The Relationship Between Personality Factors of Collegiate Football Players and Their Effectiveness on the Playing Field

Charles Williams
Western Kentucky University

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THE RELATIONSHIP BETWEEN PERSONALITY FACTORS
OF COLLEGIATE FOOTBALL PLAYERS AND THEIR
EFFECTIVENESS ON THE PLAYING FIELD

A Thesis
Presented to
the Faculty of the Department of Physical
Education and Recreation
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Charles S. Williams
May 1971
THE RELATIONSHIP BETWEEN PERSONALITY FACTORS
OF COLLEGIATE FOOTBALL PLAYERS AND THEIR
EFFECTIVENESS ON THE PLAYING FIELD

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He would also like to thank Mr. John Foe and Dr. Don R. Kirkendall who freely devoted their time in data processing. Thanks also go to Coach Jim Feix for his interest and information in developing this study.
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CHAPTER ONE

The Problem

Through the years there has been increasing interest in the investigation of the athlete's personality. Much emphasis has been placed on the psychological characteristics of athletes of a given age group and ability level. Coaches, trainers, and others involved with athletics believe that personality is an essential ingredient in developing a highly skilled individual. However, the ones in leadership seldom put forth explicit statements of such beliefs into a meaningful theory structure that can be assessed and therefore verified.

Statement of the Problem

The purpose of this study was to determine whether differences in personality factors existed between groups of outstanding and less outstanding collegiate football players. The problem was further investigated: (1) in an effort to determine the personality differences between the various groups studied; and (2) to determine if there were distinct group personality profiles present.

Need for the Study

The apparent interest of coaches, and others concerned with the relationship between personality and athletic achievement, initiated research in this area; however, the few studies conducted show conflicting results, but leave the impression that a relationship
does exist. If a connection could be established, one could
differentiate, for selective purposes, between players of equal skill.
Also, it would enhance the coaches' ability in facilitating better
interpersonal relations, behavior control, and predictions of
behavioral performances. It was the intent of the writer to add
to the present body of knowledge in this area so that scientific
applications could be made.

Underlying Hypotheses

The hypotheses investigated in this study were as follows:

1. Offensive players have personality profiles which will
   not differentiate them from defensive players.

2. Personality profiles of successful football players
   (letter winners) exhibit characteristics not distinguishable from
   those possessed by the non-letter winners.

3. When age is considered in personality factor analysis,
   the age element does not differentiate the groups.

Limitations of the Study

The following limitations were placed on the study:

1. The study was limited to forty-four collegiate football
   players at Western Kentucky University, Bowling Green, Kentucky.

2. The subjects were not selected by random procedures, but
   were the athletes available for the study.

3. It is assumed that the subjects answered the questionnaire
   in an honest and truthful manner.
Definition of Terms

The following are definitions which add to the understanding of the problem studied.

1. Personality.--refers to the unique organization of factors which characterizes an individual and determines his pattern of interaction with the environment.

2. Types.--applied to the classifications of individuals by their psychological characteristics.

3. Traits.--refers to any distinguishable, relatively enduring way in which one individual differs from another.

4. Group.--relates to classification of the athletes into letter-winners, non-letter winners, age, offense and defense categories.

5. Letter Winner.--an athlete whose game experience has been extensive enough to contribute to the success of the team, as determined by the subjective appraisal of the coaching staff.

Summary

Educators, involved with athletics, have become more interested in the personality aspect of athletes. However, they fail to state their concern in a manner that can be verified. The purpose of this study was to determine if personality differences existed between various groups of football players.

If a connection could be established between personality and specific athletic groups, it would enhance the coaches' ability in behavioral control and predictions of behavioral performances.
CHAPTER TWO

Survey of Related Literature

Introduction

The belief that a relationship exists between personality and physical abilities has been an assumption long held by physical educators and one they frequently discuss. Very few coaches would deny the role personality plays in achieving success and some suggest the difference in winning and losing may be attributed to the possessing of certain personality traits.

Discussion of the Literature

The relationship between personality and physical abilities has been argued by those who are concerned with advising and helping champion athletes. It has been suggested that in personality, champion athletes are a "special breed,"¹ and that in the last analysis personality is the vital factor in the discrimination process which singles out the champion from among those who seem to have similar physical gifts. In a study using projective psychology tests, Johnson and associates² revealed that high and generalized anxiety was a


definite personality characteristic of a group of champion athletes. Kane\(^3\) using discriminant analysis showed that physically gifted men and women students differ in personality from the general student population. However, his study failed to differentiate the high skilled men from the skilled women.

