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Selected Traits for Predicting Success in Football as Determined by College Football Coaches

Dennis Waldon Van Berkum

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SELECTED TRAITS FOR PREDICTING SUCCESS IN FOOTBALL

AS DETERMINED BY COLLEGE FOOTBALL COACHES

BY

DENNIS WALDON VAN BERKUM

A thesis submitted
in partial fulfillment of the requirements
for the degree Master of Science, Major in
Health, Physical Education and Recreation,
South Dakota State University

1975

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SELECTED TRAITS FOR PREDICTING SUCCESS IN FOOTBALL AS DETERMINED BY COLLEGE FOOTBALL COACHES

This thesis is approved as a creditable and independent investigation by a candidate for the degree, Master of Science, and is acceptable as meeting the thesis requirements for this degree, but without implying that the conclusions reached by the candidate are necessarily the conclusions of the major department.

Head, Department of Health, Physical Education and Recreation
ACKNOWLEDGEMENTS

I would like to give special thanks to Professor Glenn E. Robinson and Dr. Neil Hattlestad for their help in preparing this thesis.

I would also like to thank my parents, Mr. and Mrs. Wallace Van Berkum, for their patience and consideration.

D.V.B.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Significance of the study</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Statement of the problem</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Limitations and Delimitations</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Definition of terms</td>
<td>3</td>
</tr>
<tr>
<td>II</td>
<td>REVIEW OF RELATED LITERATURE</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Predictors of General Athletic Ability</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Investigations in Football Playing Ability</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Literature Related to Sociopsychological studies</td>
<td>10</td>
</tr>
<tr>
<td>III</td>
<td>METHOD AND PROCEDURES</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Organization of the study and source of the data</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Collection of the data</td>
<td>14</td>
</tr>
<tr>
<td>IV</td>
<td>ANALYSIS AND DISCUSSION OF THE RESULTS</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Organization and Analysis of the data</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Physical traits</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Sociopsychological traits</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Discussion of the Results</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Physical traits</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Sociopsychological traits</td>
<td>25</td>
</tr>
<tr>
<td>Chapter</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>V SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Findings</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Conclusions</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Recommendations</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>APPENDIX A</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>APPENDIX B</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>APPENDIX C</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table | Page
--- | ---
I  | Ranking and Variability of Physical Traits............. 17
II | Highest and Lowest Ratings of Physical Traits........... 18
III | Ranking and Variability of Sociopsychological Traits... 19
IV | Highest and Lowest Ratings of Sociopsychological Traits.................................................. 21
V  | The Rating of Each Trait and the Percentage of Each Trait.................................................... 41
Chapter I

INTRODUCTION

Significance of the Study

Football on the college and university level has become more complex. As innovations in strategies and techniques continue to emerge, players with more highly developed abilities are being sought by coaches. Knute Rockne emphasized the significance of the task of player selection when he stated: "A coach and his system are as good as his players...and not an iota better. Give me great players and they can win without a system. Bad ones can't win with the best tutoring in the world."¹

The popularity of modern football has attracted large numbers of athletes to the sport, thus compounding the problem of selecting superior players. College coaches have attempted to select football players who demonstrate promise, as determined by various criterion based on arbitrarily chosen factors. Just what these factors are is unknown. No one has been able to solve this problem because of the many factors involved. Physical educators, as well as coaches, have devoted attention to the development of techniques designed to predict successful performance.²

Despite these efforts no agreement upon factors has been reached. Royal suggests that a broad array of factors must be


considered. He notes that coaches must not only recognize in athletes the ability to play football, but must also be able to identify the factors which most directly influence their level of success. In addition to physical characteristics, several other factors, such as characteristics of personality, levels of aspiration, player enthusiasm, and social traits may also be required for successful athletic participation. McCloy identifies the quality of athletic intelligence to distinguish the clever performer from the so-called average or poor performer.

The selection of football players requires that consideration be given to a broad spectrum of traits. Even coaches who have developed sophisticated selection methods will admit that no single system is infallible. The need for a system that could resolve this problem would become a very valuable tool in the recruiting of athletes.

Statement of the Problem

The purpose of this study was to identify those physical and sociopsychological traits which college and university football coaches consider in predicting performance of incoming freshman football players.

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Limitations and Delimitations

1. Only head football coaches of those colleges and universities who are members of the National Collegiate Athletic Association, and that participate in Division II football were selected.

2. Responses were limited to five physical and five sociopsychological traits for the investigation.

Definition of Terms

1. Agility - The ability to change directions of the body or its parts rapidly.5

2. Co-curricular - Any activity added to the school program usually maintained after-school.6

3. Family Traits - Those traits which contribute to a stable or unstable home.

4. Flexibility - A number of specific abilities concerning the range of movement about a joint governed by limits of the body.7

5. Personality - The integration of mental and moral qualities.8

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6. Physical Traits - Those bodily traits which can be seen or measured.

