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A STUDY OF THE NUMBER OF VARSITY AND NON-VARSITY JUNIOR HIGH SCHOOL
BASKETBALL PLAYERS THAT PLAY VARSITY BASKETBALL IN SENIOR HIGH SCHOOL
(TITLE)

BY
IRVIN M. HAAK

PLAN B PAPER

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
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AND PREPARED IN COURSE

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1963
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CHAPTER I

INTRODUCTION

Throughout the years of childhood and adulthood there has been a desire for recognition through some median, whether in art, music, knowledge or sports. In most the individual desire for recognition can be fulfilled through an efficient health, physical education and recreation program.

The drive for physical activity is strong in the young, according to G. Lawrence Rarick. Free, unrestricted muscular movement is believed by psychologists to constitute one of the great hungers of life, a hunger in the young equal in intensity to that for food and rest.¹

In the teaching of skills, the understanding of physical growth in prepubescents, pubescents, and post pubescents is essential in developing motor

¹G. Lawrence Rarick, "Exercise and Growth"; Science and Medicine of Exercise and Sports, ed. Warren R. Johnson, University of Maryland (New York: Harper and Brother, 1960), p. 441.

efficiency. Alfred W. Hubbard mentioned the following pertaining to skill and human movement. "Since movement is the essence of overt behavior, and understanding of human movement is basic to an understanding of normal and abnormal behavior, or superior and inferior skill."² Hubbard also states:

Not only performances which are obviously predominantly muscular, but all other human production and communication consist fundamentally of motor activity. Perception and understanding of the world around us also depend, in part, on our ability to move. Even memory, thinking, and concept formation may well depend on subovert movements of speaking and writing.³

According to the Encyclopedia of Educational Research, motor performance scores improve with age.⁴ This increase in motor performance is due to the development of several interacting elements, such as, the nervous system, muscular system and the skeletal system.

Success in Junior High athletics depends on whether or not these interacting elements of growth have been taken into consideration and developed by

²Alfred W. Hubbard, "Homokinetics: Muscular Function in Human Movement," Science and Medicine of Exercise and Sports, ed. by Warren H. Johnson, University of Maryland (New York: Harper and Brother, 1960), p. 9.

³Ibid., p. 10.

⁴Encyclopedia of Educational Research, ed. Chester W. Harris, with the assistance of Marie R. Liba (New York: Macmillan Co., 1960), p. 903.

the coach in accordance with the mechanically correct principles. Before motor performances can be improved the learner must in turn have sufficient strength, knowledge of the skills and coordination.⁵

Sometimes this knowledge by itself will not bring forth the results that are expected for there are many external factors in the environment that must be taken into consideration during this transitional period.

Statement of the Problem

The purpose of this study was to follow the junior high varsity and non-varsity basketball players through senior high and to compare the number of junior high varsity basketball players that played senior high varsity basketball to the number of junior high non-varsity basketball players that played senior high varsity basketball.

Definitions

Varsity was defined as the top ten players on the team. The seventh and eighth grades are classified as junior high. The ninth, tenth, eleventh

⁵Charles H. McCloy, "The Mechanical Analysis of Motor Skills," Science and Medicine of Exercise and Sports, ed. Warren R. Johnson, University of Maryland (New York: Harper and Brother, 1960), p. 54.

and twelveth grades will be senior high. Since the grade level has been established, it is necessary at this point to set the age limit, i.e., starting with age group of twelve and terminating when the player reaches his fifteenth birthday. Fifteen will, on occasion, fall in this group due to the fact that a few may be late starters or they may have had academic difficulty in previous grades. Senior high begins at fourteen and ends at graduation or when they reach their eighteenth birthday.

Procedures Used in the Study

The information was collected by personal interviews with coaches and principals. This study contains the participation records in basketball of four communities. The library was consulted for information that was pertinent to this study.

Delimitations of the Problem

The delimitations of the problem include the following: (1) the study involved four schools; (2) it covered the age group from twelve to eighteen; (3) one school system failed to cooperate; (4) no provision for a follow-up was made.

CHAPTER II

MOTOR SKILLS

There has been a great deal of material published concerning the motor skills and growth of pre-adolescent and adolescent. Several attempts have been made to show the relationship of motor skills to age, growth, linear development, and strength. The writer would like to mention some of the studies relating motor skills to age, growth, linear development and strength.