Much of the research pertaining to personality and physical ability endeavors to show that the athlete possesses unique and definable personality traits that distinguish him from the non-athlete. Slusher\(^4\) selected 400 high school athletes and non-athletes to compare differences in selected profile scales. Personality characteristics in terms of hypochondriasis, depression, hysteria, psychasthenia deviation, femininity, and paranoia, distinguished the athlete from the non-athlete. Femininity and intelligence were significantly higher for all athletic groups, except swimmers, when compared with the non-athletic group. The football group was characterized by a strong neurotic profile. They were significantly lower than the non-athletic group in intelligence; however, they indicated a higher level of intelligence than any other athletic group. Cooper\(^5\) stated that there is no intellectual difference between athletes and non-athletes, but the difference comes in the area of intellectual functioning when oriented toward achievement. The motivational

---


factor here seemed to be the crucial difference. He further stated that athletes are more aggressive and outgoing, socially confident, dominant and leading, and receive a higher social adjustment when rated by teachers and peers.

Other studies concerning the relationship between athletic participation and the psychological characteristics of college men were made by Sperling, Booth, and Keogh.

Sperling\(^6\) reported that college athletes were superior in ascendance, but had less social love for people, and cared little for aesthetic values, when compared with the non-athlete.

The Minnesota Multiphasic Personality Inventory (MMPI) was administered by Booth\(^7\) to compare the personality ratings of athletes. His study indicated that the college upperclassmen, who were non-athletes, scored higher on the anxiety and social responsibility test variables, than did the upperclassmen who were athletes.

In contrast to these findings, Keogle's\(^8\) study failed to show any significant differences. However, Schendel's\(^9\) findings tend to strengthen the other two.

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\(^6\) Abraham P. Sperling, "The Relationship Between Personality Adjustment, and Achievement in Physical Education Activities," Research Quarterly, 13 (December, 1942), 355.

\(^7\) E. G. Booth, Jr., "Personality Traits of Athletes as Measured by the MMPI," Research Quarterly, 29 (May, 1958), 129.

\(^8\) Jack Keogh, "Relationship of Motor Ability and Athletic Participation in Certain Standardized Personality Measures," Research Quarterly, 30 (December, 1959), 440.

Another premise held by investigators is that athletes in one sport can be distinguished from athletes in another sport. Lakie tested 230 athletes competing in basketball, football, golf, tennis and track at two state colleges, a state university, and a private university. The mean scores on the scale were categorized by sport group totals, school group totals, and by sports groups within schools. For total group sports, no significant difference was measured. For total school groups a significant difference was noted on the social maturity scale, with the athletes at the private university scoring higher than athletes from the three other schools. For sports groups within their own school, the private university football players had a lower mean score on the social introversion than did the track men. Thus specific groups of athletes within a school may have characteristics that distinguish them not only from athletes participating in other sports, but also from athletes participating in the same sport in other schools. Lakie further states that the differentiating characteristic of specific groups may be the results of the manner in which the program is conducted, the emphasis placed upon the program, or the leadership in charge of the program.

Other studies have concentrated on finding personality differences within sports groups. Kroll considered within-sport

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11 Ibid., p. 572.

analysis of football, wrestling, and karate participants. He revealed that analysis based upon different quality levels of skill and achievement exposed no differences in personality for wrestlers. Kroll and Carlson\textsuperscript{13} reported similar findings for karate participants. The evidence suggests that football players and wrestlers exhibited profiles which were homogenous, while significantly different from those for gymnasts and karate participants. Profiles for gymnasts and karate participants were significantly different from each other. These findings tend to strengthen the belief held by some coaches who contend that two sports share many aspects of similarity. Some football coaches encourage their players to take wrestling and vice versa, because participation in one sport may contribute to improved performance in the other. Kroll and Crenshaw\textsuperscript{14} concluded that football and wrestling apparently attract and hold athletes with similar personality profiles, even though one is a team sport and the other an individual sport. Football is a combative team sport and wrestling a combative individual sport, thus leading one to believe that the similarities in combative aspects are more important than differences between team and individual sport classification.