7. Scholastic Aptitude - The academic potential of a student athlete based upon high school academic progress.

8. Size - The physical qualities of height and weight.

9. Social Traits - The acceptance and leadership qualities of an athlete.\(^9\)

10. Sociopsychological Traits - Those attitudes, values, and personality traits that constitute a person's general nature.\(^10\)

11. Speed - The ability to move from one place to another in the shortest possible time.\(^11\)

12. Strength - The ability to exert a force upon an object.\(^12\)

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\(^10\) Ibid., p. 338.


\(^12\) Vaughn, Op. cit., p. 33.
Chapter II

REVIEW OF RELATED LITERATURE

This chapter is divided into three sections: Predictors of General Athletic Ability, Investigations in Football Playing Ability, and Literature Related to Sociopsychological Studies.

Predictors of General Athletic Ability

Wiley conducted a single-year and longitudinal comparison of 220 twelve-year-old elementary school athletes and non-athletes with respect to physical, structural, strength, and motor characteristics. He observed that the most consistent differentiator of athletic ability of elementary school boys was the standing broad jump. Other tests of high prediction were the sixty-yard run, Roger's Physical Fitness Index, and Roger's Arm Strength Test.¹

Shelly constructed maturity, structure, motor ability, and intelligence profiles based on the Hull Scale scores for thirty-eight outstanding athletes at the upper elementary levels. He reported that the highest Hull Scale scores were established by outstanding athletes in tests of explosive power, speed, and agility. He also reported that athletes who were outstanding in four sports were more mature physically and had higher intelligence than those who were one-, two-, or three-sport athletes. Players who limit their

participation to football were superior in all strength measures.\(^2\)

Mitchell conducted a single-year analysis of the above traits of fifteen-year-old junior high school athletes and non-participants, and a longitudinal regression study of the same boys when twelve years old. He reported that the best predictors of athletic ability were the Roger's Arm Strength score, Roger's Strength Index, and the standing broad jump.\(^3\)

Kelly conducted a single year and a longitudinal comparison of physical maturity, physique, structure, strength, and motor characteristics of 208 seventeen- and eighteen-year-old high school athletes and non-participants. He reported that in the eighteen-year-old athletic group the most useful differentiators of athletic ability were Rogers' Strength score, weight, mesomorphy, and upper body strength.\(^4\)


Investigations in Football Playing Ability

Rhodes studied high school football players to determine whether football playing ability could be predicted by objective testing. He developed a Football Classification from physical measurements and a personal history of the subjects. The physical test included speed, pull-ups, ten-yard dash, zig-zag run, and the standing broad jump. The personal history included height, weight, grade, age, and football experience. Seven scores were gathered and ranks were established for the ten factors and then divided into five equal-step intervals. The scores on each test were converted into rank values and from the sum of these ranks, the range of ten to fifty was obtained for the index score. He concluded from the physical test that speed, the zig-zag run, and the standing broad jump were factors contributing to success in football. He also observed that all factors in the personal history were important to success in football.5

In a factor analysis of college varsity football players, Allen measured traits of eighty-two players to identify elements which might be common to all team members. Although a general factor of college varsity football playing ability was not identified, some of the selected experimental variables which correlated highly with the criterion measures of coaches' ratings of football playing were the football throw for distance, Cozen's Agility Run, the 50-yard dash,

the standing broad jump, and scholastic aptitude for mathematics.6

Steitz studied the relationship of reaction time, speed, the Sargeant jump, physical fitness, and other variables to success in specific college sports. The conclusion of Steitz's study for success in football was that the only variable which correlated significantly with success in football was the 30-yard dash.7

Thompson conducted an investigation to determine the relationship of a selected number of strength, coordination, speed tests, and individual intelligence quotients to the selection of the top twenty-four high school football players as indicated by actual season performance. The difference between the means for the strength tests, 100-yard dash, and Cozen's dodge run were significant beyond the .01 level of confidence. The correlation between the strength tests and the criteria was significant. A significant correlation was also observed in the 100-yard dash and the criteria. He concluded that the Strength Index was the best device for selecting potential football players. Strength was more essential than speed in attaining success in football.8

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Shelly concluded that outstanding football players who limit their participation to the sport of football were superior to football players who were involved in other sports in skeletal age, all structural measures, and all strength measures.\(^9\)

Wilhelm conducted a study utilizing forty-four tests designed to measure physical, mental, and visual traits which were thought to contribute to football success. The subjects for this study were sixty-five college freshman football players and sixty-five non-football players who were enrolled at Indiana State University. It was concluded that in general, football players demonstrated significant superior ability in the traits of strength, structure, power, agility, speed, kinesthesis, depth perception, and visual acuity. Successful performers in football were stronger in dynometric strength and possessed greater speed and more agility than unsuccessful performers.\(^10\)

Wiley stated that outstanding football players had significantly higher mean scores than other members of the team in skeletal age, the Roger's Arm Strength Index and the 60-yard agility test.\(^11\) Mitchel supported these findings by reporting that the best predictors of football ability were Roger's Strength Index, the

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\(^9\)Shelly, loc. cit.