In the teaching of skills, the understanding of physical growth in pre-pubescents, pubescents, and post-pubescents is essential in developing motor efficiency.

Growth

After the age of one, according to Leona Bayer and Nancy Bayley,⁶ the legs start growing more

⁶Leona M. Bayer and Nancy Bayley, "Growth Diagnosis," (Chicago: The University of Chicago Press, 1959), pp. 22-25.

rapidly than the body, a trend which continues until puberty. With the pre-pubescent growth spurt, the boy fills out by developing muscle and by general enlarging of the skeleton, particularly in the region of the shoulders. About fourteen years of age in boys, the growth of the legs slows down while the body growth continues undiminished for a year or two longer. This change in locus growth contributes to the relative laterality of build. As the body proportions of the growing child change, so do his stance and posture.

Bayer and Bayley further state:

Growth in height is closely related to the rate of physical maturing. This is true during adolescence in particular. Although most children mature and grow according to much the same pattern, normally healthy children may differ greatly in size, and they may also be as much as three years accelerated or retarded from the average in their rates of maturing.⁷

There are many factors, external and internal, that affects growth of adolescence. For coaches to determine which is the dominating factor in growth would be practically impossible. The hormones secreted by the endocrine glands, especially the pituitary, would be one of the internal organic factors that

⁷Ibid., p. 49.

causes growth to accelerate during this period.⁸ Diet would be one of the external factors, either influencing or inhibiting growth. There are a number of factors, which can be observed by the coach, and which would be invaluable in selecting and preparing adolescence for competitive sports.

From a study by S. M. Garn, Rarick states the following:

It is interesting to note that the process of becoming adolescent frequently accentuates certain physical attributes of childhood. For example Garn demonstrated that boys who were muscular prior to the adolescent growth spurt tended to become disproportionately muscular, while rotund, poorly developed boys showed little gain in muscularity during early adolescence. How much these patterns of growth may have been influenced by diet and exercise is not known. While these differences prior to adolescence are probably associated with the hormonal pattern of the child, the onset of adolescence with its surge of glandular activity does not appear to markedly disturb the basic design of growth. The effects of inherent growth factors must be considered of prime importance in determining the pattern of growth at adolescence.⁹

The exercise promoted by coaches in athletics secure psychomotor development, which involves control of the muscular system. Through junior high athletics

⁸Jean Mayer and Beverly Bullen, "Nutrition and Athletic Performance," Exercise and Fitness (Athletic Institute, 1960), p. 132.

⁹G. Lawrence Rarick, "Exercise and Growth," Science and Medicine of Exercise and Sports, ed. Warren R. Johnson, University of Maryland (New York: Harper and Brothers, 1960), p. 448.

the boys receive the knowledge regarding care of the body. Exercise develops alertness, determination, self-control and cooperation. It secures organic and physical development in terms of speed, strength, power, endurance, agility, and body efficiency.¹⁰

During pre-adolescence and adolescence the body changes are quite prominent. By observation the growth of junior high athletes can be noticed by the change occurring in body size and length and weight. The bones lengthen and thicken and alter their shape and structure during this period. Since these body segments do not increase in length at the same time, the coordination of the athletes are affected.¹¹ Rarick states that "recognition is given to the fact that the various manifestations of physical growth are affected in the expanding functional powers and adjustment capacities of the growing organism."¹²

Generally, when a child reaches early physical maturity his body is better adapted to various activities. Rarick mentions the following factor affecting growth:

The process of becoming physically mature results in morphological and functional changes

¹⁰"Athletic, Educational," Cyclopedia of Education, Vol. I (1915), p. 266.

¹¹"The Junior High School," The Lincoln Library of Essential Information, Vol. II (1955), p. 1669.

¹²G. Lawrence Rarick, "Exercise and Growth," Science and Medicine of Exercise and Sports, ed. Warren R. Johnson, University of Maryland (New York: Harper and Brothers, 1960), p. 442.