Thune's\textsuperscript{15} study of the personality of weightlifters was a significant one. An inventory was administered to 100 Oakland YMCA


male weightlifters and to 100 other YMCA male athletes in an effort to determine group differences in attitudes and dispositions of personality. The weightlifter's group was found to be basically shy and lacking self-confidence. They wanted to be strong and dominant, emulating other strong men, with their goal of a more muscular, strong body. The competitive weightlifter showed opposite characteristics from those possessed by weightlifters who just wanted to improve their body build.

Berger and Littlefield\textsuperscript{16} investigated differences in personality between thirty outstanding football athletes and thirty non-outstanding football athletes. It was found that ninth and twelfth grade athletes generally possessed more desirable personal-social psychological characteristics than non-outstanding athletes. There is the possibility that differences in psychological characteristics between athletes and non-athletes in college may reflect primarily academic achievement rather than personal social psychological characteristics. The insignificant differences in the California Psychological Inventory scores found between outstanding athletes and non-outstanding athletes indicate that participation in varsity football may not develop more favorable characteristics of social interaction and social living than non-participants. Rushall\textsuperscript{17} found that when data was combined several ways that different results


were obtained for each analysis. The implications from these contrasts of group formation were that factors which differentiated environments were more heavily weighted than factors which differentiated levels of performance in the interaction analysis. The same conclusion was drawn by Lakie\textsuperscript{18} as Rushall,\textsuperscript{19} that it is evident differentiating personality variables for physical performance categories are dependent upon the method of group formation and the environments from which they are selected. Kroll and Peterson\textsuperscript{20} selected five collegiate football teams, in order to provide data on winning and losing football teams. By using sten scores of the 16 Personality Factor Questionnaire, they suggested that the profile factors constitute little importance in differentiating personality dimensions for the football teams studied. However, when one considers the personality profile as a whole rather than by independent factors, the opposite is true.

Cattell Questionnaire

One recurring problem in personality assessment is the measuring of traits, since there are so many of them. Investigators have searched the dictionary and found over 3,000 trait words for describing personality. Studies showed many different meanings and ways of measuring it, thus leading to much confusion. One statistical method for studying separate abilities as they function together is

\begin{enumerate}
\item[18] Lakie, op. cit., 571.
\item[19] Rushall, op. cit., 163-64.
\end{enumerate}
factor analysis. Its purpose is to identify the underlying variables that contribute to a complex skill and measure their relative importance.

Cattell and Eber\textsuperscript{21} developed the Sixteen Personality Factor Questionnaire (later references may simply be Sixteen P.F.) by use of factor analysis. This questionnaire consists of fifteen temperamental or dynamic factors and one general intelligence factor.\textsuperscript{22} The Sixteen P.F. can claim a more intensive and extensive research basis than the few excellent factorial questionnaires otherwise available, notable in (1) the coverage of the personality sphere, and (2) the determination of factor loading for every item. The resulting better selection of items permits measures of higher factor saturation though still with a small number of items per factor to work with.\textsuperscript{23}

The Sixteen P.F. is considered one of the better personality tests available. It is widely used, having been translated and standardized in a number of foreign countries. Soundly based on factor analytic research, it purports to measure all the main and separate dimensions of personality which can differentiate people.\textsuperscript{24}

Summary

A realistic analysis of the work in athletic personality must conclude that the matter is unsettled. Conclusions brought forth by

\begin{itemize}
  \item \textsuperscript{21}Ibid., 69.
  \item \textsuperscript{22}Raymond B. Cattell, "Validation and Intensification of the Sixteen Personality Factor Questionnaire," \textit{Journal of Clinical Psychology}, 12 (July, 1956), 205.
  \item \textsuperscript{23}Robert B. Cattell, \textit{Description and Measurement of Personality}, (New York: World Book Company, 1946), 40.
  \item \textsuperscript{24}Walter Kroll and Kay H. Peterson, \textit{op. cit.}, 438.
\end{itemize}
objective measurement tools continue to offer conflicting results. Kroll states that this is due to researchers expecting too much of personality inventories. "Because... structural personality factors cannot always be expected to discriminate in the kinds of operations and situations in which we have hoped for significant differences." This premise is not unreasonable in that personality factors may play an important part in some sports but not in others, or at some ability levels but not at others.