\(^11\)Wiley, loc. cit.
standing broad jump, skeletal age and lower body strength.  

Brace conducted a study dealing with measures of achievement and learning fundamental skills involved in college football. His findings were these: The best test for success was the 50-yard dash. A relationship existed between achievement scored and opinions of each other and opinions of the coaches. A correlation coefficient of .69 was found between players' ratings and coaches' ratings.  

LITERATURE RELATED TO SOCIO-Psychological Studies  

Vanek and Cratty state that personality assessments of superior athletes have been carried on the past fifteen years. These assessments have had several purposes and some were originally formulated to evaluate psychiatric patients which were not well suited to the normal and superhuman subject. At times these first measures were only subjective self-analyses of the athlete's personal life, general feelings about performance, his family constitution, and the like.  

Eysenck reported that by the 1960's sophisticated personality scales were starting to be employed. The Eysenck Personality Inventory was used by some sport psychologists. The traits evaluated

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12 Mitchell, loc. cit.


included stability-instability, introversion-extroversion, and a
general evaluation of an athlete's temperament.15

LaPlace compared personality traits of athletes and non-
athletes, and superior performers and less capable performers. He
evaluated professional baseball players to gather data, employing
the Minnesota Multiphasic Personality Test Inventory. One group,
the "success group," was composed of major league baseball players;
the other group, the "non-success group," was composed of Class D
minor league baseball players. LaPlace's conclusions were that the
success group exercised self-discipline, was able to get along with
other people, and demonstrated initiative. He also recommends
additional research to find definite psychological differences
between successful and unsuccessful athletes.16

Jeppson administered the Minnesota Multiphasic Personality
Inventory and investigated the differences in selected personality
traits between first team football players as compared to the
remaining squad members. He concluded that first team and most
valuable athletes were more sensitive and suspicious, had more rigid

15Hans Jargin Eyesenck, The Effects of Psychotherapy,

16John I. LaPlace, "Personality and its Relationship to
Success in Professional Baseball," Research Quarterly, 313-319,
October, 1954.
opinions and attitudes, and were more egotistical than the rest of the athletes studied.\textsuperscript{17}

Litchard administered the Edwards Personality Preference Schedule to thirty-three varsity letter winners, thirty-three varsity non-letter winners, and thirty-three non-athletes at Springfield College. The findings of his study suggest three characteristics: the lettered group was dominant over the non-lettered group; the "need nurturance" was characteristic of the letter winner; and the letter winners needs for aggression were met.\textsuperscript{18}

In summary, the review of literature indicates that there is some agreement between investigators concerning physical traits of athletes. Only a few studies were found, however, in the area of sociopsychological traits of athletes.


Chapter III

METHODS AND PROCEDURES

The purpose of this study was to identify those physical and sociopsychological traits which college and university football coaches consider in predicting performance of incoming freshman football players.

Organization of the Study and Source of the Data

In this study a survey of selected college and university football coaches was conducted for the purpose of expressing their opinions concerning the physical and sociopsychological traits in predicting performance of incoming freshman football players. Davis added support to the use of the survey for this type of investigation when he stated, "The general purpose of the survey is to reveal current conditions, to point up the acceptability of the status quo, and to show the need for change."\(^1\) Good and Scates have observed that the "versatility of the questionnaire and the freshness of its returns render it an indispensable instrument for securing current information."\(^2\)

Criteria for the selection of the participating coaches were based upon a mailing list of member institutions in the National Collegiate Athletic Association. The mailing list was obtained through the cooperation of the National Collegiate Athletic Association.

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Collegiate Athletic Association, Division II. The mailing list was obtained through the national office of the National Collegiate Athletic Association in Kansas City, Kansas. It was discovered that 170 colleges and universities sponsored Division II intercollegiate football teams.

The information to be collected for data purposes was addressed to the Head Football Coach and no personal names were used. It was felt that the head coach would be willing to answer the questions more honestly and frankly if his name did not appear.

Collection of the Data

The original draft of the questionnaire was formulated by the present writer. Then, in consultation with an advisor and other members of the graduate faculty in the Department of Health, Physical Education, and Recreation, additional ideas, corrections and deletions were made. A pilot study was conducted with the revised questionnaire to coaches, graduate students, and faculty at South Dakota State University. After further corrections and deletions, the final draft of the questionnaire was prepared for distribution. Traits selected for inclusion in the questionnaire were: speed, agility, size, strength, flexibility, personality, scholastic aptitude, family traits, social traits, and co-curricular activities.

The questionnaire was condensed to postcard size in order to facilitate a greater return. Respondents were instructed to use a rating of one to five in ranking the importance of the physical
and sociopsychological traits. The ranking one indicated most importance and five rank least importance. A sixth trait specified as others was also listed. The purpose was to allow coaches to suggest any other traits they felt as being important.

A combination letter of transmittal and sponsorship was prepared. The letter and the final draft of the postcard questionnaire were coded to facilitate the follow-up procedure and mailed on April 7, 1975, to the 170 selected college and university head football coaches.

