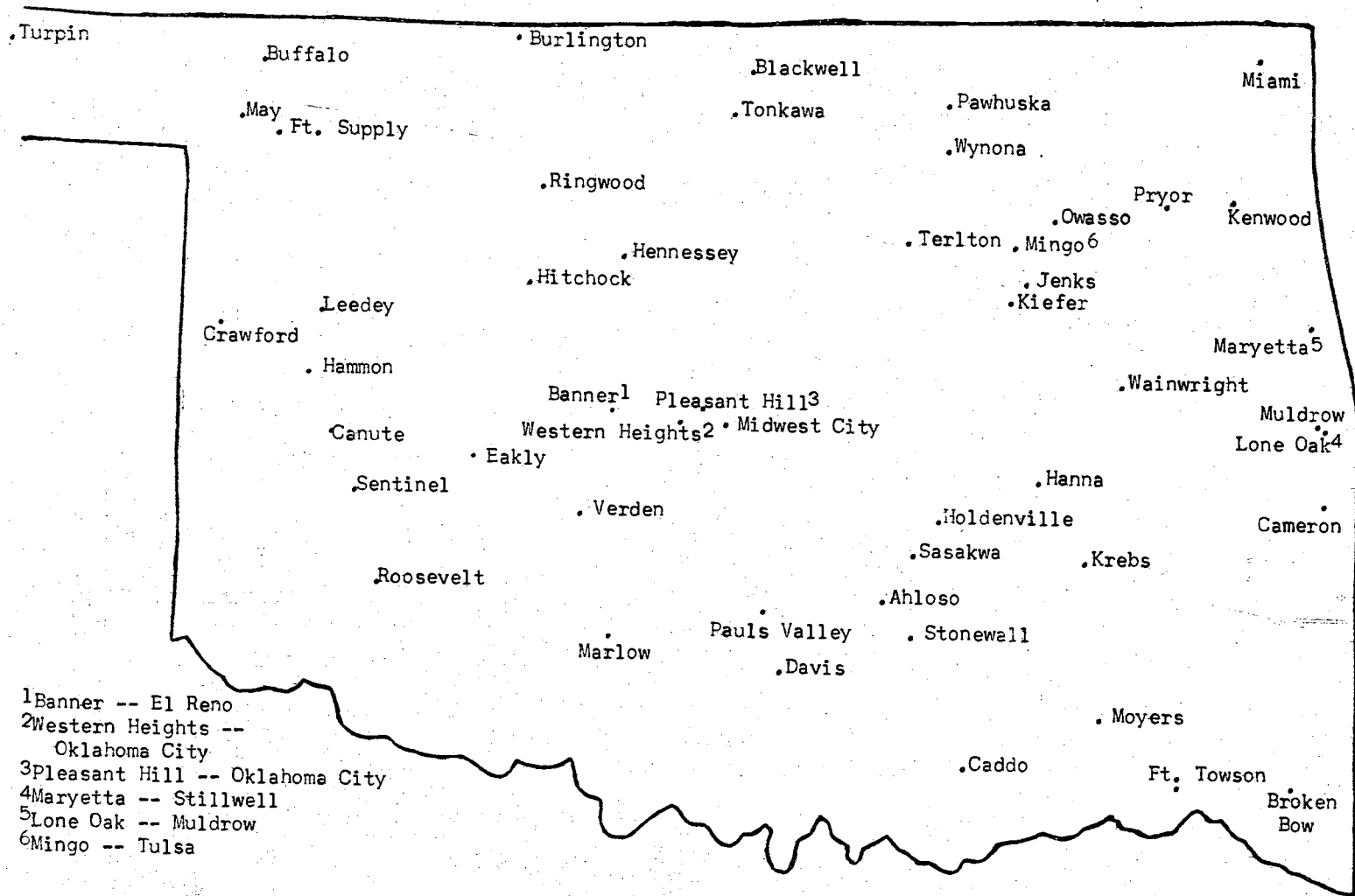
QUESTION XV

SPORTS SPONSORED BY CIVIC GROUPS?

