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### An Evaluation of the Factors Contributing to a Sound Program of Conditioning For Basketball

Harold E. Parker

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AN EVALUATION OF THE FACTORS CONTRIBUTING TO A  
SOUND PROGRAM OF CONDITIONING FOR  
BASKETBALL

A Problem Submitted to the Department of Education in Partial  
Fulfillment of the Requirements for the  
Course in Research Problems 390b

By

Harold E. Parker

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Pittsburg, Kansas

July, 1956

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### ACKNOWLEDGMENTS

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## FOREWORD

Conditioning for basketball is a topic that is discussed quite freely by basketball coaches throughout the country. Is it important? What constitutes a good training program? How do the various coaches go about this task? These questions formed the bases for this problem. Through the three methods of research (1) the case study, (2) the questionnaire, and (3) the documentary, the writer has consolidated available material with the purpose of arriving at definite conclusions, or to determine what the general trends indicate from compiled information gathered from various coaches.

This felt need for conducting such a study stems from the writer's belief that conditioning is one of the important factors in the success of a team, and it is the writer's belief that the information which is available on the topic is not easily accessible to those who might benefit from such information. It is hoped that the data gathered will be of particular importance to beginning coaches. As they go out in the field, it is advisable to have some concrete evidence on the degree of importance placed on conditioning.

The approach which the writer has followed is the three tools of research which have been mentioned before. Part I is a case study of two athletes on the same team. Both boys were picked by their coach and classified as one being in condition and the other boy not in condition. The study is



made for the purpose of determining why each boy regards conditioning as he does. Part II consists of the questionnaire method of research. The writer has surveyed some of the leading coaches and compiled their beliefs and viewpoints on conditioning so that knowledge of the various methods used could be consolidated in a compiled form. Part III emphasizes the documentary method of research. The writer has consolidated material on the opinions of leading authorities on conditioning, how they go about it, and what the trends have been throughout the years. Compiled results from these three methods of research should give much insight into this matter of conditioning.

As stated before, it is hoped that this material will be of particular importance to the beginning coach. It is with this purpose in mind that the writer has done research on the principles and techniques of conditioning for basketball.

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PART I

CASE STUDIES OF TWO HIGH SCHOOL ATHLETES



## INTRODUCTION

To fully understand just how important conditioning is as viewed from the player's point of view, the case study method of research was selected as the technique which would best serve this purpose. It is the writer's contention that if we are to look at the total picture of conditioning, we must include in our analysis the viewpoints of the players themselves.

The subjects which were used in the study were members of the same team and were selected by their coach as two boys who would be placed on the opposite ends of a continuum with regards to conditioning.

Once we have looked at the results of the study and have interpreted the results objectively, it is the writer's belief that we will have a much clearer picture of how these particular players regard conditioning, and this information should be relevant toward determining the importance of conditioning.

### Statement of the Problem

The problem involved in this study is to learn, by means of the case study method of research, how and why the two subjects selected for the study regard conditioning. It is the writer's belief that if a longitudinal study of these two

boys is made perhaps the results will throw some reflection on why they regard conditioning as they do.

### Need for the Study

When looking at any problem, with the purpose of arriving at definite conclusions, it seems highly important that all parties concerned must be made a part of the pattern of developments which lead to that final conclusion. This is the writer's reason for including the study of the two athletes. If we are to attach any validity to the over-all picture of conditioning, all involved parties must be surveyed.

The particular need for this study stems from the writer's belief that validity should be an important factor in research procedures. Without the study of these two boys to supplement other material on conditioning, it is highly possible that we would not have a valid study.

### Research Procedures

The introduction of the case study method of research may be summarized by an introductory statement of Good, Barr, and Scates.<sup>1</sup>

It is becoming generally recognized that in dealing in any practical way with human relationship and adjustments there is considerable advantage in using the case study method. The case study method is well known in certain professions. The social worker, psychologist, psychiatrists, and mental hygienists make use of this method and consider it basic to their understanding of the whole personality.

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<sup>1</sup>Carter V. Good, A. S. Barr, Douglas E. Scates, The Methodology of Educational Research (New York: Appleton-Century-Crofts, Inc., 1941), p. 566.



According to Traxler,<sup>2</sup> the major function of the case study is to bring together the information collected by other tools and techniques in such a manner that this data can be systematically reviewed and analyzed. Basically, it is an individualized, discriminating, systematically planned method of record keeping and interpretation.

This method as described by Gordon Allport<sup>3</sup>:

...is the most comprehensive of all types of research, and lies closer to the initial starting point of common sense. It provides a framework by which the psychologist and the educator can place all of their observations gathered by other methods. This method is the final affirmation of the individualism and uniqueness of every personality. It is a completely synthetic method, the only one that is spacious enough to embrace all assembled facts. Unskillfully used, this method becomes a meaningless chronology, or confusion of fact and fiction, of guesswork and misinterpretation. Properly used, it is the most revealing method of all.

With this background material thus stated, it seems superfluous to add that the writer has taken great strides to see that the material gleaned for use in this case study be used in a constructive manner toward seeing the total development of these two boys.

### Scope and Limitations

The writer followed the following outline in making the case studies:

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<sup>2</sup>Arthur E. Traxler, Techniques of Guidance (New York: Harper and Brothers, 1945), p. 131.