Ninety questionnaires were returned on which sixty contained valid data. Twenty of the returned questionnaires were invalid for data purposes because of methods used in ranking the traits. On May 5, 1975, a follow-up questionnaire was sent to the twenty respondents whose responses were invalid and to the eighty non-respondents. A copy of the letter of transmittal is presented in Appendix A. A sample questionnaire appears in Appendix B.
Chapter IV

ANALYSIS AND DISCUSSION OF THE RESULTS

The purpose of the study was to identify those physical and sociopsychological traits which college and university football coaches consider in predicting performance of incoming freshman football players. Chapter IV presents the analysis of the data obtained by use of the questionnaire and discussion of the data as they pertain to the purpose of the study.

Organization and Analysis of the Data

One hundred and seventy questionnaires were mailed to the head football coaches of the National Collegiate Athletic Association, Division II colleges and universities. A total of 125 questionnaires were returned or seventy-four percent. Twenty questionnaires were found to contain unacceptable data for analysis. The usable return was 105 or sixty-two percent.

The data ranking the physical traits are presented in Table 1. Table II contains data concerning the highest and lowest ratings of the physical traits. Ranking and variability of the sociopsychological traits appears in Table III. Data identifying the highest and lowest sociopsychological traits are listed in Table IV. The results are analyzed following each table. The tabulation or raw data was presented in APPENDIX C.

The analysis of the data consisted of computing measures of central tendency and dispersion. This was accomplished by

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calculating mean scores and standard deviation. The traits ranked from 1 to 5 were subsequently ranked in order of importance as determined by the mean score of the responses. Other traits listed by coaches were also discussed.

Physical Traits. The mean score for each physical trait along with the standard deviation are presented in Table I.

<table>
<thead>
<tr>
<th>Physical Trait</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Speed</td>
<td>1.829</td>
<td>0.985</td>
</tr>
<tr>
<td>2. Agility</td>
<td>2.381</td>
<td>1.113</td>
</tr>
<tr>
<td>3. Size</td>
<td>3.086</td>
<td>1.388</td>
</tr>
<tr>
<td>4. Strength</td>
<td>3.543</td>
<td>1.144</td>
</tr>
<tr>
<td>5. Flexibility</td>
<td>4.162</td>
<td>1.102</td>
</tr>
</tbody>
</table>

An analysis of results presented in Table I reveals that the physical trait of speed had a mean score of 1.829, which was highest among all physical traits. Agility received a mean score of 2.381 to place it second in importance. Following these were size, with a mean score of 3.086, and strength with a mean score of 3.543. The trait with the lowest mean score of 4.162 was that of flexibility.

The characteristic of speed had a standard deviation of 0.985, which ranked it at the top of the list of physical traits with respect
to its variability. Following speed were flexibility with a deviation of 1.102, agility with a deviation of 1.113, and strength with a deviation of 1.144. The trait with the greatest variability was that of size. Its deviation was 1.388.

The combined ratings of the physical traits rated 1 and 2 in importance and the combined percentages are presented in Table II. Also, presented are the combined ratings and percentages of traits rated 4 and 5 in importance.

Table II
Highest and Lowest Ratings of Physical Traits

<table>
<thead>
<tr>
<th>Physical Trait</th>
<th>Sum of Ratings 1 and 2</th>
<th>Percentage of Ratings 1 and 2</th>
<th>Sum of Ratings 4 and 5</th>
<th>Percentage of Ratings 4 and 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Speed</td>
<td>84</td>
<td>80.01</td>
<td>8</td>
<td>7.61</td>
</tr>
<tr>
<td>2. Agility</td>
<td>55</td>
<td>52.37</td>
<td>18</td>
<td>17.15</td>
</tr>
<tr>
<td>3. Size</td>
<td>38</td>
<td>36.19</td>
<td>40</td>
<td>38.10</td>
</tr>
<tr>
<td>4. Strength</td>
<td>21</td>
<td>20.00</td>
<td>60</td>
<td>57.14</td>
</tr>
<tr>
<td>5. Flexibility</td>
<td>11</td>
<td>10.47</td>
<td>86</td>
<td>81.91</td>
</tr>
</tbody>
</table>

An analysis of the results presented in Table II revealed that eighty-four coaches, or 80.01 percent, rated speed in the highest two categories, and eight coaches or 7.61 percent, rated this trait as fourth in importance. It is of interest to note that the sum and percentage of the trait of least predictability, flexibility, had an inverse relationship with the highest ranked trait. Flexibility
was rated by eleven respondents, or 10.47 percent. The sum of the coaches rating flexibility as 4 and 5 was 86 or a percentage of 81.91. As can be seen, the comparison of the opposite traits of speed and flexibility have nearly equal percentages.