Of the articles written there is much repetition in the bibliographies of a great many publications. Rushall believes that the majority of articles printed before 1960 are invalid in their implications. He states that, "The main basis for asserting that a relationship exists [between personality and athletic achievement] appears to rest with personal conviction." Kroll implies that there is far too little acceptable research concerning athletic personality characteristics to draw definite conclusions at this time. The confusing data cannot be allowed to prompt the conclusion that there is no correlation between personality and athletic accomplishment.


26 Ibid., 29.

27 Rushall, op. cit., 157.

CHAPTER THREE

Experimental Procedures and Equipment

Selection of Subjects

All subjects were members of the Western Kentucky University Football Team and were divided into the following categories: achievers (letter winners); participants on the team, but not letter winners; defensive team members; offensive team members; and age groups 18 through 20, and 21 through 23. The athletes were asked to participate in the study by the investigator and the head coach. No undue pressure was brought to bear on the subjects. All subjects were cooperative, and most were very interested in taking the test.

Instruction to Subjects

The participants were divided at random into two equal groups for taking the inventory. Forms A and B of the Cattell Sixteen Personality Factor Questionnaire were administered to each group, with approximately three weeks between testing dates. Although the test is virtually self-administered, a brief description of the testing procedures and the purpose of the study were given to insure good rapport with the subjects. Standardized instructions were prepared and read to each group. The importance of these directions cannot be overlooked, since it is most important to relate to the individual the benefits he will receive if he is frank and honest in describing himself. Emphasis was placed on the confidential nature
of the subjects' responses. It was stated that all questions must be answered and that the test had no time limit. After the instructions were given, any questions from the participants were answered.

Data Collection Equipment

The Cattell Sixteen Personality Factor Questionnaire was administered. The questionnaire consists of equivalent forms A and B, each with 187 items (10 - 13 items per factor), with each item having a three choice answer. A description of the sixteen primary personality factors in the Cattell Sixteen Personality Factor Questionnaire can be found in Appendix A. The development of the sixteen personality factor questionnaire reflects a high order of technical skill. The test has had substantial acceptance as a self-reporting personality measurement. It was administered in accordance with the directions provided in the 16 PF Handbook.29

Statistical Methods

The answers to the items on the questionnaire were made on separate answer sheets and were hand scored with the use of two cardboard scoring stencils. Once the testing had been completed, the question of distortion was taken into account. Since no questions were eliminated due to this phenomenon, each individual inventory was scored. Scoring was based on points zero, one, or two points per question. Each item contributed to only one factor's total.

Before any meaning could be given to the test results, the raw scores were converted into mean standard ten scores (stens),

distributed from 1 - 10. Sten scores from 5 - 6 were average; 4 and 7 slightly deviant; 2, 3, 8, and 9 were characterized as being strongly deviant; 1 and 10 exhibited extreme deviation. Norm tables for college men as found in the Sixteen PF Supplement of Norms\textsuperscript{30} were used.

All the data gathered were recorded on a master I.B.M. sheet. Key cards were punched at the Western Kentucky University Computer Center. The cards were then forwarded to the University of Kentucky Computing Center for analysis, since the computer programming desired was available at this center.

The analysis included the development of means, standard deviations, and the calculation of t-ratios. Since both groups were studied for deviations from the average, it was necessary that this investigation test the probabilities at both ends of the distribution. Consequently, a two-tail test of the null hypotheses was made. The .05 level of significance was established for acceptance in this study.

All tabulations were carried four place values and rounded to three, in order to find the varying levels of significance.

Summary

The subjects were collegiate football players enrolled at Western Kentucky University. All participants were given the Cattell Sixteen Personality Factor Questionnaire, a self-administered personality inventory. Standardized instructions were read and questions from the subjects answered.

After each inventory was scored, the raw scores were converted to mean standard ten scores. The data were then recorded on a master I.B.M. sheet. Key cards were forwarded to the University of Kentucky for analysis. A two-tail test was made of the null hypotheses.
CHAPTER FOUR

Analysis and Interpretation

The responses of forty-four varsity football players at Western Kentucky University were studied in this investigation, by use of the Cattell Sixteen Personality Factor Inventory. The available subjects were members of a highly successful NCAA college division team, which won the Championship of the Ohio Valley Conference, compiling an 8-1-1 record.