<sup>3</sup>Gordon Allport, Personality: A Psychological Interpretation (New York: Henry Holt and Company, Inc., 1937), p. 390 as quoted by M. E. Hahn and Malcolm S. Mclean, General Clinical Counseling (New York: McGraw-Hill Book Company, 1950), p. 136.

Results of Mental Examinations

Health and Physical Records

Physical Appearance

Personality Traits

Educational Status

Home and Family Background

Athletic Record

Remarks about Conditioning

It is the writer's belief that by use of this general plan, information could be gathered in an organized manner and consequently this would make for a stronger finished product.

The limitations of this study are many. The selection of the two cases is a decided limitation, as the coach was at a decided disadvantage when he selected the two subjects on the basis of good and poor conditioning factors.

The question of validity once again enters into the discussion. The question might be asked, "How valid are the results of the study; can they be used in other situations?" This type of research is unsatisfactory to the person who wishes to predict general outcomes, or wishes to plan a program of conditioning with some degree of assurance that it will be pertinent to the needs of large groups of boys. This study shows once again the importance of making conditioning programs flexible enough to meet the needs of the individual athlete.



The inexperience of the writer in the use of research methods definitely is a limitation to the quality of this study. All errors in research and presentation of data must be scored against the writer.

Since the approach to this study is of an individual nature, the writer believes that this study will prove beneficial when one looks at the total picture of conditioning.

### PRESENTATION OF DATA

#### Case One

Case One was selected by his coach as being a boy who was not in "tip top shape," but nevertheless did make a definite contribution to the team. Case one is a seventeen year old boy who is a senior in high school, and is considered a very good student by his teachers.

Physical and Health Factors. There appears to be no indication of a serious health problem according to the school health records. Hearing and vision show normal, according to the health records. He does have a slight stomach disorder which necessitates his watching his diet. He is a worried looking individual who always seems to have something on his mind. When asked about this mannerism, he replied, "I like to do a lot of thinking; think<sup>n</sup>g relaxes me." Case one weighs 155 pounds and is five feet nine inches tall.

School History. The educational record shows a continuous history of above average work. Teachers report him as being

very cooperative. Case one made this remark, "I like school but I feel that school does not offer enough science and math courses." At the present time, art and science are his favorite subjects. Case one has a very stable school record having attended schools in this city his entire school life.

Case one plans to go to college upon completion of high school, and he states that he desires to work in the field of engineering or art.

Test data for Case one are as follows:

1. The California Test of Mental Maturity (short form) produced an M.A. 240-; C.A., 191 which equals an I.Q. of 125.
2. S.R.A. achievement battery showed that Case one is well above the 50th percentile on all eight tests.
3. Kuder Preference Record (form C) showed that he is above the 75th percentile in artistic, outdoors, and scientific areas.
4. Occupational Interest Inventory showed that Case one scored in the 80th percentile in nature; 80th percentile in mechanical; 70th percentile in science areas.

Family Background. Case one has one other sibling, a sister nine years of age. A younger brother died at the age of seven of seemingly natural causes, so state the health records. His mother is in good health and devotes all her time to working in the home. The father is a civil engineer and is separated from the family. When asked how much time the father had spent at home in the last year, Case one replied, "Oh, he



hasn't spent but a week at home over the last year and a half." Case one is a member of the Episcopal Church, but reported that he had attended church only twice in the last year.

Discipline from the mother is very mild, as Case one reported that his mother more or less let him do as he pleases.

Personal and Social Behavior. Case one demonstrates average behavior, but as a rule, would not be classified as a "top notch mixer," so state his teachers, but they all declare that he is a dependable person. When asked if he had any special friends, either male or female, Case one replied, "No, I don't have any special friends; I more or less try to go along with everyone." Case one stated he did not date girls because he did not have a car, and this factor made dating inconvenient. He made mention of the fact that he had not had a date all year.

His specific hobbies are playing ping-pong, pool, working in the shop, tennis, and thinking. He states that he has a lot of financial worries and this occupies a good portion of his thinking. His work experience has been very limited and only for a short span of time.

Athletic Record and Views on Conditioning. Case one was not an exceptional player, but was very steady and a leader on the floor, according to his coach. He was not a prolific scorer but he more than proved his value to the team by being a "take charge guy" on the court. He stated, "I like to play guard because in this position you have to think

to play well; this is why I like to play basketball." Case one is a three-year letterman and said, "I had enough quarters to letter my freshman year, but I did not letter because I did not 'brownie' the coach enough."

He likes to play basketball for the sake of playing. "It's fun to win, but it's more fun to play the game," states Case one.

"Conditioning is up to the individual," states Case one. "I am a prime example of what shouldn't be done to get in condition," remarked the boy. For his own purpose he does not believe in conditioning. He does not watch his sleep before ball games, or his diet. He has been smoking for four years and states that this has not affected his playing. With regards to drinking, Case one said, "Liquor only hurts you psychologically. One night before a game I was out to the club drinking until approximately 2 o'clock, and it did not affect my playing the next night." "Conditioning is all right, but it depends on the individual as to how he will train," states Case one.