The same implications can be made when comparing the second ranked trait, agility, and the fourth ranked trait, strength. Agility had a sum of the ratings 1 and 2 of fifty-five, or 52.37 percent. Strength was the inverse of agility with the sum of 1 and 2 being twenty-one, or 20 percent and the sum of 4 and 5 being sixty or 57.14 percent. The third ranked trait, size, had nearly equal totals for the first two ratings, thirty-eight or 36.19 percent and for the lowest two ratings forty or thirty-eight percent.

Sociophysiological Traits. The mean scores for each sociopsychological trait along with the standard deviation, are presented in Table III.

Table III
Ranking and Variability of Sociopsychological Traits

<table>
<thead>
<tr>
<th>Traits</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Personal Traits</td>
<td>1.571</td>
<td>0.886</td>
</tr>
<tr>
<td>2. Scholastic Aptitude</td>
<td>2.638</td>
<td>1.093</td>
</tr>
<tr>
<td>3. Family Traits</td>
<td>2.943</td>
<td>1.216</td>
</tr>
<tr>
<td>4. Social Traits</td>
<td>3.400</td>
<td>1.006</td>
</tr>
<tr>
<td>5. Co-curricular Activities</td>
<td>4.448</td>
<td>1.074</td>
</tr>
</tbody>
</table>
An analysis of results presented in Table III revealed that the sociopsychological trait of personality was given a mean score of 1.571, which was the highest among all sociopsychological traits. The second highest ranked trait, scholastic aptitude, had a mean score of 2.638. A mean score of 2.943 was computed for family traits. Social traits had a mean score of 3.400. The trait with the lowest mean score was co-curricular activities with a score of 4.448.

The characteristic of personality had a standard deviation value of 0.886, which ranked at the top of the desirable sociopsychological traits with respect to its variability. Following personality were social traits with a standard deviation of 1.006, co-curricular activities with a deviation of 1.074, scholastic aptitude with a deviation of 1.093. The trait with the largest variance was family traits, which had a deviation of 1.216.

The combined ratings of the sociopsychological traits in rating 1 and 2 in importance and the percentages are presented in Table IV. Also presented are the combined ratings and percentages of 4 and 5 in importance.
Table IV

Highest and Lowest Ratings of Sociopsychological Traits

<table>
<thead>
<tr>
<th>Traits</th>
<th>Sum of Ratings 1 and 2</th>
<th>Percentages of 1 and 2</th>
<th>Sum of Ratings 4 and 5</th>
<th>Percentages of 4 and 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Personality</td>
<td>89</td>
<td>84.77</td>
<td>3</td>
<td>2.85</td>
</tr>
<tr>
<td>2. Scholastic Aptitude</td>
<td>50</td>
<td>47.62</td>
<td>25</td>
<td>23.81</td>
</tr>
<tr>
<td>3. Family</td>
<td>37</td>
<td>35.24</td>
<td>42</td>
<td>40.00</td>
</tr>
<tr>
<td>4. Social</td>
<td>24</td>
<td>22.85</td>
<td>54</td>
<td>51.44</td>
</tr>
<tr>
<td>5. Co-curricular Activities</td>
<td>8</td>
<td>7.62</td>
<td>89</td>
<td>84.77</td>
</tr>
</tbody>
</table>

An analysis of the results in Table IV revealed that eighty-nine coaches, or 84.77 percent, rated personality as the most desirable trait in categories 1 and 2. Only three coaches, or 2.85 percent considered personality of little importance. The trait that was rated least desirable, co-curricular activities, for the prediction of success in football contained nearly the same number of responses in categories 4 and 5, (eighty-nine), as did personality in categories 1 and 2.

A comparison of the second ranked trait, scholastic aptitude and fourth ranked social traits, indicated a near inverse relationship. The sum of responses for categories 1 and 2 with respect to scholastic aptitude was fifty, while the sum of categories 3 and 4 for social traits was fifty-four. The percentages for these traits were inversely proportional also.
The trait which ranked third, family traits, had nearly equal number of responses in categories 1 and 2, and 3 and 4. The sums were thirty-seven and forty-two, respectively.

Discussion of the Results

Physical Traits. Approximately eighty percent of the coaches agreed that speed is the most desirable trait in determining the success of incoming freshman football players. Allen supported this finding by concluding that the 50-yard dash of college varsity football players correlated significantly with the criterion measure of coaches ratings. Rhodes, also concerned with this finding, reported that the speed of high school football players was one of the traits contributing to success. Further support was observed in the findings of the study conducted by Brace in which it was revealed that the 50-yard dash was the best test for determining success of college football players. Steitz observed that superior


4David K. Brace, "Validity of Football Achievement Tests as Measures of Motor Learning and as a Partial Basis for Selection of Players", Research Quarterly, 14:373, Dec., p. 43.
performance in the 30-yard dash was significantly related to success in high school football players.\textsuperscript{5}

The findings in the present investigation revealed that agility was the second most important physical trait. This was corroborated by Wilhelm who reported that agility was also ranked second as a predictor of football playing ability of college freshman in his investigation.\textsuperscript{6} Using the Cozen Agility Test as the criterion measure for agility, Allen reported a significant relationship between this trait and the players which coaches had ranked as having superior college football playing ability.\textsuperscript{7}