The material was divided into three categories for presentation. These categories included a comparison and a discussion between (1) letter winners and non-letter winners, (2) offense and defense, and (3) older and younger team members.

The analysis was made by use of the "2" Tail Test, in order to compare the personality of the various groups, and to determine if there were distinct personality profiles present.

Letter Winners Versus Non-Letter Winners

The distribution of the personality factors and the basic computations utilized in deriving t-ratios between letter winners and non-letter winners at Western Kentucky University is presented in Table 1. Among the sixteen personality factors studied were ego strength, premsia, surgency, super ego, parmia and dominance. A listing of all sixteen factors can be found in Appendix A.
### TABLE 1
ANALYSIS OF LETTER WINNERS AND NON-LETTER WINNERS ON THE 16 PERSONALITY FACTORS

<table>
<thead>
<tr>
<th>Profile Component</th>
<th>L-W* (N=18)</th>
<th>N-L-W** (N=26)</th>
<th>t ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean  SD</td>
<td>Mean  SD</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>6.22 1.73</td>
<td>6.31 2.05</td>
<td>-0.14</td>
</tr>
<tr>
<td>B</td>
<td>4.50 1.72</td>
<td>5.08 1.96</td>
<td>-1.01</td>
</tr>
<tr>
<td>C</td>
<td>5.83 1.82</td>
<td>4.92 2.06</td>
<td>1.51</td>
</tr>
<tr>
<td>E</td>
<td>5.61 1.82</td>
<td>5.81 2.12</td>
<td>-0.32</td>
</tr>
<tr>
<td>F</td>
<td>6.89 1.91</td>
<td>5.73 1.93</td>
<td>1.97</td>
</tr>
<tr>
<td>G</td>
<td>5.39 2.17</td>
<td>4.35 2.12</td>
<td>1.59</td>
</tr>
<tr>
<td>H</td>
<td>6.06 1.89</td>
<td>5.69 1.89</td>
<td>1.63</td>
</tr>
<tr>
<td>I</td>
<td>6.06 1.55</td>
<td>5.50 1.58</td>
<td>1.15</td>
</tr>
<tr>
<td>L</td>
<td>6.28 1.60</td>
<td>5.85 2.29</td>
<td>0.69</td>
</tr>
<tr>
<td>M</td>
<td>5.61 2.43</td>
<td>5.73 1.95</td>
<td>-0.18</td>
</tr>
<tr>
<td>N</td>
<td>4.89 2.30</td>
<td>5.46 1.77</td>
<td>-0.93</td>
</tr>
<tr>
<td>O</td>
<td>5.72 1.56</td>
<td>5.88 2.41</td>
<td>-0.27</td>
</tr>
<tr>
<td>Q₁</td>
<td>5.78 2.52</td>
<td>5.15 1.97</td>
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</tr>
<tr>
<td>Q₂</td>
<td>5.67 1.41</td>
<td>5.65 2.11</td>
<td>0.02</td>
</tr>
<tr>
<td>Q₃</td>
<td>5.83 2.60</td>
<td>5.88 2.05</td>
<td>0.07</td>
</tr>
<tr>
<td>Q₄</td>
<td>5.72 1.93</td>
<td>5.46 1.68</td>
<td>0.48</td>
</tr>
</tbody>
</table>

*Letter Winners

**Non-Letter Winners

The t-probabilities ranged from a low of .0558 to a high of .9809 on the various factors. Therefore, the null hypothesis, that
no differences existed between letter winners and non-letter winners on the personality profile, was accepted at the .05 level of significance. Kroll and Peterson's\textsuperscript{31} study substantiates this finding. They conclude that profile factors taken independently constitute little importance in differentiating personality dimensions of winning and losing football teams.

While the personality differences between the two groups showed no statistical significance at the .05 level, there were differences. One score approaching significance was Factor F (Sober vs. Happy Go Lucky) at the .0558 level, with a t-ratio of 1.9667. One implication of this finding may be that the letter winners who had a sten score of 6.89 seemed more confident than the non-letter winners, with a sten score of 5.73; or perhaps the very nature of the letter winners' personality characterized itself to success in this area.

Factor G (Expedient vs. Conscientious) had a t-ratio of 1.5898, with stens of 5.39 for the letter winners and 4.35 for the non-letter winners. While not statistically different, these findings suggest that the non-letter winner disregards rules and feels fewer obligations than the letter winners, in this population.