Summary and Interpretations. As the study shows, Case one is a very bright individual who is doing excellent work in school. It is the writer's belief that he takes a negative attitude toward conditioning for the purpose of showing that he can play a creditable brand of ball and also be a leader, and yet not conform to the usual standards with regard to conditioning. Reasons for this type of behavior might be



explained by the fact that Case one realizes that he is more intelligent than the other fellows. His moodiness can be attributed to an unstable home life and worry over financial matters.

Recommendations. Case one must be shifted into activities that challenge his intellectual powers, and this youth must be reached in some way so that he may learn that clean living is a prerequisite for good health. It is recommended that challenging work in the art field, and in other specific interests of Case one, might prove a good media for accomplishing this task.

#### Case Two

Case two was selected by his coach as a boy who was in good physical condition during the season, and made a definite contribution to the team. Case two is a seventeen-year old with a very pleasing personality and is a nice appearing lad.

Physical and Health Factors. Health records of Case two indicate a young man of very good health, weight 150 pounds, five feet nine inches tall. Hearing and vision were both checked as normal, according to the reports from his health records. Case two had all the usual childhood diseases with no apparent after effects. He is an individual who seems to be a friend to everyone, so state his teachers, and this they attribute to his pleasing personality.

School History. School records show that Case two has always done average or below average work. Teachers state that he does try very hard in subjects that hold his interest, but he still just does not seem to be able to do much better than "C" work. His favorite subjects are physical education and industrial arts. Case two has spent his entire school life in the same city. Plans after high school include college. Case two said, "I want to be a teacher and I think I shall shoot the works and try for a doctor's degree."

Test data for Case two are as follows:

1. California Test of Mental Maturity (short form):

M.A., 240; C.A., 191 which equals an I.Q. of 85. This test was administered in 1954.

2. S.R.A. achievement battery showed that Case two is well below the 50th percentile on all eight tests of the battery.

3. Kuder Preference Record (form C) showed that Case two scored in the 85th percentile in computational area, and 75th percentile on outdoors interests.

4. Occupational Interest Inventory results showed that Case two scored in the 60th percentile in business and mechanical interest areas.

Family Background. Case two is the youngest of five children. He has two sisters 27 and 22 years of age. His two older brothers are 23 and 21 years of age. At the present time, he is the only child at home. Case two reports that



his father is a farmer and has been at this occupation for twenty years. The mother in the home devotes her time to housekeeping. The ages of the father and the mother are 57 and 52, respectively.

Case two reports that he is a member of the Zion Lutheran Church and attends church regularly. Discipline in the home is not very strict, but Case two states, "You can't put anything over on Mom."

Personal and Social Behavior. Normal behavior is demonstrated by the subject, and he is considered a very good mixer so state his teachers. Case two states that he does not have a steady girl but he does date at least one time a week. When reference was made toward his special male friends, he stated that he had no special friend, all the fellows were his buddies.

Case two is a very industrious young man. This reasoning is based upon the fact that he has three part-time jobs, which the subject says he has for the purpose of keeping him in "spending change". His specific hobbies are pool, ping-pong, and "chasing girls" according to the subject.

Athletic Record and Views on Conditioning. The subject was one of the leading scorers on the team this year, according to the coach. Although he was not an exceptionally high scorer, he was always good for ten or twelve points per game. Case two has lettered four years in basketball and considers this sport his best one. Both of his older brothers were

standouts at the same school and he said, "My brothers somewhat set a pattern for me to follow." When asked what other reasons he had for playing the game he replied, "Oh, for a letter, I guess."

"If you want to get any where in basketball, you must be in condition," said Case two. He attributes his good success this year to the fact that he was in excellent shape all season. Eight to ten hours of sleep was always the rule the night before a ball game. He did not pay too much attention to his diet, but he did watch the eating of greasy foods the day of a game. Case two does not smoke or drink alcoholic beverages.

When asked what particular drills helped him to reach good physical condition, he stated that a lot of running and work on the trampoline helped him most.

Summary and Interpretations. The study shows that the subject is a very likable person who is inclined to "just get by" in his school work. The writer believes that the subject tries to excel in sports to compensate for his work in the classroom. So that he might excel to the fullest in athletics, Case two sees the importance of conditioning and takes a very positive approach. It is the writer's belief that Case two should make normal adjustments in later life if he is stimulated to work in some field that he can enjoy success in.

Recommendations. Case two must be shown that he will encounter some difficulty if he tries to over achieve in the



educational world. The writer refers to the subject's wish to do advanced college work. The subject must be guided into some field where he can enjoy success. It is recommended that some type of work in which he has contact with people should be his vocation, but he must be shown that he would be handicapped if he tried to achieve too much at the college level.

SUMMARY COMPARISON OF CASE ONE WITH CASE TWO WITH  
REGARD TO CONDITIONING

When a comparison is made between two individuals, many factors must be taken into consideration so that an adequate comparison can be made. The writer is aware of these factors and tried to be very objective when making the comparison between the two boys.

The case studies of Case one and Case two have shown the similarities and differences of the two subjects and their reasons for reacting the way they do toward conditioning.

As shown in the studies, Case one more or less took a negative attitude toward conditioning because it was his way of showing that he could be a success and still train in a negative way; whereas, Case two took a positive approach toward conditioning so that he might go just as far as his ability would allow him. These post assumptions are entirely the writer's opinion and are based entirely upon the facts gathered from the study.