An analysis of the data in the present study indicates a disagreement among coaches as to the importance of size in predicting the success of incoming freshman football players. Shelly reported that in elementary and junior high school athletes size was an important criterion on the prediction of success of a football player.\textsuperscript{8} Further support was observed in the findings of the study

\begin{itemize}
\item \textsuperscript{5}Edward S. Steitz, "The Relationship of Reaction Time, Speed, Sargeant Jump, Physical Fitness, and Other Variables to Success in Specific Sports" (unpublished Doctor's dissertation, Springfield College, 1963), pp. 208-209.
\item \textsuperscript{6}Fredrick Wilhelm, "The Relationship of Certain Measurable Traits to Success in Football" (unpublished Doctor's dissertation, Indiana University, 1951), p. 139.
\item \textsuperscript{7}Allen, loc. cit.
\end{itemize}
conducted by Kelly in which it was reported that weight and mesomorphy were vital criteria for the differentiating of athletic ability of seventeen- and eighteen-year-old athletes. 9

Few coaches agreed with the findings of Thomas who revealed that strength was more important than speed in the success of high school football players. 10 Shelly concurred with Thomas to the extent that elementary and junior high school athletes who limit their participation to football were superior in all strength measures. 11 Further support was observed in the study of Wilhelm who stated that successful freshman football players generally scored higher than unsuccessful football players in tests of dynamic strength. 12

Approximately eighty-two percent of the coaches rated flexibility as the least desirable of the traits considered in predicting superior player performance among incoming freshman football players.

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11 Shelly, loc. cit.

12 Wilhelm, loc. cit.
football players. Space was provided on the questionnaire of the present study for respondents to list physical traits other than those listed. Traits which they listed include skill, lateral movement, endurance, height and quickness.

**Sociopsychological traits.** Approximately eighty-five percent of the respondents rated personality as the most desirable sociopsychological trait contributing to the success of incoming freshman football players. According to LaPlace, self-discipline and initiative were two desirable sociopsychological characteristics found in a group of successful professional baseball players. 13 Jeppson emphasized the importance of personality by reporting that college football players who were first team members were more sensitive and suspicious. They also demonstrated more rigid opinions and attitudes, and were more egotistical than the other athletes tested. 14

Within the limits of this study, it appeared that coaches are generally in agreement that some importance is placed upon scholastic aptitude and family traits. The findings of Shelly reported that high scholastic aptitude is a commonly found trait among athletes who


participate in four sports, as compared with those who competed in one, two, or three sports.

Out of the five traits listed, social traits ranked fourth. This would suggest that coaches seem to place little importance on social traits in the prediction of the success of incoming freshman football players. The findings of LaPlace were not in agreement with the results of the present study. He found the successful group of professional baseball players were not able to get along better with other people.\textsuperscript{16} The importance of social traits was emphasized by Litchard who revealed that the "need nurturance" characteristic was evident in the lettered group of college varsity athletes as compared to the non-lettered group.\textsuperscript{17}

The sociopsychological trait of co-curricular activity participation was ranked fifth in importance. Findings of the research investigated by Shelly revealed that athletes who were outstanding in four sports were more mature physically, had greater agility, were larger, and had more intelligence than those who competed in one, two, or three sports.\textsuperscript{18} This suggests that those

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\textsuperscript{15}Shelly, loc. cit.

\textsuperscript{16}LaPlace, loc. cit.


\textsuperscript{18}Shelly, loc. cit.
who participate in a number of sports may be more successful than those who do not. However, findings of the present study indicated that coaches do not consider participation in co-curricular activities to be of great importance in predicting the level of success achieved by incoming freshman football players.

In the space provided on the questionnaire for coaches to identify other traits considered in predicting success in football, those listed included courage, aggressiveness, interest, and a winning attitude. The present researcher believed that those traits were synonymous with those in the questionnaire, which might suggest that some respondents had difficulty in interpreting these terms.
Chapter V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to identify those physical and sociopsychological traits which college and university football coaches consider in predicting performance of incoming freshman football players.

One hundred seventy questionnaires were mailed to the head football coaches of institutes who are members of the National Collegiate Athletic Association and sponsor Division II football. A total of 105 usable questionnaires were returned, which accounted for sixty-two percent of the total sample.

Findings

Findings for this study include the following:

1. Eighty-four coaches, or eighty percent rated speed as the most desirable physical trait listed for predicting success in football as observed in the top two categories.

2. Eighty-six coaches, or eighty-three percent of the coaches rated flexibility in the lower two categories of the physical traits listed.

3. Eighty-nine coaches, or eighty-five percent, rated personality as the most desirable sociopsychological trait listed for predicting success in football as observed in the lowest two categories.

4. Eighty-nine coaches, or eighty-five percent, rated
co-curricular activities in the lower two categories of the sociopsychological traits.

Conclusions

Within the limitations of this investigation the following conclusions seem tenable:

1. Speed may be the most desirable physical trait which may be used to predict success among incoming freshman football players.