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which are attributed primarily to inherent growth factors. While the most dramatic physical changes occur as the child is approaching sexual maturity, rather subtle changes which clearly differentiate the early from the late maturing child occur at a much earlier age. The rate at which the skeleton is ossifying reflects in some degree the speed with which the child is approaching sexual maturity. With children who mature early the ossification centers of the hand, wrist, and knee are markedly advanced at every age over those who mature late. The accelerated growth of the skeleton of early maturing children is also reflected in a greater mean height and weight for this group. Not only are the earlier maturers taller and heavier throughout middle childhood, but this group tends to be predominantly of mesomorphic physique while the late maturing, slower growing children are by and large of ectomorphic body build.¹³

A number of studies have shown a close relationship, in pre-adolescence, adolescence, and post adolescence, between physical size and motor performance. It has also been noted that motor behavior can be advanced by muscular development. The repeated exercise employed during training produces an increase in size of the skeletal muscle fibers plus the development of more capillaries. This increase in size of muscles produces strength whereas exercise of endurance produces more capillaries.¹⁴

¹³Ibid., p. 445.

¹⁴Lucien Brouha, "Training," Science and Medicine of Exercise and Sports, ed. Warren R. Johnson, University of Maryland (New York: Harper and Brothers, 1960), p. 404.

This increase of physical size can be recognized by increase in height, weight, and breadth in pre-adolescence and adolescence while in post adolescence there is a slight deceleration. This acceleration in growth can also be recognized, to some degree, by such physical characteristics as axial and pubic hair, facial hair and change in voice, and the sexual organs.¹⁵

Linear Development

Frank D. Sills defines anthropometry as that branch of anthropology that is concerned with the taking of measurements on the human body.

According to Sills:

Linear and circumferential measurements are employed most frequently since they are easily obtained and provide useful information concerning both physical growth and physical development. They also provide the basis for many useful indices. These indices may serve in differentiating between the performances of individuals when linear and circumferential measurements alone do not provide adequate information. Such indices as the ratio of upper-leg length to lower-leg length, and leg length to trunk length, have shown positive correlations with the performances of track men who run various distances.

Indices have been formulated, too, from linear and circumferential measurements to determine the relative linearity of stockiness of body build. The majority of these have been

¹⁵Anna Espenschade, "Motor Development," Science and Medicine of Exercise and Sports, ed. Warren R. Johnson, University of Maryland (New York: Harper and Brothers, 1960), p. 422.

based on height-weight relationships, although others, such as the ratio of the chest circumference to height, have also been used.¹⁶

Several studies have shown a definite relationship between physical performance and physique. Body physique has been classified into three groups: endomorphic, which is characterized by an excessive amount of weight; ectomorphic, which is characterized as muscularly weak; mesomorphic, which is characterized by physical ruggedness and strength. From these three groups the mesomorphic is by far the best type for athletics, while the endomorphic is limited due to excessive weight and the ectomorph is subject to injuries.¹⁷

The following research is by H. Harrison Clarke and Ernest W. Degutis, on comparison of skeletal age and various physical and motor factors with the pubescent development of ten, thirteen and sixteen year old boys.

The purpose of this study was to compare the skeletal age and various physical and motor factors with the pubescent development of 10, 13, and 16 year old boys. The findings of this study indicated that physical

¹⁶Frank D. Sills, "Anthropometry in Relation to Physical Performance," Science and Medicine of Exercise and Sports, ed. Warren R. Johnson, University of Maryland (New York: Harper and Brothers, 1960), p. 40.

¹⁷C. E. Willgoose, "Body Type and Physical Fitness," Journal of Health, Physical Education and Recreation (Sept., 1956), pp. 26-27.

maturation was differentiated most effectively at 13 years of age, although it was not sensitive to maturational changes as was skeletal age; at 16 years, maturational differentiation was much more limited; and attributed to this method. The 13 and 16 year old boys who were advanced in pubescent development had higher mean scores on all physical and motor tests studies with few exceptions; generally, the differences between the means were significant.¹⁸

The research by C. L. Wear and Kenneth Miller on relationship of physique and developmental level to physical performance, brought out the following facts:

A study was made of the relationship of physique and developmental level, determined by the use of the Wetzel Grid, to performance of junior high boys on four fitness tests; pull-ups, 50 yd. dash, standing broad jump, and softball throw. Subjects of different physique groups (heavy, medium and thin) who were alike developmentally (accelerated, normal and retarded) differed more markedly in performance than did the subjects of different developmental levels who were alike with regard to physique. Subjects who were medium in physique and normal in development were the best performers. Subjects of heavy physique (many overweight) were the poorest performers.¹⁹

¹⁸H. Harrison Clarke, and Ernest W. Deguttis, "Comparison of Skeletal Age and Various Physical and Motor Factors with the Pubescent Development of 10, 13, and 16 Year Old Boys," The Research Quarterly of the Association of Health, Physical Education and Recreation, Vol. XXXIII, No. 3 (Oct., 1961), p. 356.