A t-ratio of 1.5099 was established for Factor C (Affected by Feelings vs. Emotionally Stable) with stens of 5.83 for the letter winners and 4.92 for the non-letter winners. While not statistically significant, this information suggested that the non-letter winner was more affected by feelings than his letter-winner counterpart. In

\textsuperscript{31}Kroll and Peterson, \textit{op. cit.}, 438.
contrast, the letter winner, as might be expected, remained calm and faced reality more directly than his peers.

These findings are similar to those reported by Ogilvie's\textsuperscript{32} 1968 study, namely, that the traits which consistently appear to be associated with athletic achievement are C+ (Emotional Stability), and G+ (Conscientiousness). The data presented in Table 2 illustrates that the letter winners ranked above the average sten score 5.5, on both of these items.

Offense Versus Defense

For the purpose of this study, classification for the groups was accomplished by the squad affiliation for this competitive school year. An examination of Table 3 reveals that Factor N (Forthright vs. Shrewd) is significant at the .05 level. The t-ratio of Factor N is 3.495. Since the factor is significant, this dimension demands some additional discussion. Individuals who are more trusted and liked appear to be more socially accepted, and thus reflect a low N Factor. In contrast, individuals who have a high N Factor are repeatedly associated with responses reflective of dislike for school; this better fits the rebellious concept. Table 4 shows that this is a significant factor when comparing the offense and defense. The defense scored negatively, with a sten score of 4.20, while the offense had a sten score of 6.08.

A few other factors, while not statistically significant, bear comment. The offensive group had a mean sten score of 4.88, while the

\textsuperscript{32}B. C. Ogilvie, "Psychological Consistencies Within the Personality of High-Level Competitors," \textit{Journal of the American Medical Association}, 205, (March, 1968), 158.
<table>
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<th>Low Score Description</th>
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<th>2</th>
<th>3</th>
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<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>High Score Description</th>
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<td>Outgoing</td>
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<tr>
<td>B Less Intelligent</td>
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<td></td>
<td></td>
<td>More Intelligent</td>
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<tr>
<td>C Affected by Feelings</td>
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<td></td>
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<td></td>
<td>Emotionally Stable</td>
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<td>E Humble</td>
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<td></td>
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<td>Happy-Go-Lucky</td>
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--- Letter Winners

--- Non-Letter Winners
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ANALYSIS OF OFFENSE AND DEFENSE ON THE 16 PERSONALITY FACTORS

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^aSignificant at .05.
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Offense

Defense
defensive group scored 5.60 on Factor Q₁ (Conservative vs. Experimenting). On Factor Q₃ (Undisciplined vs. Controlled) a sten score of 6.25 was scored by the offense in comparison to the defense, who scored 5.40. While these items were not significant at the .05 level they did reflect greater differences than any of the other factors.

Age Groups 18 Through 20 Versus 21 Through 23

In comparing the two age groups of the athletes, 18 through 20, and 21 through 23, Table 5 should be viewed. Findings from this study are in basic agreement with Cattell's statement, that only slight differences in personality measurement may be observed when the age factor is in question.

An interesting aspect of age comparison is found on Factors H and L. While neither is statistically significant, they do show some differences. The H Factor (Shy vs. Venturesome), indicated for older athletes a mean sten score of 6.62 as indicated in Table 6, while the younger athletes averaged 5.51. Likewise, Factor L (Trusting vs. Suspicious) is noteworthy, in that both groups scored positively but at different degrees. Age group 18 through 20 had a sten score of 6.26, while the 21 through 23 age group rated 5.46.

No separate analyses of individual scores on these tests are reported. The results from these sheets were used by the football staff and when requested, were discussed with the student-athlete. While some unusual individual profiles were identified, they have not been reported in this study.

---

33Robert B. Cattell, _16 PF Supplement of Norms_, op. cit., 71.
TABLE 5
ANALYSIS OF AGE GROUPS 18 THROUGH 20
AND 21 THROUGH 23 ON THE
16 PERSONALITY FACTORS

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### TABLE 6

**PROFILES OF PERSONALITY FACTORS OF AGE GROUPS**

**18 THROUGH 20, AND 21 THROUGH 23**

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18 through 20

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21 through 23
Summary

The "2" Tail Test was used to compare the personality profiles of collegiate football players by playing position, degree of success, and age. Each group was further compared with regard to their mean sten scores.