Enrollment	Foot- ball	Basket- ball	Track	Base- ball	Soft- ball	Wres- tling	Swim- ming
Below 250	.16	.14	.03	.85	.03	.02	.03
250-500	.27	.15	.03	.87	.03	. .	. .
500-1000	.41	.26	.04	.74	. .	.04	.07
Over 1000	.50	.49	.03	.95	.05	.19	.03

APPENDIX C

OKLAHOMA MAP WITH GEOGRAPHIC LOCATIONS
OF SCHOOLS VISITED IN THE STUDY



APPENDIX D
STANDARD EVALUATION FORM

STANDARD EVALUATION FORM

School _____ Number of years of current program _____
 Principal _____ City or rural address _____
 Enrollment _____ Type of program _____
 Person Interviewed _____ Position _____

I. Rank in numerical order the importance of the values listed below in relation to the particular program you are offering your students. The rank of "1" will be the highest, thus, a rank of "12" or "13" would be considered fairly low. If you feel that your program offers values that are not listed, feel free to add others and rank them also. There are 16 values listed below, therefore, rank from 1 to 16.

<u>VALUES</u>	<u>RANK</u>
a. Physical fitness	_____
b. Develops above average athletes	_____
c. Increases skill range and accuracy in a variety of activities	_____
d. Stimulates children quite extensively	_____
e. Increases knowledge and judgment	_____
f. Creates more challenging activities	_____
g. Develops better use of leisure time	_____
h. Aids in defeating juvenile delinquency	_____
i. Develops attitudes and appreciations toward physical activities	_____
j. Develops school spirit	_____
k. Develops good mental and emotional health	_____
l. Develops competitive attitudes in children	_____
m. Develops good sportsmanship	_____
n. Develops better high school and college players	_____
o. Decreases absence from school	_____
p. Allows students to advance physically and emotionally as their growth increases	_____

II. Check the following skills that you feel your program is offering the students.

a. Basketball	_____	j. Swimming	_____
b. Volleyball	_____	k. Dodgeball	_____
c. Tennis	_____	l. Soccer	_____
d. Bowling	_____	m. Football	_____
e. Tumbling	_____	n. Softball	_____
f. Trampoline	_____	o. Baseball	_____
g. Rope jump	_____	p. Track and field	_____
h. Rhythms or dance	_____	q. Games of low organization	_____
i. Outdoor camping	_____		

List below any skills that you feel your program is offering the students that are not listed above.

r. _____	u. _____
s. _____	v. _____
t. _____	w. _____

III. Fill in the won and lost records in the specific sport. If your program has been in operation three to six years, fill in only the junior high school records. If your program has been in operation seven years or over, fill in only the high school records (boys only).

<u>HIGH SCHOOL RECORD</u>			
<u>Year</u>	<u>Sport</u>	<u>Won</u>	<u>Lost</u>
1965-66	Basketball	_____	_____
1965-66	Football	_____	_____
1965-66	Baseball	_____	_____
1966-67	Basketball	_____	_____
1966-67	Football	_____	_____
1966-67	Baseball	_____	_____
1967-68	Basketball	_____	_____
1967-68	Football	_____	_____
1967-68	Baseball	_____	_____
1968-69	Basketball	_____	_____
1968-69	Football	_____	_____
1968-69	Baseball	_____	_____

For those filling in the junior high school records, if your program has been in operation only three years, fill in only 1968-69; if for four years, fill out 1967-68 and 1968-69; if for five years, fill out 1966-67, 67-68, and 68-69; if over six years, fill out all the years.

<u>JUNIOR HIGH SCHOOL RECORD</u>			
<u>Year</u>	<u>Sport</u>	<u>Won</u>	<u>Lost</u>
1965-66	Basketball	_____	_____
1965-66	Football	_____	_____
1965-66	Baseball	_____	_____
1966-67	Basketball	_____	_____
1966-67	Football	_____	_____
1966-67	Baseball	_____	_____
1967-68	Basketball	_____	_____
1967-68	Football	_____	_____
1967-68	Baseball	_____	_____
1968-69	Basketball	_____	_____
1968-69	Football	_____	_____
1968-69	Baseball	_____	_____

IV. Estimate the approximate percentage of boys and girls in your system that participate in your program. (Also, state actual number.) (If both programs, state separately.)

	<u>Number</u>	<u>Percent</u>
Students in interscholastic sports programs	_____	_____
Students in physical education programs	_____	_____

V. As it is possible for you to recall, please estimate the percent of injuries (on a 100 percent basis) occurring during the past three years in each of the following sports. If you have only physical education programs, fill in only PE column. If you have only interscholastic sports, fill in only for those sports. If you have both programs, complete both areas. If you have been in the school less than three years, give amount of time that you have been employed _____.