¹⁹C. L. Wear, Kenneth Miller, "Relationship of Physique and Developmental Level to Physical Performance," The Research Quarterly, Vol. XXXIII, No. 4 (Dec., 1962), p. 615.

Strength

The time for developing strength, speed, skill and coordination is during adolescent age.²⁰ The method of acquiring these skills is still debatable. One group favors maturation and the other the learning process through imitation, practice and direct instruction.²¹

According to Anna Espenschade:

Muscular strength is closely related to body size and body build but is more subject to environmental influence than the latter. There is also a sex difference so that boys and girls of the same age, height, and weight are not alike in strength.

Changes in grip strength with age have been studied by many investigators and large numbers of children have been tested. Metheny has summarized a number of these studies. Although the instruments used and probably also the methods of procedure differ, the results agree that boys continue to improve until 18 years or older and that girls show a tapering off after the 14th year. In 1950, Bookwalter re-examined the studies made on males and presented curves for the years 9-24. The rate of growth is steady 9-14, accelerates 14-17, and shows a reduced rate of increase 17-24. The amount of change in boys 6-18 years was found by Meredith to be 359 per cent, for girls by Metheny 260 per cent.

Jones observed in the data of the California Adolescent Study that strength develops more rapidly than any other conspicuous aspect of physique. Indeed, approximately four fifths of strength but only one third of height is acquired after the age of 6. Strength is so

²⁰McCurdy, James Huff, and Larson, Leonard A., The Physiology of Exercise (3rd ed., 1939), p. 25.

²¹Ibid., p. 24.

closely liked with individual growth patterns that it may in itself be regarded as an indicator of puberty and as a secondary sexual characteristic.²²

Another study on strength by Clarke, Irving and Heath showed:

The purpose of this study was to relate the somatotypes of boys to their skeletal maturity, structural characteristics, and muscular strength. Five somatotypes categories were formed: endomorphs, mesomorphs, endomesomorphs, ectomorphs, and mid-types. The subjects were 259 boys, 37 boys at each age 9 to 15 years inclusive. In general, the endomorphs and endomesomorphs were largest in such body measures as body weight, chest girth, upper arm girth, calf girth, and hip width. The mesomorphs showed general superiority in both gross and relative muscular strength and muscular endurance measures. The ectomorphs and mid-types followed somewhat the same pattern, although some differences between these two categories did exist.²³

Conclusion

These studies show that children's bodies grew at different rates from birth to maturity. The rate of maturation varied from individual to individual and maturity was closely related to growth, function of hormones, muscularity, body build, ossification of skeletal parts, environment, heredity, and sexual characteristics. Locomotor skills, to some degree, were related to all these factors.

²²Espenschade, op. cit., p. 426.

²³H. Harrison Clarke, Robert M. Irving, and Barbara Honeyman Heath, "Relation of Maturity, Structural and Strength Measures to the Somatotype of Boys Through 15 Years of Age," The Research Quarterly, Vol. XXXII, No. 4 (Dec., 1961), p. 444.

Strength seemed to develop more rapidly and played a major role in motor skills and were closely related to body size.

Boys who made the junior high varsity basketball appear to be those who matured early, while the non-varsity players were those who matured late. The maturation at this point seems to play an important role in the success of junior high athletics. The non-varsity players who matured late generally catch up to those who matured early and surpass them in physique and skills.