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PART II

SURVEY OF HIGH SCHOOL COACHES ON FACTORS  
REGARDING CONDITIONING

## INTRODUCTION

Conditioning for basketball is a factor that is approached differently by the various coaches. The writer felt that if there was some way of surveying the various coaches in order to compile their different techniques and viewpoints on conditioning, this would help clarify the matter, and be of great help to the beginning coach. The questionnaire method of research was selected as the tool that would serve best this purpose.

The writer is well aware of the fact that there are many variables that must be taken into consideration when one looks at the total picture of conditioning. With the different viewpoints and techniques of various coaches presented concerning this matter of conditioning, it is the writer's contention that we have taken great strides toward reaching a decision on what constitutes a good conditioning program.

### Statement of the Problem

The primary concern of this study was to survey a total of forty-four basketball coaches in Kansas, Oklahoma, Missouri, Texas, Indiana, and Colorado, to see what techniques they used most extensively, and to arrive at definite conclusions on the importance they placed on conditioning. In an attempt to understand better what constitutes a good conditioning program



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### Statement of the Problem

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such factors as techniques of conditioning, the importance placed on conditioning by the various coaches, and the prevalence of calisthenics in a training program will also be included.

### Need for the Study

It is the writer's contention that there is a definite need for consolidated information on the importance placed by various coaches on conditioning, and the techniques which they employ. The beginning coach, as he enters the field of coaching, needs some definite idea of what constitutes a good training program, and should have this information easily accessible to him. Research by the writer has shown that this information is not very prevalent and that authorities differ in their conception of what constitutes a good program.<sup>1</sup>

Although the writer does not mean to imply that this survey will be a cure-all for all such problems, it is the writer's contention that this compiled information should give more insight on the modern methods of conducting a sound program of conditioning.

### Research Procedures

Good, Barr, and Scates<sup>2</sup> have defined the questionnaire as follows:

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<sup>1</sup>Jesse F. Williams, The Athlete in the Making (New York: W. S. Saunders Co., 1935), p. 168.

<sup>2</sup>Carter V. Good, A. S. Barr, and Douglas E. Scates, The Methodology of Educational Research (New York: Appleton-Century Crofts, Inc., 1941), p. 337.



The questionnaire is a form which is prepared and distributed for the purpose of securing response to certain questions. Generally these questions are factual, designed to secure information about conditions or practices of which the recipient is presumed to have knowledge.

The questionnaire is an important instrument in normative-survey research, being used to gather information from widely scattered sources. It is probably out-ranked in frequency only by the survey test.<sup>3</sup> Out of 581 printed studies representing research of all kinds, Koos<sup>4</sup> found that in practically one fourth of them, the questionnaire was used.

The questionnaire procedure normally comes into use where one cannot readily see personally all the people from whom he desires responses or where there is no particular reason to see them personally.

The basic and essential criteria for a good questionnaire are: (a) The ability and (b) the willingness of the persons approached to make reliable answers.<sup>5</sup>

It was the writer's intention while constructing the questionnaire to incorporate the nine points as set down by Good and Scates<sup>6</sup> as requisites of a good questionnaire.

<sup>3</sup>Frederick L. Whitney, Elements of Research (New York: Prentice-Hall, Inc., 1950), p. 46.

<sup>4</sup>Leonard V. Koos, The Questionnaire in Education (New York: The Macmillan Company, 1928), p. 182.

<sup>5</sup>Whitney, op. cit., p. 50.

<sup>6</sup>Carter V. Good and Douglas E. Scates, Methods of Research (New York: Appleton-Century Company, 1954), pp. 615-616.

The writer used the following pattern when selecting the coaches to whom to send the questionnaire:

1. Coaches in large schools, 500 enrollment and above--AA
2. Coaches in small schools, 500 enrollment and below--A
3. Coaches in schools with excellent records during the past five years.

Included in the survey are results from 29 AA schools, or equivalent, and 10 smaller schools. Included in this list are the state champions of Kansas, Colorado, and Indiana. Out of 45 questionnaires sent, the writer received 39 returns which was equivalent to 88.5 per cent.

#### Scope and Limitations

This study is subject to many limitations, perhaps, the greatest of which is obtaining a valid cross-section of coaches to give such information. The writer also is aware that conditioning is an individual process, and one must be careful when applying generalities to the individual. This study can be no means be the final word on what constitutes a good training program, and this is not the writer's purpose in conducting this research.

It might be stated at this point that item number five in the questionnaire proved to be quite a valuable item, as the coaches made good use of the free response opportunity to clarify the reasons for their selection of the various items.

It is the writer's belief that obtaining results from such a varied group of coaches does have a definite advantage when looking at the total picture of conditioning, if this information is used objectively.

#### PRESENTATION OF DATA

As would be expected, the responses to the questionnaire were quite varied, but interpreting the information objectively one can see that the coaches generally followed a definite pattern in their manner or marking the various items. The coaches used in this survey ranged from one to twenty-five years with regard to experience, the mean number of years of coaching experience being 9.1 years.

