DOCUMENT RESUME

ED 083 153 SP 006 938

AUTHOR Stier, William F., Jr.
TITLE An Overview of Organized Athletic Competition Among Pupils of Elementary School Age.
PUB DATE Feb 73
NOTE 18p.; Speech presented to Senior Physical Education Majors at Shepherd College, Shepherdstown, West Virginia

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Athletic Programs; *Child Development; *Elementary Education; Injuries; *Literature Reviews; Males; *Physical Education; Physiology; Social Factors

ABSTRACT

In 1952 the American Association for Health, Physical Education, and Recreation (AAHPER) recommended that interschool competition be disapproved for children below the ninth grade; recent AAHPER surveys, however, indicate that highly organized athletic competition exists for today's elementary youth. Although no studies have been made on the long-range effects of athletics on youth and other research results are contradictory, there is evidence that vigorous physical activity for young boys can be beneficial. There is no hard evidence that it is detrimental. Each specific program should be individually evaluated with respect to its potential output in any given situation. Moreover, physical activity must be accompanied by exemplary supervision, both medical and educational. (This speech provides an extensive review of the literature on the physiological and sociological aspects of elementary school athletics and its potential injury problems.) (JA)

AN OVERVIEW OF ORGANIZED ATHLETIC COMPETITION AMONG PUPILS OF ELEMENTARY SCHOOL AGE

A speech

Presented To The

Senior Physical Education Majors

at

SHEPHERD COLLEGE

Shepherdstown, West Virginia

by:

Dr. William F. Stier, Jr., Chairman of the Department
of Physical Education (Saint Mary's College, Winona, Minn.)
February 22, 1973

TABLE OF CONTENTS

Chapter 1

INTRODUCTION TO THE PROBLEM

The question of whether or not children, those who have not yet progressed to the secondary level of education in the United States, should be allowed and/or encouraged to partake of the entire spectrum of organized athletic competition is one of controversy in today's society. The fact that such physical activities can be provided by either school authorities or by nonschool organizations is of secondary importance. Rather, the question, the concern, is with the physical activities themselves, the circumstances surrounding them, and the result of participation in such activities. Authorities and parents alike have split as to their position on this sometimes violent, always pertinent, issue.

Although some school administrators, teachers, and parents react favorably and align themselves behind such programs as interschool athletic competition, the issue is certainly far from impotent.[1] In fact, the topic of athletic participation for elementary students has been under investigation for over thirty years, with the result being a discernible shift not only in the position taken by the recognized experts in the field, but also in the emphasis given to the concept.

The American Association of Health, Physical Education and Recreation Committee on Athletics for Children recommended in 1952 that interschool competition of a varsity pattern sponsored by either the schools or by nonschool agencies be definitely disapproved for

children below the ninth grade.[2] Other bodies of authorities on "child care" have not aligned themselves with the 1952 AAHPER committee's approach. The Educational Policies Commission stated its concern in 1954 that participation in sound athletic programs contributes materially to the physical, emotional, social and moral development of children and that the experience of participating in athletic activities should be a part of the education of all children and youth.[3] Numerous other policy statements have been issued by other professional groups, educational as well as medical, and the statements have gravitated toward the conservative side of the spectrum.[4]

In light of the increased concern in respect to the seemingly increasing participation in such activities for children below the high school level, a committee was formed to represent the American Association of Health, Physical Education, and Recreation and the Society of State Directors (Health, Physical Education, and Recreation) in an attempt to re-examine the problems of athletic competition at this age level. In its initial groundwork, the committee created a goal of determining with specificity the actual extent of the current practice of interschool athletics for elementary students. In light of this objective and in direct consequence, the committee undertook a nationwide study (questionnaire) of elementary schools in both urban and rural areas to determine the extent and nature of competitive athletic programs for boys of elementary school age. Girls were excluded from the study as a review of existing literature indicated that the problems associated with athletic competition at that time was not relevant to the female sex at this age level due to the disparity of

the numbers of such programs in existence. The survey indicated that a significant number of programs were in existence for young boys to warrant further investigation as to the effects of organized athletic competition among young children.[5] An additional indication that such activity was in existence can be found in an earlier report prepared by Schneider, who concluded that 44% of the 523 urban areas (above 10,000 population) investigated had interschool, interplayground, or inter-agency athletic competition for boys beginning in the third, fourth, fifth or sixth grades.[6]

Chapter 2

REVIEW OF RELATED LITERATURE

Realizing that highly organized athletic competition is in existence for today's elementary youth, it is appropriate to scan or review the literature in an attempt to determine whether such activity is shown to have an appreciable effect upon the individual child in respect to physiological effects or physical growth; social and emotional growth and adjustment; and finally, in regard to the potential injury problem.