CHAPTER III

SCHOOL SURVEYS

The reader cannot assume that the facts brought out in this study are true in all communities. The reader should also bear in mind the different concepts of thinking originating in a small community toward education and athletics in most cases are due to the lack of sufficient funds and to a small enrollment. The communities studied are mostly rural with few industries and financed largely by agriculture. Facilities found in these schools were considerably meager in comparison to larger schools. The quality of instruction, in some cases, fell below the quality of instruction in larger communities. The enrollment of these schools varied from one hundred to six hundred pupils. Two of the communities studied had two grades in each class.

In preparing the data, the schools and players were assigned a code number. The communities were

called A, B, C, and D, while the players were classified as subjects 1, 2, 3, etc.

An attempt was made to collect records for the past eight years, starting with the 1954-55 season and ending with the 1961-62 season, from Community A and the past five years from Community B, Community C, and Community D.

Since Community D had no athletic program in its junior high, it was selected to compare the possibilities a student coming from such a background might have in achieving success in a senior high athletic program.

Community A

At the time the study was inaugurated the population of this community was six hundred with an average grade school enrollment of two hundred and high school enrollment of one hundred fifty. The only sport offered in junior high was basketball with the average number of participants being fifteen. Senior high had basketball and baseball with the average number of participants being twenty-seven for both sports. At the time of this study there was no intramural program at either level, and the junior high had no physical education program other than twenty minute recesses morning and afternoon.

The following table on Community A will show whether the student played on varsity in junior and senior high.

TABLE 1--Community A

JUNIOR HIGH VARSITY 1954-55 TO
SENIOR HIGH VARSITY 1961-62

SUBJECTS	JR. HIGH Varsity	Did Not Come Out In Jr. High	Sr. High Varsity	Did Not Come Out In Sr. High	Quit Basket- Ball in Sr. high	Cut Off Sr. H.	Drop Outs Sr. high	Fr. So. Still Out
1	+		+					
2	+		+					
3	+		+					
4	+						+	
5		+	+					
6	+			+				
7	+					+		
8	+		+					
9	+				+			
10	+		+					
11	+				+			
12	+			+				
13	+		+					
14	+		+					
15	+		+					
16	+		+					
17	+				+			

TABLE 1--Continued

SUBJECTS	Jr. High Varsity	Did Not Come Out In Jr. High	Sr. High Varsity	Did Not Come Out In Sr. High	Quit Basket- Ball in Sr. High	Cut Off Sr. H.	Drop Outs Sr. High	Fr. So. Still Out
18	*			+				
19	+		+					
20	+	*	+					
21		+	+					
22	+							+
23	+		+					
24	+		+					
25	+		+					
26	+			+				
27	+				+			
28	+		+					
29	+			+				
30	+			+				
31	+							+
32	+							+
33	+			+				
34	+			+				
35	+							+
36	+		+					
37	+				+			
38	+							+
39	+			+				

TABLE--1 Continued

SUBJECTS	Jr. High Varsity	Did Not Come Out In Jr. High	Sr. High Varsity	Did Not Come Out In Sr. High	Quit Basket- Ball In Sr. High	Cut Off Sr. H	Drop Outs Sr. High	Fr. So. Still Out
40	+			+				
41	+							+
42	+					+		
43	+			+				
44	+			+				
45	+							+
46	+				+			
TOTAL	44	2	18	12	6	2	1	7

Cut-offs were due to academic difficulty
Drop-outs - from school

Community B

At the time this study was inaugurated the population of this community was approximately three hundred with an average grade school enrollment of ninety students. The students upon graduation went to the Community A High School. The only sport offered in this school was basketball, with the average participants being fifteen, and they must draw from the fourth, fifth and sixth grades. At the time of this study there was no physical education or intramural program. All practice was completed during the school day, mainly because this community consists of ninety-nine per cent farmers; therefore, the students were needed on the farm.

TABLE 2--Community B

JUNIOR HIGH VARSITY 1956-57 TO
SENIOR HIGH VARSITY 1961-62

SUBJECTS	Jr. High Varsity	Did Not Come Out In Jr. High	Sr. High Varsity	Did Not Come Out In Sr. High	Quit Basket-Ball In Sr. High	Cut Off Sr. H.	Drop Outs Sr. High	Fr. So. Still Out
1	+			+				
2	+			+				
3	+		+					
4	+			+				
5	+			+				
6	+		+					
7	+		+					
8	+							
9	+							
10				+				

TABLE 2--Continued

SUBJECTS	Jr. High Varsity	Did Not Come Out In Jr. High	Sr. High Varsity	Did Not Come Out In Sr. High	Quit Basket- Ball In Sr. High	Cut Off Sr. H.	Drop Outs Sr. High	Fr. So. Still Out
11	+				+			
12	+				+			
13	+		+					
14	+			+				
15	+							+
16	+		+					
17	+							+
18	+			+				
19	+			+				
20	+			+				
21	+							+
22	+							+
23	+							+
24	+							+
25	+							+
TOTAL	25	-	4	9	2	-	-	7

No. 7-8-9 did not make senior high varsity.