<u>Injuries</u>	<u>Basketball</u>	<u>Baseball</u>	<u>Football</u>	<u>PE</u>
a. Broken bones	_____	_____	_____	_____
b. Severe sprains	_____	_____	_____	_____
c. Mild sprains	_____	_____	_____	_____
d. Knee injuries	_____	_____	_____	_____
e. Mouth injuries (involves teeth)	_____	_____	_____	_____
f. Head injuries	_____	_____	_____	_____
g. List other types:	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Total	100%	100%	100%	100%

During the past three years estimate the percent of injuries (on a 100 percent basis) that you would consider of permanent or temporary nature. Permanent _____ Temporary _____

VI. On a yearly basis, approximately how much money is budgeted for your specific type program? _____ Do you feel that this is sufficient? _____

If you have both interscholastic sports and physical education in grades four through six, how much money is proportioned for each of these? PE _____ IS _____

VII. Facility Evaluation

OUTDOOR AREAS (Maximum score = 24 points)

1. Total available playground space or field area includes from one to five acres, according to size of school, (Minimum of one acre, with an additional acre for each added unit = 2 points; minimum with additional acre for each 400 students = 4 points; minimum with additional acre for each 300 students = 6 points) Score _____

2. Field and court areas are surfaced with materials that are non-abrasive, resilient, non-slippery, firm, and as nearly dustless as possible (includes good turf, hard packed dirt, etc.), and has good drainage slope for rainy weather. (Fair surface = 2 points; good = 4 points; excellent = 5 points) Score _____
3. Field areas are kept clean and well marked, and are without hazardous obstructions; and apparatus is protected by sawdust, sand or shavings. (Fair condition = 1 point; good = 2 points; excellent = 3 points) Score _____
4. All play areas are fenced off from streets with subdivision fences where necessary for safety and control; and are made attractive by vine, tree, or shrubbery borders. (Standards approximately met = 1-2 points; fully met = 3 points) Score _____
5. Playground is kept open after school hours and on Saturdays for general play of school children, under supervision of trained teacher or playground director. (Standards approximately met = 2-4 points; fully met = 6 points) Score _____

INDOOR AREAS (Maximum score = 18 points)

1. One or more indoor recreation halls or gymnasiums (size proportionate to classes and enrollment) are provided for certain activities and for rainy weather, with non-slippery floors; lines properly painted, walls smooth and clear; radiators and drinking fountains recessed; and light, heat, ventilation, and acoustics properly cared for. (Standards approximately met = 24 points; fully met = 6 points) Score _____
2. Dressing and shower rooms are provided for grades four through six (adjoining gymnasium), with free floor space (exclusive of lockers) adequate to care for peak load use. (Standards approximately met = 2 points; fully met = 3 points) Score _____
3. Toilet facilities area available immediately adjoining dressing rooms and accessible directly to the playground; containing adequate bowls, urinals, washbasins, hot and cold water, soap dispensers, drinking fountains, mirrors, paper towels, etc. (Standards approximately met = 1-2 points; fully met = 3 points) Score _____
4. An equipment and supply office, suitable for use by consulting physical education supervisor, is equipped for storing and issuing class and playground supplies. (Fair office = 1 point; good = 2 points; excellent = 3 points) Score _____

5. Well-equipped rest rooms for instructors are provided.
 (Fair rooms = 1 point; good = 2 points; excellent = 3 points) Score _____*

VIII. Sports that Little Leagues are sponsoring in the community for children in grades four through six should be listed below. Explanations should include: types of coaches, selection of players, goals of program, number of years in operation, hours of practice, and does everyone get to play, etc.

<u>SPORT</u>	<u>EXPLANATION</u>
1.	
2.	
3.	
4.	

IX. General questions regarding current program:

1. Who is in charge of the program (coach, PE teacher, teacher)? _____
2. How many minutes each day are allowed for your program?

3. List any changes that are planned in the near future.

VITA /

Max L. Dobson

Candidate for the Degree of

Doctor of Education

Thesis: AN INVESTIGATION OF THE STATUS OF PHYSICAL EDUCATION
AND INTERSCHOLASTIC SPORTS IN GRADES FOUR THROUGH SIX
IN THE STATE OF OKLAHOMA

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Biographical:

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Recreation, Oklahoma Christian College, 1967-70; Chair-
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