The various responses to the questions used in the survey gave the following information:

TABLE I

RESPONSES OF THIRTY-NINE COACHES TO QUESTIONS 1 AND 3

Questions	Percentages	
	Yes	No
1. Is getting boys into physical condition to play basketball a problem to you?	28.2	71.7
3. Do you use calisthenics in your conditioning program?	33.4	66.6
(1) First of season only?	53.8	
(2) Until mid-season	23.7	
(3) Entire year	23.7	



TABLE II

## RESPONSES OF THIRTY-NINE COACHES TO QUESTIONS 2 AND 4

Questions	Per cent choosing each
2. Which of the following do you concentrate most of your time on during the first two weeks of practice?	
(1) Combination of conditioning and fundamentals?	82.5
(2) Fundamentals?	12.8
(3) Conditioning?	4.0
4. Techniques used most extensively:	
(1) Extensive running drills?	58.9
(2) Running drills and scrimmage	33.3
(3) Lead-up games	2.5
(4) Early scrimmages	5.0

A total of 71.7 per cent of the coaches stated that conditioning was not a problem; whereas, 28.2 per cent of the surveyed coaches said that this was a problem. The coaches who remarked that conditioning was not a problem as a general rule stated that with planned practices and when their style of offense and defensive was incorporated into their pattern of conditioning drills, conditioning was more or less taken care of. It was also brought out that if the boys are aware of what you are striving for in your conditioning drills, and can see the advantage of part drills toward the whole pattern, conditioning drills could be more easily mastered.

In some of the smaller schools surveyed, it was found that where a good portion of the boys played both football and basketball, conditioning problems were few. The only problem they encountered here was to develop a different type of conditioning for basketball.

The coaches who stated that conditioning was a problem had their reasons for making such a statement. Many of the coaches stated that the competition of big city life was a detriment to their conditioning program.

Many of the coaches stated that foot injuries were the greatest hindrance to their conditioning program, and stressed the importance of properly fitted shoes and correct foot hygiene.

As Table I indicates, 66.6 per cent of the surveyed coaches replied that they did not use calisthenics in their conditioning program; whereas, 33.4 per cent said that they did. Of the coaches making a positive reply to this item, the length of time they used calisthenics varied. It was found that more beginning coaches used calisthenics in their program than coaches with more experience. The reason given for infrequent use of calisthenics was that many of the coaches could not see the need for having drills that did not employ in some manner actual game activities. The coaches who did use calisthenics in their program stated that the length of time for these drills varied from 5 to 10 minutes, and were usually held at the beginning of the practice session. It

was found from the survey that small and large school coaches did not follow any marked pattern with regards to use of calisthenics in a conditioning program. It was clearly a matter of individual choice regardless of the size of the school.

Eighty-two and five tenths per cent of the surveyed coaches replied that they spent the bulk of their time during the first two weeks of the season working on a combination of conditioning and fundamental drills. All of the coaches seemed to be in one accord when they stated that they tried to incorporate conditioning and fundamental drills into the total pattern of their offensive and defensive style of play. It was also stated that when the boys knew what the drills were supposed to accomplish, more positive results were obtained.

The percentage of coaches stressing fundamentals and conditioning drills, isolated by themselves, was very small, as can be verified by referring to Table II.

Extensive running drills were the technique used most extensively in the various coaches' training programs. Running drills and actual game scrimmages are used to good advantage in a conditioning program, according to the results of this survey. The coaches emphasized the importance of planned running, and running with a purpose instead of unorganized running, or the running of laps. Many of the coaches advocated stair-step running, when possible, as a very good conditioner. The running of cross-country and having boys out for track



was reported as being a definite assist to the conditioning process. Rope jumping for coordination improvement, and also as a conditioner, was also very much used by the various coaches.

In some cases where the facilities of the gymnasium were poor and the coach had limited time for access of its use, the coaches utilized the track to help the boys get into good physical condition. This was a problem which many of the coaches in smaller school systems faced.

The surveyed coaches seemed to be in one accord on the use of definite offensive and defensive patterns used in their conditioning drills. This they called "conditioning drills with a purpose," and they felt that the boys reacted much more favorably to this type of training than conditioning drills foreign to their style of play. The importance of "sugar coating" your drills in the form of team relays and other lead up games was also stressed as being very important. These drills can be presented to the boys as games, which can be used to improve certain fundamentals such as dribbling and passing, yet they can also work as good conditioners.

#### CONCLUSIONS AND RECOMMENDATIONS

Definite conclusions to be drawn from this survey cannot easily be brought forth here and still carry a great deal of validity, as it should be remembered that we are dealing with the individual. It is the writer's contention that conditioning

for best results should be an individual effort and methods used will vary with different schools and the individual boy.

This conclusion can be drawn from what the various coaches had to say in this survey: "Always pattern your conditioning drills after the style of play that you will employ during the year." The writer refers to both the offensive and defensive aspect of play.

The importance of planning your drills and making sure that all the boys are doing something at all times, instead of some working and others standing around, is also very important toward molding a sound team.

All these factors are important to the total picture of conditioning, and appear to be sound, and can be carried out to the utmost of perfection; but, if your boys still cannot put the ball through the basket, then this factor presents much more of a problem to the coach than this matter of conditioning.

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## APPENDIX

Cover Letter

Harold E. Parker  
Tanner Hall  
K.S.T.C.  
Pittsburg, Kansas

Dear Coach:

You are one of several coaches who have been selected as persons who can supply useful information on the subject of techniques of conditioning boys for basketball.

This survey is being made as a part of the research I am doing on conditioning for basketball, as partial fulfillment of the work required for a Masters degree at K.S.T.C.