2. Flexibility may be the least desirable as a predictor of the success of incoming freshman football players.

3. Player Personality may be the most desirable sociopsychological trait which may be used to predict the success of incoming freshman football players.

4. The level of participation in co-curricular activities may be the least desirable factor in predicting success among incoming freshman football players.

Recommendations

1. The present study should be repeated using a larger sample to include coaches of National Collegiate Athletic Association Division I and III institutions and professional coaches.

2. The present study should be repeated with synonyms listed following each of the traits in the questionnaire to improve interpretation by respondents.

3. A similar study should be designed so that the weighing of factors can be assigned to each trait.
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BIBLIOGRAPHY

A. BOOKS


Vanek, Miroslav, and Bryant J. Cratty. Psychology and the Superior Athlete.


B. PERIODICALS

Brace, David K. "Validity of Football Achievement Tests as Measures of Motor Learning and as a Partial Basis for Selection of Players," Research Quarterly, 14:373, December, 1943.


C. UNPUBLISHED SOURCES


APPENDIX A

Methodology and Procedures

Participants

As a psychology and kinesiology student at Kent State University, I am interested in determining the physical and mental health benefits of participation in a sport for college and university students. I have decided to focus on football players.

Survey

I have developed a survey that will be administered to football players.

The survey will include questions about physical fitness, mental health, and injury rates. It will also include questions about the players' experiences with football.

Informed Consent

All participants will be given the opportunity to opt out of the survey. They will be informed about the purpose of the survey and its potential benefits. They will also be informed about the confidentiality of their responses.

APPENDIX A

Survey for Football Players

Dear Football Players,

I am a psychology student at Kent State University and I am conducting a study on the physical and mental health benefits of football. I am interested in your experiences and opinions on this topic.

I am currently preparing a survey that will be administered to all football players at Kent State University. The survey will take approximately 15 minutes to complete.

Your participation will be greatly appreciated. Your responses will be kept confidential and will not be shared with anyone outside of the research team.

If you are interested in participating, please sign up for the survey through the link provided. If you have any questions or concerns, please feel free to contact me.

Thank you for your time and cooperation.

Sincerely,

[Your Name]
APPENDIX A

Letter of Transmittal and Sponsorship

Department of Intercollegiate Athletics

Dear Sir:

As a graduate student in Health, Physical Education, and Recreation at South Dakota State University, Brookings, South Dakota, I am conducting an investigation to determine the physical and socio-psychological traits which college and university football coaches consider in predicting performance of incoming freshman football players. To obtain this information, I have prepared a short questionnaire for all head football coaches in NCAA Division II institutions.

After reviewing prospective player information forms being used by several area colleges and universities, I have concluded that coaches are not in agreement with respect to the traits they measure in predicting how well an athlete may perform in their programs. Hopefully, the findings of this survey will provide us with a better understanding of the importance of these traits so the player selection process may be improved. In order for the results of this survey to be of value, it will be necessary to identify the opinions of as many coaches as possible. I am seeking your assistance, and it is my sincere hope that you will find time in your busy schedule to participate in this study.

Results of this study will be made available to all who express an interest in receiving them. Only the investigator will have access to the data and no coach or school will be mentioned by name in the study.

Sincerely yours,

Dennis Van Berkum
Department of Health, Physical Education and Recreation

This thesis study has been approved by the Health, Physical Education and Recreation Department at South Dakota State University. I would appreciate any assistance you can give Mr. Van Berkum.

Dr. Neil Hattlesad
Coordinator of Graduate Research
South Dakota State University
APPENDIX A
Letter of Transmittal to Invalid Responses

Dear Sir:

I sincerely appreciate your returning the questionnaire concerning traits of incoming freshman football players. Many of the questionnaires returned were invalid because of a misunderstanding in directions, therefore, I am requesting that another questionnaire be completed by those coaches with clearer directions.

If the findings of this study are to be of value to football coaches of the N.C.A.A. Division II schools, your opinions and answers are of great importance. I would very much like to use your corrected data in this study and your continued support will be greatly appreciated.

I would appreciate your returning the questionnaire as early as possible. The following is a sample questionnaire:

Rate the following traits one to five. One being that of most importance and five being that of least importance. Use each number only once.

<table>
<thead>
<tr>
<th>PHYSICAL TRAITS</th>
<th>SOCIOPSYCHOLOGICAL TRAITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>_____ Agility</td>
<td>_____ Co-curricular</td>
</tr>
<tr>
<td>_____ Flexibility</td>
<td>_____ Family Traits</td>
</tr>
<tr>
<td>_____ Size</td>
<td>_____ Personal Traits</td>
</tr>
<tr>
<td>_____ Speed</td>
<td>_____ Scholastic Aptitude</td>
</tr>
<tr>
<td>_____ Strength</td>
<td>_____ Social Traits</td>
</tr>
<tr>
<td>Others:</td>
<td>Others:</td>
</tr>
</tbody>
</table>

Sincerely,

Dennis Van Berkum
APPENDIX A

Letter of Transmittal to Non-Respondents

Dear Sir:

Recently you received a questionnaire concerning physical and sociopsychological traits of varsity football players. Many of the questionnaires have been returned, but as yet, yours has not been received. I am enclosing another copy in case you have misplaced or did not receive the original material.