Community C

At the time this study was inaugurated the population of this community was approximately sixteen hundred with an average grade school enrollment of five hundred and high school enrollment of one hundred and seven-fifty. Baseball, track, and basketball were offered with a regular physical education class. At present no intramural program exists. Like the previous communities, it is mostly agricultural.

TABLE 3--Community C

JUNIOR HIGH VARSITY 1956-57 TO
SENIOR HIGH VARSITY 1961-62

SUBJECTS	Jr. High Varsity	Did Not Come Out In Jr. High	Sr. High Varsity	Did Not Come Out In Sr. High	Quit Basket- Ball In Sr. High	Cut Off Sr. H.	Drop Outs Sr. High	Fr. So. Still Out
1	+		+				+	
2	+		+					
3	+		+					
4	+		+					
5	+		+					
6	+		+					
7	+		+					
8		+				+		
9	+		+					
10	+		+					
11	+		+					
12	+		+					
13	+			+				
14	+		+					

TABLE 3--Continued

SUBJECTS	Jr. High Varsity	Did Not Come Out In Jr. High	Sr. High Varsity	Did Not Come Out In Sr. High	Quit Basket- Ball In Sr. High	Cut Off Sr. H.	Drop Outs Sr. High	Fr. So. Still Out
15	+			+				
16	+			+				
17	+				+			
18	+				+			
19	+		+					
20	+		+					
21	+		+					
22	+		+					
23	+		+					
24	+		+					
25	+							+
26	+							+
27	+		+					
28	+		+					
29	+				+			
30	+				+			
31	+			+				
32	+			+				
33	+			+				
34	+							+
35	+							+

TABLE 3--Continued

SUBJECTS	Jr. High Varsity	Did Not Come Out In Jr. High	Sr. High Varsity	Did Not Come Out In Sr. High	Quit Basket- Ball In Sr. High	Cut Off Sr. H.	Drop Outs SR. High	Fr. So. Still Out
36	+							+
37	+							+
38	*							+
39	+							+
40	+							+
41	+				+			
42	+							+
43	+			+				
TOTAL	42	1	19	7	5	1	1	10

Cut-offs due to academic difficulties
Drop-outs - from school

Community D

Community D was selected mainly because no athletic program existed and to compare the possibilities of these students making the senior high varsity team with the three communities that have an active athletic program.

Community D is predominately agricultural with a population of five hundred and a grade school enrollment of one hundred. The county line runs directly through the main street; thus part of the grade school children go to one county and part to another.

The study of this community over the past five years shows that fifteen boys came out for basketball in senior high. Not one of these fifteen boys made the varsity; in fact, every one quit the team either during their freshman year or their sophomore year.

CHAPTER IV

INTERPRETATION OF DATA

An attempt was made to show the differences in ratio between the number of junior high varsity and non-varsity basketball players that played on the senior high varsity basketball team. Tables 4, 5, and 6 show the results of the survey.

TABLE 4

THE NUMBER OF JUNIOR HIGH BASKETBALL PLAYERS THAT PLAYED VARSITY BASKETBALL IN SENIOR HIGH

Community	Jr. High Varsity	Sr. High Varsity	Total Number of Varsity and Non-Varsity Basketball Players
A	44	18	71
B	25	4	40
C	42	19	77
TOTAL	111	41	188

Table 4 shows the following results: From the one hundred and eighty-eight basketball players in junior high, one hundred and eleven played junior high varsity; of the one hundred and eleven junior high varsity players only forty-one made varsity in senior high.