Most of the answers are of the multiple choice variety and can be answered by a checkmark, but please feel free to express what your experience has been if the answer space does not coincide with your particular situation.

If you would be interested in obtaining information from the results of this questionnaire, I would be happy to release this information to you upon your request.

It is hoped that your response will be as soon as possible as your early reply will aid my work greatly. Thanking you in advance for your cooperation.

Sincerely,

Harold E. Parker



Questionnaire

1. Is getting boys into physical condition to play basketball a problem to you?  
                 YES            
                 NO
2. During the first two weeks of practice which of the following do you concentrate most of your time on?  
                 Conditioning            
                 Fundamentals            
                 Combination of conditioning and fundamentals
3. Do you use calisthenics in your conditioning program?  
                 YES            
                 NO

If yes, for how long?

- First of the season only            
          Until mid-season            
          Entire year
4. What other techniques do you use most?  
                 Early scrimmages            
                 Lead-up games            
                 Extensive running drills

5. Other methods used and additional comments you are to add pertinent to the subject.

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6. Number of years in the coaching profession.

Name:                                                                                                     
                                 Last                                  First                                  Middle



PART III

DOCUMENTARY STUDY OF CONDITIONING

## INTRODUCTION

To complete this look at the total picture of conditioning, the writer thought that it should be imperative that documented material should be surveyed to find what has been written by coaches concerning conditioning, their particular theories, and what the trends have been throughout the years. The documentary method of research was selected as the tool which would best serve this purpose.

If the beginning coach is aware of what is being done by some of our leading coaches, it is the writer's belief that this information should make him a better informed person, and this knowledge should benefit him when he adopts his own techniques.

### Statement of the Problem

The particular problem involved in this study is to survey documented material on conditioning, to see what some of our leading coaches have to say about conditioning, and to note the consistency of the various theories.

### Need for the Study

It is the writer's belief that if this study is used to supplement the other material that has been gathered in this study, the final picture that we draw at the conclusion of all three parts, will be much clearer because of the addition

of this documentary study. The writer does not look upon each separate part of this study as being complete in itself, but realizes the important contribution that each small part plays toward the total picture of interpreting conditioning. Thus, the writer sees the necessity for using this particular type of research in the study.

### Research Procedures

The historical technique of research is a form of documentary method of research, and is considered a major approach to educational truth, according to Good, Barr, and Scates.<sup>1</sup> The purpose of the educational historian may be either to produce a faithful record of unique events that have happened in the past, or to suggest through the survey of these events fruitful generalizations from past experiences, that may act as controls for behavior in the present or future. The three major processes involved in historical method are (1) collection of data, (2) criticism of data collected, (3) the presentation of the facts in readable form, involving problems of organization, composition, exposition and interpretation.<sup>2</sup>

Textbook analysis is one of the simpler examples of quantitative study of documentary materials.<sup>3</sup>

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<sup>1</sup>Carter V. Good, A. S. Barr, and Douglas E. Scates, The Methodology of Educational Research (New York: Appleton-Century Company, Inc., 1941), p. 224.

<sup>2</sup>Loc. cit.

<sup>3</sup>Carter V. Good and Douglas E. Scates, Methods of Research (New York: Appleton-Century Company, Inc., 1954), p. 665.



Documentary analysis of textbooks as a form of status study is evaluative when criteria have been set up and validated. In that case the evaluation becomes no longer subjective but objective and a form of measurement. There is always the danger that the criteria may be to some extent warped, incomplete, dominating or misleading. Hence, there are dangers and difficulties of interpretation.<sup>4</sup>

The advantage of using this particular method of research for this phase of the study is that many varied approaches to conditioning can be studied to find the prevalence of specific points on conditioning. This factor should make for better objective interpretation.

It is the writer's belief that the advantages outweigh the disadvantages and that the documentary method of research used in this study does add considerably to the completeness of this problem.

#### Scope and Limitations

The scope of this study is not as broad as the writer intended it to be. Reasons for this particular short-coming stems from the fact that the writer was limited in selection on material on this topic of conditioning. Whereas, there are many books and pamphlets dealing with techniques and principles of basketball, conditioning was sometimes neglected in the presentation of material. However, ten different approaches

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<sup>4</sup>Loc. cit.

were studied to see how the different coaches view conditioning.

This limited selection of coaches is a decided limitation of this study. It should be mentioned that the writer is not trying to formulate definite conclusions, as it should be remembered that conditioning is an individual process.

With the different views of the coaches presented, the picture of conditioning should be somewhat clearer to the persons interested in conditioning. This factor alone is reason enough to include this type of survey in this study.

If the beginning coach is aware of how this matter of conditioning is treated by some of the leading coaches, then this factor should make him more qualified to cope with the many types of situations he might encounter.

#### PRESENTATION OF DATA

For ease in presentation and for more clarity to the reader, the writer has presented the viewpoints of the different writers without comments. Interpretation of these views can be found in the section entitled, "Conclusions and Recommendations".

Walter E. Meanwell<sup>5</sup> states:

The term training embraces all the exercises engaged in to produce individual skills and technical ability, and the development of team play. Conditioning means the up-building and developing of the body to a high

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<sup>5</sup>Walter E. Meanwell, Basketball for Men (New York: Democrat Publishing Company, 1922), pp. 20-23.



degree of physical efficiency by the use of exercise, the application of sane rules of living, and by the use of helpful measures in the care and treatment of injuries and physical weaknesses. The training and conditioning of the team are the most important factors in the success of a season, more so than the quality of material.