Significant differences were not established at the .05 level of significance for the group's letter winners vs. non-letter winners, and the two age groups 18 through 20 vs. 21 through 23.

There was a significant difference at the .05 level between the offensive and defensive groups in regard to Factor N (Forthright vs. Shrewd); no other factors were significantly different.

When the two age groups were compared, it was found that only slight differences in personality were observed on the age factor.
CHAPTER FIVE

Summary and Conclusions

Summary

The purpose of this study was to analyze personality differences between various groups of collegiate football players at Western Kentucky University. The study further investigated the differences in personality factors existing between outstanding and less outstanding football athletes.

Forty-four athletes from the successful 1970 Western Kentucky University football squad were used as subjects. The Cattell 16 Personality Factor Inventory was administered to these athletes approximately three weeks after the close of the regular football season. The inventory results were then categorized into the following groups: (1) letter winners and non-letter winners, (2) offense and defense, and (3) age groups.

The data thus collected was recorded on a master I.B.M. sheet and individual cards were punched. Analysis of the data was accomplished by use of the "2" Tail Test comparing one group with another and establishing t-ratios. The .05 level of significance was established. Previously reported studies were consulted and comparisons made where appropriate.
Conclusions

Fully considering the limitations of this study, the following conclusions seem to be justified:

1. There were no significant differences between letter winners and non-letter winners on the sixteen personality factors at the .05 level.

2. Factor N was the only personality factor significant at the .05 level when comparing offensive and defensive groups.

3. In comparing the two age groups, no factor was significant at the .05 level.

Recommendations

1. Analysis of individual profiles may seem to be a beneficial venture for the team or coach. Group patterns do not seem to reveal extensive differences between groups.

2. Further detailed investigations concerning athletes in specific sports or sports activities would seem to be desirable.
APPENDIX A

Descriptions of the 16 Primary Personality Factors in the Cattell 16 P.F. Questionnaire

1. Factor A:
   Low: Reserved, detached, cool—likes things rather than people, works alone.
   High: Outgoing, warmhearted, participating—cooperative, attentive to people, likes people.

2. Factor B:
   Low: Less intelligent, concrete thinking.
   High: More intelligent, abstract thinking, bright.

3. Factor C:
   Low: Affected by feelings, less emotionally stable, easily upset.
   High: Emotionally stable, faces reality, calm, mature.

4. Factor E:
   Low: Humble, mild, accommodating.
   High: Assertive, independent, aggressive, stubborn.

5. Factor F:
   Low: Sober, prudent, serious.
   High: Happy-go-lucky, gay, enthusiastic.

6. Factor G:
   Low: Expedient, evades rules, feels few obligations.
   High: Conscientious, persevering, rulebound.

7. Factor H:
   Low: Shy, restrained, timid.
   High: Venturesome, socially bold, uninhibited, spontaneous.
8. Factor I:
   Low: Tough-minded, self-reliant, realistic, no nonsense.
   High: Tender-minded, dependent, over protected, sensitive.

9. Factor L:
   Low: Trusting, adaptable, easy to get along with.
   High: Suspicious, hard to fool.

10. Factor M:
    Low: Practical, careful, conventional, proper.
    High: Imaginative, self-motivated, concerned with "essentials," oblivious of particular people and physical realities.

11. Factor N:
    Low: Forthright, natural, artless, sentimental.
    High: Shrewd, calculating, worldly, penetrating.

12. Factor O:
    Low: Placid, self-assured, confident, serene.
    High: Apprehensive, worrying, troubled, depressive.

13. Factor Q₁:
    Low: Conservative, establishment centered, tolerant of traditional (conservative).
    High: Experimenting, critical, liberal, free thinking (radicalism).

14. Factor Q₂:
    Low: Group adherence, a joiner, a follower.
    High: Self-sufficient, resourceful, prefers own decisions.

15. Factor Q₃:
    Low: Low integration, undisciplined, follows own urges, careless of protocol.
    High: High self-concept, controlled, socially precise.

16. Factor Q₄:
    Low: Relaxed, tranquil, torpid, unfrustrated, satisfied.
    High: Tense, frustrated, driven, overwrought, impatient.
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