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

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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. 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. 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. 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.

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. 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.
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. 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. 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. 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.\textsuperscript{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,\textsuperscript{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.\textsuperscript{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.\textsuperscript{13}

An animal investigation revealed that the body benefits from a regimen consisting of vigorous exercises.\textsuperscript{14} This is in apparent agreement with Rarick, who worked not with lower animals but with human subjects.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{18}

Rarick found that students who were superior in physical skills (gained through participation) had more satisfactory scholastic adjustment than those who were inferior.\textsuperscript{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.\textsuperscript{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 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. Saly, however, concluded that there was no significant difference in respect to the areas of personality included in his study. 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.

Biddulph linked athletic ability and participants to social adjustment while athletic ability and participation have been linked by Grace with social status. Similarly, Bretsch, Flowtow, McGraw
and Talbert, have shown an apparent relationship between social status or acceptance and athletic ability or participation. Popularity and its direct relationship with athletic ability and/or participation has been cited by Tuddenham. Stogdill and Zeleny revealed an apparent positive relationship between athletic ability and the choosing of friends. 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.

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. Jones cites evidence that strength in itself is a significant factor in social adjustment of the adolescent. Physique and body size have been shown to have a demonstrable effect upon adjustment and social status as well as leadership.

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.

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. 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.\textsuperscript{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.\textsuperscript{41} The elbow, in particular, has been the subject of several inquiries as has the total subject of bone injury.\textsuperscript{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.\textsuperscript{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


8M. 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.


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.).


36 Emery W. Seymour, Loc. cit.