In general most of the inexperienced coaches and practically all of the unsuccessful ones, train or exercise their men too much, too long, too hard. More teams are over trained than under trained.

Basketball is so very vigorous, and requires such a characteristic quick sudden start and stop that any effort to train the men by means in addition to the practice of basketball, such as the running on the track, calisthenics or setting up exercise, is useless and detrimental. This wastes time and energy that should be spent with the ball.

At the beginning of the season the candidates for the team will report in varying physical condition. Watch the men for signs of marked fatigue, make practice short and peppy, engage entirely in the fundamentals of the game for at least two and preferably four weeks. Regardless of the early physical condition of the candidates or of the position for which they are trying out, give the same preliminary work to all.

Jesse F. Williams<sup>6</sup> expressed his views on conditioning in the following manner:

In relation to diet and eating, the athlete should be expected to eat only at meal time, to avoid foods which do not agree with him, to avoid over eating and to see that he has a balanced diet.

Proper rest and sleep are indispensable to fine condition. For this reason the athlete must retire at a reasonably early hour and get eight to ten hours of sleep each night, he must avoid too much exercise as carefully as too little. The athlete must report to the coach or trainer all injuries or symptoms of physical disorder, whether they seem important or not. This information is necessary for the proper direction of the athlete's training program.

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<sup>6</sup>Jesse Williams, The Athlete in the Making (New York: W. S. Saunders Co., 1935), p. 35.



The athlete must avoid worry and other forms of emotional disturbance if he hopes to attain the best physical conditions. The relationship between mental condition and physical welfare is too close to be overlooked. Worry and excitement of any sort is likely to affect digestion and rest in a harmful way.

If the athlete is intelligent and conscientious, he will not just train for a few months of the year and spend the rest of the year in dissipation. One of the aims of sport is the development of physical efficiency and it is hoped that eventually we may develop the conception that physical fitness is just as worthwhile off the playing field, as on it.

S. E. Bilik<sup>7</sup> in his book, Trainers Bible stated these facts on conditioning:

Competitive sport makes a tremendous demand upon the physical strength, vitality, endurance and mental powers of the participants. Only athletes in the finest of condition can stand the terrific wear and tear of a competitive season. Thus the proper conditioning of candidates for a team must be considered as one of the most essential tasks of the coach and trainer.

Conditioning is divisible into two distinct phases, pre-seasonal and seasonal. By means of a carefully planned routine of training carried out by the athlete before the opening of the playing season, an effort is made to have him report in good physical trim. It takes from six to eight weeks of conscientious hard work to condition an athlete for intense competition.

Pre-seasonal conditioning is now being stressed as an absolute necessity in the efforts to lessen the frequency of serious injuries. It is early in the season before the men are properly hardened, that injuries take their heaviest toll.

Tackle the men individually, general rules or methods can be used only to a limited extent. In general, the conditioning exercises should stimulate as far as is possible the movements common to the sport for which the athlete is preparing.

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<sup>7</sup>S. E. Bilik, The Trainers Bible (New York:

Rollie Bevan<sup>8</sup> in his book, The Athletic Trainers Handbook, approaches conditioning in this manner:

Conditioning means endurance in physical action. In order to acquire this, sacrifices from certain social activities must be made. Smoking and drinking are the two main things from which to abstain. Good sleep and relaxed surroundings after games and practice are most necessary.

Running is the best body conditioner for all sports. It should be regulated so as not to develop soreness to too great an extent at the outset. As a beginner the player should walk 50 yds. then run 50 yds. over a 2 mile course, the first few days.

Lots of calisthenics and running should be used as conditioners for every sport and wind sprints should be used to finish up every practice except track.

Howard Hobson<sup>9</sup> states:

In addition to mastering the technical skills in basketball, the boy who wishes to be a successful player must be familiar with the ways to be in the best possible condition to play basketball. Basketball requires the proper mental attitude. For these reasons the training and conditioning has both physical and mental aspects.

The question of diet is very important. Regular meals should be eaten every day, avoid greasy foods and eat plenty of fruit and vegetables.

Safe guards to keep in good condition:

- A. At the first sign of a cold or anything wrong consult the coach.
- B. Report bruises, scratches, burns, athletes foot at once.
- C. Take a short warm shower after every practice, dry very thoroughly.

<sup>8</sup>Rollie Bevan, The Athletic Trainers Handbook (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1956), p. 18.

<sup>9</sup>Howard Hobson, Basketball Illustrated (New York: A. S. Barnes Co., 1948), pp. 80-81.



- D. Wear warm-up clothes at all times you practice.
- E. See that all clothing is clean.
- F. Weigh in every day and record weight on chart.

Nat Holman<sup>10</sup> in his book on basketball said:

Conditioning in basketball places prime emphasis on the ability to run, especially with the increased stress on movements offensively and defensively. Big or small all players must have their legs and wind in shape to function effectively.

Conditioning is a year round process. A clean and healthy life at all times is a basic requirement for an athlete who wishes to succeed and maintain this standing in the sport a long time.

Off season activity is very important to the conditioning program. Athletes are encouraged to play baseball, tennis, track and cross country, but the extent of the use of these activities depends on the player's off season activity.