If the findings of this study are to be of value to football coaches of N.C.A.A. Division II schools, your opinions and answers are of great importance. I would like very much to include your data in this study and your support will be greatly appreciated. I would appreciate your return of the questionnaire as soon as possible.

If your questionnaire is now in the mail, please disregard this letter. I would like to thank you in advance for your cooperation.

Sincerely,

Dennis Van Berkum
H.P.E.R. Department
South Dakota State University
APPENDIX B

Postcard Questionnaire

Directions: Rate each column of traits 1 to 5 (1 being that of most importance and 5 being that of least importance). Use each number only once.

<table>
<thead>
<tr>
<th>PHYSICAL TRAITS</th>
<th>SOCIOPSYCHOLOGICAL TRAITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agility</td>
<td>Co-curricular Activities (Extra)</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Family Traits (stable home</td>
</tr>
<tr>
<td>Size</td>
<td>Personal &quot; environment)</td>
</tr>
<tr>
<td>Speed</td>
<td>Scholastic Aptitude</td>
</tr>
<tr>
<td>Strength</td>
<td>Social Traits</td>
</tr>
<tr>
<td>Others (List below)</td>
<td>Others (List below)</td>
</tr>
<tr>
<td>Check if you wish</td>
<td>Check if you wish</td>
</tr>
<tr>
<td>a copy of the results of</td>
<td>a copy of the results of</td>
</tr>
<tr>
<td>this study</td>
<td>this study</td>
</tr>
</tbody>
</table>
APPENDIX C

Table 5: The rating of each trait and the percentage of each is presented in this table.

<table>
<thead>
<tr>
<th>Physical Traits</th>
<th>Rating 1</th>
<th>%</th>
<th>Rating 2</th>
<th>%</th>
<th>Rating 3</th>
<th>%</th>
<th>Rating 4</th>
<th>%</th>
<th>Rating 5</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agility</td>
<td>29</td>
<td>27.62</td>
<td>26</td>
<td>24.76</td>
<td>32</td>
<td>30.48</td>
<td>14</td>
<td>13.34</td>
<td>4</td>
<td>3.81</td>
</tr>
<tr>
<td>Flexibility</td>
<td>5</td>
<td>4.76</td>
<td>6</td>
<td>5.71</td>
<td>8</td>
<td>7.62</td>
<td>34</td>
<td>32.38</td>
<td>52</td>
<td>49.53</td>
</tr>
<tr>
<td>Size</td>
<td>17</td>
<td>16.19</td>
<td>21</td>
<td>20.00</td>
<td>27</td>
<td>25.71</td>
<td>16</td>
<td>15.24</td>
<td>24</td>
<td>22.86</td>
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<tr>
<td>Speed</td>
<td>49</td>
<td>46.68</td>
<td>35</td>
<td>33.33</td>
<td>13</td>
<td>12.38</td>
<td>6</td>
<td>5.71</td>
<td>2</td>
<td>1.90</td>
</tr>
<tr>
<td>Strength</td>
<td>5</td>
<td>4.76</td>
<td>16</td>
<td>15.24</td>
<td>24</td>
<td>22.86</td>
<td>35</td>
<td>33.33</td>
<td>25</td>
<td>23.81</td>
</tr>
</tbody>
</table>

Sociopsychological Traits

<table>
<thead>
<tr>
<th>Co-curricular Activities</th>
<th>3</th>
<th>2.86</th>
<th>5</th>
<th>4.76</th>
<th>8</th>
<th>7.62</th>
<th>11</th>
<th>10.48</th>
<th>78</th>
<th>74.28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Traits</td>
<td>16</td>
<td>15.24</td>
<td>21</td>
<td>20.00</td>
<td>26</td>
<td>24.76</td>
<td>33</td>
<td>31.43</td>
<td>9</td>
<td>8.57</td>
</tr>
<tr>
<td>Personal Traits</td>
<td>66</td>
<td>62.87</td>
<td>23</td>
<td>21.90</td>
<td>13</td>
<td>12.38</td>
<td>1</td>
<td>0.95</td>
<td>2</td>
<td>1.90</td>
</tr>
<tr>
<td>Scholastic Aptitude</td>
<td>17</td>
<td>16.19</td>
<td>23</td>
<td>31.43</td>
<td>30</td>
<td>28.57</td>
<td>18</td>
<td>17.14</td>
<td>7</td>
<td>6.67</td>
</tr>
<tr>
<td>Social Traits</td>
<td>1</td>
<td>0.95</td>
<td>23</td>
<td>21.90</td>
<td>27</td>
<td>25.71</td>
<td>39</td>
<td>37.14</td>
<td>15</td>
<td>14.30</td>
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