PHYSIOLOGICAL ASPECTS

Seham and Seham concluded, in their study dealing with six to fifteen year old youngsters who rode the bicycle ergometer until near exhaustion, that although nausea followed, dilatation of the heart was not noted, and all subjects recovered completely in a few hours.[7] In a similar study, Morse had young boys run on a treadmill until exhausted and revealed that the older boys possessed greater ability to sustain exhausting exercises than did the younger subjects.[8] That the working capacity of young boys indicated an increase almost linearly with age and in changes in the body size was concluded by Adams who subjects ranged from six to twelve years of age.[9] Rowe, in his investigation of growth comparisons of nonathletes with athletes, and Fait, who conducted a more recent analytical investigation of the effects of athletics, indicated that in the early pubertal years the growth of

a boy may be adversely affected by interscholastic sports of six months duration or more.[10]

A study which fails to substantiate the above conclusion is that of Shuck who reported that the growth trends of seventh, eighth, and ninth graders, who participated in sport activities, were no different from youngsters who failed to participate.[11] However, he did indicate an apparent retardation in growth of seventh and eighth grade boys who were involved in seventeen games in contrast to those individuals who were involved in only twelve games in the season.

Relinquishing the attempt to investigate the cause or effect type of relationship existing between participation and physiological characteristics, two investigators revealed that participants were anatomically and physiologically advanced over non-participants of the same chronological age.[12] This included skeletal maturity. One who does not relinquish his opportunity to voice an opinion on the "cause or effect" position is Clark who concludes that there is an apparent selective factor at work which not only attracts the big, strong and mature individual into athletics but which insures his readiness for such activity over the less liberally endowed youngster.[13]

An animal investigation revealed that the body benefits from a regimen consisting of vigorous exercises.[14] This is in apparent agreement with Rarick, who worked not with lower animals but with human subjects.[15] It is important that one take note of the fact that the pertinent questions of "how much is optional or what is excessive," is not adequately treated in the two above mentioned studies.

Steinhaus found that long bone growth could be retarded somewhat by excessive weight bearing during the growing years.[16] This is possible even while growth in the bone diameter may be stimulated by the same apparent cause.

SOCIOLOGICAL ASPECTS

As children grow older, proficiency in gross motor activity assumes greater importance as is evidenced by the prestige value placed upon the skillful performance by the child's peers. In studies by Bowen and Sperling, it was determined that the self-confidence and social approval gained by the individual skilled in motor activities may be a valuable asset in personality development and social adjustment.[17] A study which substantiates the conclusions drawn in the above studies was that of McGraw and Talbert who state that boys achieve their popularity through participation in . . . athletics more than any other factor.[18]

Rarick found that students who were superior in physical skills (gained through participation) had more satisfactory scholastic adjustment than those who were inferior.[19] In respect to the emotional effects on participants in such activities as Little League baseball, in comparison to those who do not participate, Skubic utilized the Galvanic Skin Response to conclude that youngsters who participated were no more stimulated by competition in league games than they were by participation in games in physical education classes.[20] However, the investigator emphasized the point that this study delved into only

one phase of the total problem of competition (i.e., the immediate effects of competition on emotionality.

Evidently this preceding study was mistakenly understood by some as "proof" that such participation was beneficial and in fact essential for correct psychological development, for a year later Johnson[21] thought it necessary to report in the Research Quarterly concerning this article in an attempt to clarify its purpose and objectives. He suggests that we must interpret with great caution all studies related to such highly complex and poorly understood subjects as personality and emotion. The conclusion reached by Skubic only indicates that there was or was not a change in skin conductivity but does not hint at the psychological significance lying behind it.

Seymour found that participants scored slightly higher on personality traits and received significantly higher social acceptance rating from peers.[22] Saly, however, concluded that there was no significant difference in respect to the areas of personality included in his study.[23] An interesting study by Schendel revealed that on the ninth grade level, the participants were exhibiting greater qualities of leadership and social initiative; possessed more of the qualities which lead to status; were more sociable; possessed a greater sense of personal worth; had less self-doubt; fewer complaints, and were more conventional in their responses to social situations than the subjects in the non-participants group.[24]

Biddulph linked athletic ability and participants to social adjustment while athletic ability and participation have been linked by Grace with social status.[25] Similarly, Bretsch, Flowtow, McGraw

and Talbert, have shown an apparent relationship between social status or acceptance and athletic ability or participation.[26] Popularity and its direct relationship with athletic ability and/or participation has been cited by Tuddenham.[27] Stogdill and Zeleny revealed an apparent positive relationship between athletic ability and the choosing of friends.[28] Austin differed, however, and indicated that in the sixth grade, "skillful in games" was no better than sixteenth on a list of criteria for choosing friends.[29]