TABLE 5

THE NUMBER OF JUNIOR HIGH NON-VARSITY BASKETBALL PLAYERS THAT PLAYED VARSITY BASKETBALL IN SENIOR HIGH

Community	Jr. High Non-Varsity	Sr. High Varsity	Total Number of Varsity and Non-Varsity Basketball Players
A	27	-----	71
B	15	-----	40
C	35	-----	77
TOTAL	77	-----	188

Table 5 shows the following results: From the one hundred and eighty-eight players, seventy-seven were non-varsity and not one made senior high varsity.

TABLE 6
SURVEY RESULTS

Comm.	Jr. High Vars.	Did Not Go Out Jr. High	Sr. High Vars.	Did Not Go Out Sr. High	Quit Sr.H. Team	Cut Off Acad.	Drop Outs	Fr. & So. Still Out	Total Minus Those Who Did Not come Out In Jr. High
A	44	2	18	12	6	2	1	7	44
*B	25	-	4	9	2	-	-	7	22
C	42	1	19	7	5	1	1	10	42
TOTAL	111	3	41	28	13	3	2	24	108

Subjects 7,8, and 9 of Community B did not make senior high varsity. Add this to the total to get one hundred and eleven.

Table 6 show the following results: From the one hundred and eleven who made junior high varsity three did not go out in junior high; forty-one made senior high varsity; twenty-eight did not go out in senior high; eight of them moved away; thriteen quit during senior high; three were cut off due to academic difficulty; two dropped out of high school; and twenty-four are freshman or sophomores and are still out.

Community D did not have an athletic program or a physical education program and the study showed that fifteen boys, over a five-year period, came out for basketball in senior high and all of them quit either during their freshman or sophmore year.

Probably the most significant factor brought out in this study was that out of the one hundred and eighty-eight boys only forty-one played varsity in senior high and nothing in the way of intramurals were provided for those who could not make the team.

CHAPTER V

SUMMARY

In summarizing Chapter II, the following facts were brought out. Boys participating in junior high athletics are taller, heavier, and more mature than non-athletes. Through athletics boys develop better emotional control and are more socially accepted.²⁴ Junior high athletes are classified as pre-pubescents, pubescents and post pubescents, and they are in a stage of irregular development in which an awkward age develops due to the uneven growth of various body segments. It has been stated that strength is the best indicator of puberty and is an essential element in order to compete successfully in athletics.

Success in junior high athletics depends on whether or not the interacting elements, the nervous system, muscular system, and the skeletal system have been taken into consideration by the coach and

²⁴Louis E. Alley, "Interscholastic Athletics for Junior High School Boys," National Association of Secondary School Principals Bulletin, Vol. XLIV (May, 1960), p. 95

developed in accordance with the mechanically correct principles. Before motor performances can be improved the learner must have sufficient strength, knowledge of the skills and coordination.

The study of the three communities from Chapter III brought out the fact that only forty-one players qualified for the varsity team in senior high from one hundred and eighty-eight boys who came out for basketball in junior high. The forty-three could be classified as the "cream of the crop." They filled the qualifications that were necessary to be successful in athletics. Community D, as previously stated, had no athletic program and every boy that came out in senior high failed to qualify for the varsity basketball team. This could indicate that the neuro-muscular skill acquired through participation in junior high athletics had some effect on the ability to perform successfully in senior high athletics.

Creighton J. Hale states:

Physiological and sociological analysis reveal that boys who participate in competitive sports are more mature, more highly skilled, more socially accepted, and better adjusted and have broader interests than boys who have no experience in competitive athletics.²⁵

²⁵ Creighton J. Hale, Little League Baseball, Inc.,
(Office of the Superintendent of Public Instruction).

Recommendations

An adequate physical education program and intramural program should be installed in these communities. Undoubtedly further study involving a larger number of schools is needed and a more intensive study of the physiological and anatomical structure of the body in comparison to athletic performance and skill. Since the communities studied had no intramural program or an adequate physical education program, a study is needed to see if either one or both of these programs can advance the athletic program.

Conclusion

No definite conclusion can be drawn from this study due to the limited number of schools involved and lack of information available on their records. It seemed unusual that none of the non-varsity basketball players in junior high qualified for senior high varsity. This could be due to the lack of intramural programs and physical education classes.

COLLEGE CONTENT
EXERCISE
WINTER 1960

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