In general get yourself in shape to play basketball by playing basketball. Begin gradually, don't push the conditioning process. Once in shape, stay in shape. For those who wish to gain athletic glory and fame, conditioning must be a way of life.

#### Hints:

1. Tall men--practice skipping rope. Do push-ups to build shoulder muscles. Coordination of mind, eye and hand is the big problem for tall men in getting past the awkward stage.
2. Drink plenty of water, but sparingly during workouts. Hot lemonade or tea is a good drink after a scrimmage or game.
3. Get plenty of sleep.
4. Eat good wholesome food.
5. Take good care of your feet. Begin with sneakers, neither too short or roomy. Wear two pairs of socks, light and heavy. Tape all ankles before scrimmages and games.
6. After a work-out cover up with sweat clothes, always shower and dry thoroughly.
7. Change gear frequently, never lend equipment.
8. All injuries report to doctor or coach.

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<sup>10</sup>Nat Holman, Holman on Basketball (New York: Crown Publishers, 1950), pp. 150-153.



Howard Hobson<sup>11</sup> in another of his publications states:

Conditioning is divided into three main parts:

A. Physical condition off the court.

Eat properly, get adequate sleep, have good personal habits, refrain from drinking alcoholic beverages and smoking. Proper attention should be given all injuries and ailments.

B. Conditioning on the court.

The coach can supervise more thoroughly. It is the duty of the coach to see that every player is in condition to play 32 continual minutes of basketball. This is necessary not only from a health standpoint but also to win games.

C. Mental condition.

While there is no real scientific distinction between the physical and mental, this part of work refers to the player's attitude and loyalty. Players must have confidence, but not be over confident. They must have the proper attitude toward the coach, the other players on the team, the officials, spectators and all concerned. Of all the qualifications and qualities that a coach should look for in a player the most important are confidence, competition ability, and determination.

John Lawther<sup>12</sup> in his book said:

Conditions vary so greatly that no general statement can be made about how long the coach needs to train his team for endurance and stamina. He will still be working at skills and techniques the last week of the season.

The mature champion knows how to take care of himself. He loves to win but he gets in shape instead of worrying. He knows how to relax, he warms up slowly and completely and cools off slowly after a game. He does not let over-excitement fatigue him and decrease his efficiency.

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<sup>11</sup>Howard Hobson, Scientific Basketball (New York: Prentice-Hall, Inc., 1947), p. 177.

<sup>12</sup>John Lawther, Psychology of Coaching (New York: Prentice-Hall, Inc., 1951), p. 58.

The Navy Training Bureau<sup>13</sup> considers conditioning to be important and stated their views as follows:

Two of the main essentials to successful basketball play are good teaching and proper conditioning. Good material will be ruined or augmented by proper conditioning. The coach's job is a dual one, that of giving players the knowledge necessary for successful play and that of seeing that they are ideally conditioned to carry out their instructions in the best possible way.

Conditioning is not only physical but mental. Each player is an individual case having individual limitations and needing individual consideration.

Conditioning as an all year matter would have to consider such things as length of practice sessions, time before first game, conditions of the candidates, the experience of the candidates, etc. It is well to remember that conditioning may most economically be attained through the practicing of the fundamentals of the game, but that the method of teaching fundamentals and the stress placed upon them would vary depending upon the age and experience of the player. In addition the content of the daily early sessions should depend largely upon the system of offense and defense used.

#### CONCLUSIONS AND RECOMMENDATIONS

As would be expected, the responses of the various coaches were varied as to the correct techniques to employ in the conditioning program. Only one of the coaches used in the survey advocated the use of calisthenics in the program of conditioning and only one of the coaches stated that all types of running should be included in a conditioning program.

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<sup>13</sup>Basketball, prepared by the Training Division of the United States Navy (Annapolis, Maryland: Bureau of Aeronautics, 1943), p. 18.



Specific points drawn from the theories of the coaches were:

1. Conditioning is both physical and mental.
2. Conditioning is an individual process.
3. Coaches should incorporate their offensive and defensive patterns of play in their conditioning drills.
4. Sleeping, resting, and diet are very important toward good conditioning.
5. All injuries and illness, no matter how slight, should be reported to the coach or trainer.

It is recommended by the writer that the beginning coach should keep paramount in his mind that conditioning is an individual process and that his style of play should be used in his conditioning drills. Results from the questionnaire study, the case study, and the documentary method of research verify these points. Thus, the writer used this information to formulate these conclusions.



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## APPENDIX

Sample DietBreakfast

Fruit--orange juice, apple sauce, stewed prunes.  
Cooked cereal--oatmeal, cream of wheat  
Dry toast  
Soft boiled or poached egg if desired  
Milk, or chocolate, water

Lunch

Soup--Cream of tomato, etc.  
Meat--light meat order, steak, roast beef, roast veal,  
etc., no pork sausage or ham  
Vegetables--or potatoes, toast or dark bread  
Milk, ice cream

Dinner

Vegetables or meat, depending on lunch  
Potatoes (preferably baked or boiled)  
Dessert (light pudding, plain cake)  
Tea or water

Eat two and one half hours before the time to play.

If playing at night, eat the heavy meal at noon. Drink very little water the day of the game, and do not eat between meals.