Mere ability in contrast to actual participation has been the center of numerous studies but the following investigations concern themselves with superiority in the acquisition of physical ability and skills and the relationship, if any, with social adjustment. Bowen, Coleman, Smart, Wellman, claim an apparent positive relationship.[30] Jones cites evidence that strength in itself is a significant factor in social adjustment of the adolescent.[31] Physique and body size have been shown to have a demonstrable effect upon adjustment and social status as well as leadership.[32]

Another investigation dealt with physicians who were also fathers of youngsters involved in Little League Play. The survey showed that 64% felt that the participation favorably affected the emotional adjustments of their sons.[33]

Some adverse findings of athletic competition at this age level are revealed in the study by Giddings who found that children demonstrated disturbed and restless sleep following highly competitive contests.[34] Similarly, Skubic revealed that one-third of the parents

(having sons who are participants) claim that their children become so excited following competition that their eating pattern was adversely affected.[35]

Participants in Little League and Middle League Baseball achieved scores in standardized inventories of social behavior and attitudes which did not differ significantly from the scores of non-participants. On the scales of social acceptance, however, the participants were determined to be more favorably accepted by their peers.[36] A more recent study dealing with behavior adjustment showed no significantly improved adjustment in first, second and third graders who had been deficient in adjustment and motor ability or skill. The six week's program had significantly affected their motor ability.[37]

POTENTIAL INJURY PROBLEMS

The number of injuries per student hour of participation (all sports) was highest among senior high students who were involved in athletics.[38] The incidence of injuries was lowest at the junior high level. It is significant that when the ratios for seventh and eighth grade boys were compared for the three types of physical activity available to students: class, intramurals and athletics, the differences were negligible. Hale's presentation of statistical evidence regarding the rate of incidence revealed that when one views the subject in light of the number of exposures (to injury), past experience does not indicate that Little League activity is significantly dangerous.[39]

Authorities have warned of the potential dangers due to injury or to permanent damage done to some part of the adolescent's body.[40] Sixty-nine per cent of the orthopedic surgeons questioned in one study indicated the susceptibility of the prepubertal years in respect to the joints which are considered to be unusually vulnerable to injury.[41] The elbow, in particular, has been the subject of several inquiries as has the total subject of bone injury.[42] Shaffer states that orthopedists are not currently in agreement that specific types of injuries to bones occur more frequently in athletics than in informal play.[43]

Chapter 3

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

It is evident, from the review of literature, that there exists no conclusive evidence to substantiate the belief that strenuous (competitive or social) physical activity is detrimental to young boys below the high school level to the extent which would warrant its exclusion from the educational scene. In fact, there is evidence which indicates that vigorous physical activity for young boys can be beneficial. However, it must be understood that there exists no data concerning the long-range effects of competitive athletics for youth.

Studies which have been cited within the review of literature must be scanned with care as athletes for the most part tend to be drawn from the larger, early maturing, fast growing boys. Bias may be built in before the study is conceived.

The determining factors in regard to the immediate and long range effect upon the elementary age child rests with the circumstances surrounding the physical activity, the nature of the activity itself, and the individual characteristics of each of the participants.

As many questions remain unanswered as to the effects of physical activity upon the elementary age student, it is recommended that each specific program, and the activities which comprise same, be individually evaluated in respect to the potential output in any given situation. Unless the physical activity can be provided under

exemplary supervision, both medical and educational, such activity should not exist. Activities should be provided which would emphasize the positive values of physical activities for the individual participant. This requires consideration of physical maturity, physique, motor development, psychological and sociological maturity.

FOOTNOTES

[1]Phoebe M. Scott, "Attitudes Toward Athletic Competition i Elementary Schools," Research Quarterly, XXIV (October, 1953), 352 61.

[2]Desirable Athletic Competition for Children (Washington, D. C.: American Association for Health, Physical Education, and Recreation, 1952), p. 10.

[3]School Athletic Problems and Policies (Washington, D. C.: National Educational Association and American Association of School Administrators, 1954), p. 7.

[4]"Statement of Policy on Competitive Athletics," Pediatrics American Academy of Pediatrics Committee on School Health, XVIII (1956), pp. 672-76; see also American Academy of Pediatrics, Report of Committee on School Health (Evanston, Illinois: The Academy, 1966), pp. 71-75; see also (White House Conference on Children and Youth), Children and Youth in the 1960's, Committee on Studies for the Golden Anniversary White House Conference on Children and Youth, Inc., 1960.

[5]Desirable Athletic Competition for Children of Elementary School Age (Washington, D. C.: American Association for Health, Physical Education, and Recreation, 1968), p. 6.

[6]Elsa Schneider, Physical Education in Urban Elementary Schools (Washington, D. C.: U.S. Department of Health, Education, and Welfare, 1959), p. 5-7.

[7]Maud Egerer Seham and G. Seham, "Physiology of Exercise in Childhood. I. A Study of Normal Children of School Age," American Journal of Diseases of Children, XXV (1923), 1; see also Maud Egerer Seham and G. Seham, "Physiology of Exercise in Childhood. II. A Study of Collapse in Normal Children" American Journal of Diseases of Children, XXV (1923), 254.

[8]M. Morse, F. Schultz, and H. Cassels, "Relation of Age to Physiological Responses of the Older Boy (10-17 Years) to Exercise," Journal of Applied Physiology, I (1949), 683-92.

[9]Forrest H. Adams, L. M. Linde and H. Miyake, "The Working Capacity of Normal School Children," Pediatrics, XXVII, (1961), 55.

[10]Floyd A. Rowe, "Growth Comparisons of Athletes and Nonathletes," Research Quarterly, IV (October, 1933), 108-16; see also Hollis Fait, "An Analytical Study of the Effects of Competitive Athletes Upon Junior High School Boys," (Unpublished Doctor's dissertation, University of Iowa, 1951), p. 15.

[11]Gilbert R. Shuck, "Effects of Athletic Competition on the Growth and Development of Junior High School Boys," Research Quarterly, XXXIII (May, 1962), 288-98.

[12]Creighton J. Hale, "Physiological Maturity of Little League Baseball Players," Research Quarterly, XXVII (October, 1956), 276-82; see also Wilton M. Krogman, "Maturation Age of 55 Boys in the Little League World Series, 1957," Research Quarterly, XXX (March, 1959), 54-56.

[13]Harrison H. Clark and Kay Petersen, "Contrast of Maturational, Structural, and Strength Characteristics of Athletes and Nonathletes 10-15 Years of Age," Research Quarterly, XXXII (May, 1961), 163-76; see also Harrison H. Clark and Morgan E. Shelley, "Maturity Structure, Strength, Motor Ability, and Intelligence Test Profiles of Outstanding Elementary School and Junior High School Athletes," The Physical Educator, XVIII (May, 1961), 132-37.

[14]H. H. Donaldson and Ruth E. Messer, "On the Effects of Exercise Carried Through Seven Generations on the Weight, Musculature and Composition and Weight of Several Organs of the Albino Rat," American Journal of Anatomy, I (January, 1932), 359-96.

[15]G. Lawrence Rarick, "Exercise and Growth," In Johnson, Warren, ed., Science and Medicine of Exercise and Sports, (New York: Harper and Brothers, 1960), pp. 259-64.

[16]A. H. Steinhaus, "Chronic Effects of Exercise," Physiological Review, XIII (1933), 103-47.

[17]P. O. Bowen, "The Relation of Physical, Mental and Personality Factors to Popularity in Adolescent Boys," (unpublished Doctor's dissertation, University of California, Berkeley, 1941), p. 24; see also Abraham P. Sperling, "The Relationships Between Personality, Adjustment and Achievement in Physical Education Activities," Research Quarterly, XIII (December, 1942), 35.

[18]L. S. McGraw and J. W. Talbert, "Sociometry Status and Athletic Ability in Junior High School Boys," Research Quarterly XXIV (March, 1953), 72-80.

[19]Lawrence G. Rarick and Robert McKee, "A Study of Twenty Third Grade Children Exhibiting Extreme Levels of Achievement on Tests of Motor Proficiency," Research Quarterly, XX (May, 1949), 142.

[20]Elvera Skubic, "Emotional Responses of Boys to Little League and Middle League Competitive Baseball," Research Quarterly XXV (October, 1955), 342-352.

[21]Johnson, Warren R., Research Quarterly, Vol. 27;245, 1956.

[22]Emery W. Seymour, "Comparative Study of Certain Behavior Characteristics of Participants and Non-Participants Boys in Little League Baseball," Research Quarterly, XXVII (October, 1956), 338.

[23]Arthur Elliot Saly, "Comparative Study of Personality of Little League Champions, Other Players in Little League and Non-Playing Peers," (Microcarded M.S. Thesis, Pennsylvania State University, 1961), p. 29.

[24]Jack S. Schendel, "The Difference Between the Psychological Characteristics of 9, 12-Year-Olds and College Athletes and Non-Participants in Athletics," (Microcarded Ed.D. Thesis, University of Oregon, 1963), p. 39.

[25]L. G. Biddulph, "Athletic Achievement and the Personal and Social Adjustment of High School Boys," Research Quarterly, XXV (March, 1954), 1; see also David K. Brace, "Sociometric Evidence of the Relationship Between Social Status and Athletic Ability Among Junior High School Boys," Professional Contributions Number 3, (Washington, D. C.: American Academy of Physical Education, 1954), 14.

[26]H. S. Bretsch, "Social Skills and Activities of Socially Accepted and Unaccepted Adolescents," Journal of Educational Psychology, XXXXIII (December, 1952), 449; see also E. A. Flowtow, "Charting Social Relationships of School Children," Elementary School Journal, XXXXVII (October, 1946), 498; see also McGraw and Talbert, Loc. cit.

[27]R. D. Tuddenham, "Studies in Reputation: III. Correlates of Popularity Among Elementary School Curriculum," Journal of Educational Psychology, XXXXII (May, 1951), 257.

[28]R. M. Stogdill, "Personal Factors Associated with Leadership: A Survey of the Literature," Journal of Psychology, XXV (1948), 35; see also L. D. Zeleny, "Leadership," Encyclopedia of Educational Research (New York: Crowell-Collier and Macmillan, Inc., 1950) p. 250.

[29]M. C. Austin and G. G. Thompson, "Children's Friendship Study of the Bases on Which Children Select and Reject Their Best Friends," Journal of Educational Psychology, III (1948), 101.

[30]P. O. Bowen, Loc. cit; see also J. C. Coleman, J. F. Keough, and J. Mansfield, "Motor Performance and Social Adjustment Among Boys Experiencing Serious Learning Difficulties," Research Quarterly, XXXIV (1963), 516; see also R. Smart and M. Smart, "Kraus Weber Scores and Personality Adjustment of Nursery School Children," Research Quarterly, XXXIV (December, 1963), 109; see also B. Wellman, "The School Child's Choice of Companions," Journal of Educational Research, XIV (November, 1926), 126.

[31]H. E. Jones, "Physical Ability as a Factor in Social Adjustment in Adolescence," Journal of Educational Research, XXXX (April, 1948, 287.

[32]P. S. Cabot, "The RElation Between Characteristics of Personality and Physique in Adolescents," Genetic Psychological Monographs, XX (1938), 3; see also Stogdill, Loc. cit.

[33]Research Division, Little League Baseball, 1,300 Doctors Evaluate Little League Baseball (Williamsport, Pa.: Little League Baseball, Inc.).

[34]G. A. Giddings, "Cited in Sleep and Children," A Report of the Joint Committee on Health Problems in Education of the AEA and AMA, 1956, p. 3.

[35]Elvera Skubic, "Studies of Little League and Middle League Baseball," Research Quarterly, XXVII (March, 1956), 97-110.

[36]Emery W. Seymour, Loc. cit.

[37]D. M. Olson, "Motor Skills and Behavior Adjustment: An Exploratory Study," Research Quarterly, XXXIX (May, 1968), 321.

[38]John A. Knutson, "Accident Rates of Elementary and Secondary School Boys Occuring in P. E. and Interscholastic Sports in the Elgin, Illinois Schools," (unpublished Master's thesis University of Wisconsin, 1960), p. 23.

[40]Wilton M. Krogman, "Child Growth and Football," Journal of Health, Physical Education and Recreation, XXVI (September, 1955), 12.

[41]Desirable Athletic Competition for Children, (Washington, D. C.: American Association for Health, Physical Education and Recreation, 1952), p. 15.

[42]J. E. Adams, "Injury to the Throwing Arm: A Study of Traumatic Changes in the Elbow Joints of a Boy Baseball Player," California Medicine, CII (1965), 127-32, 1965; see also Thomas E. Shaffer, "Athletics for Elementary School Youth," Theory Into Practice, III (1964), 95-97; see also Harvey Sigmond, "The Adolescent and Athletics, Orthopedic Aspects," Pediatric Clinics of North America, VII (1960), 165-72; see also Robert L. Larson and R. O. McMahan, "The Epiphysis and the Childhood Athlete," Journal of the American Medical Association, CLXXXVI (1966), 607-12.

[43]Thomas E. Shaffer, "Are Little Leagues Good for Children?" Pennsylvania Medical Journal, CIX (1956), 447-50.