

PERSONALITY PROFILES OF INTERCOLLEGIATE WOMEN
IN TEAM AND INDIVIDUAL SPORTS AS MEASURED
BY THE PERSONAL ORIENTATION INVENTORY

A DISSERTATION

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CHAPTER I

ORIENTATION TO THE STUDY

Introduction

The question of the importance of the athlete's personality in sport participation has for some time been an area in which sports psychologists, coaches, and players have been interested; however, the research in the area of personality and athletics is in its infancy. An individual's personality is formed in early childhood but can be modified by later experience in life.¹ Participation in physical activity has been acknowledged by many psychologists, sociologists, educators, and physical educators as one of the better available means of bringing about desirable personality development. However, the question of whether or not athletic participation is a cause or result of certain personality factors has yet to be answered.² A few investigators claim to have identified a

¹Riley W. Gardner and Alice Moriarty, Personality Development at Preadolescence (Seattle, Washington: University of Washington Post, 1968), p. 9.

²Robert N. Singer, "Athletic Participation," The Physical Educator, XXIV (December, 1967), 169-171.

"sport type" and have found differences between team and individual sport competitors, but there is yet no clear definition of a "sport type."

It is startling to realize how little research has been completed on the personality of women athletes. The need for studies and the justification for them was elaborated upon in a recent article by Sara Staff Jernigan:

First, their problems differ from those of male athletes because of the special role the female organism plays in reproduction; second, the number of participating female athletes is much greater now than in the past; third, modern training is strenuous and there are opportunities for more intensive and extensive competitions; and fourth, the psychological and sociological factors involved are unique to the female athlete.¹

The boom in women's athletics has certainly led to greater opportunity, particularly at the collegiate level, and it is to be hoped the sparsity of research in the area will be remedied.

Just as the physical training for various athletes is varied, the psychological training should be considered when dealing with athletes. Although more research has been completed on the personality of the male than on the

¹Sara Staff Jernigan, "Research Needs in Girls and Women's Sports." The 14th International Congress of the International Council on Health, Physical Education and Recreation. (Washington D. C.: American Association for Health, Physical Education and Recreation, 1972), p. 93.

female athlete, there is still confusion and contradiction as to the meaning and application of the results. Some investigators view this as failure, while others perceive it as a contribution to existing knowledge. Robert Singer states that:

The potential outcome of knowing the personality of a performer has yet to be realized. With only the beginnings of research becoming known, it must be expected that confusion and contradiction would occur. With more sophisticated instruments and better experimental designs, there is great promise in the area of personality evaluation and the application of such information to the sports' scene.¹

The research that has been completed must be expanded and contradictions will in themselves help establish patterns and theories of the athlete's personality, if there is such a thing. Within the past fifteen years the number of studies on women athletes has increased but the number is still insufficient. The most significant studies, which include almost all of the existing studies, in relationship to the present investigation will be reviewed in detail.²
3, 4, 5, 6, 7, 8, 9, 10, 11, 12.

¹Robert N. Singer, "Reaction to 'Sport and Personality Dynamics'." Proceedings, National College Physical Education Association for Men. (Minneapolis, Minnesota: National College Physical Education Association for Men, 1968), p. 79.

²Anne M. Bird, "A Comparative Study of Certain Personality Characteristics of College Women Participating in Basketball and Modern Dance." Unpublished Master's thesis, University of Maryland, College Park, Maryland, 1965.

³John L. Dayfries and Ronald L. Grimm, "Personality Traits of Women Athletes as Measured by the Edwards Personal Preference Schedule." Perceptual and Motor Skills, XXX (February-June, 1970), 229-230.

⁴Donna Ann Lopiano, "Personality and Its Relationship to Playing Position in High School Women's Basketball." Unpublished Master's thesis, University of Southern California, Los Angeles, California, 1969.

⁵Theresa M. Malumphy, "Personality of Women Athletes in Intercollegiate Competition." Research Quarterly, XXXIX (October, 1968), 610-620.

⁶Theresa M. Malumphy, "The College Woman Athlete: Questions and Tentative Answers." Quest XIV. National Association for Physical Education of College Women and National College Physical Education Association for Men, June, 1970.

⁷Patsy Neal, "Personality Traits of United States Women Athletes Who Participated in the 1959 Pan-American Games, As Measured by the Edwards Personal Preference Schedule." Unpublished Master's thesis, University of Utah, Salt Lake City, Utah, 1963.

⁸Sheri L. Peterson, Jerome C. Weber and William W. Trousdale, "Personality Traits of Women in Team Sports vs. Women in Individual Sports." Research Quarterly, XXXVIII (December, 1967), 686-689.

⁹Cheryl Ann Renneckar, "Personality Traits of Selected Women Intercollegiate Athletes." Unpublished Master's thesis, Illinois State University, Normal, Illinois, 1970.

¹⁰Virginia Jackson Schreckengaust, "Comparison of Selected Personality Variables Between Women Athletes in Individual Sports and Women Athletes in Team Sports." Unpublished Master's thesis, Pennsylvania State University, University Park, Pennsylvania, 1968.

¹¹Peggy Thomas, "Personality of Women Athletes in Athletic Competition as Measured by the Edwards Personal Preference Schedule." Abstracts of Research Papers, 1973. Washington, D. C.: American Association for Health, Physical Education and Recreation, 1973.

These studies reveal contradicting results and so it is impossible to draw any definite conclusions which would be indicative of women athletes.

The number of studies conducted using male athletes is far greater than those employing female athletes. Although results have been contradictory, some general statements describing male athletes, particularly the champion athlete, have been proposed and generally accepted. 1, 2, 3, 4, 5, 6.

¹²Diane T. Wendt, "Characteristics of Intercollegiate Competitors." Abstracts of Research Papers, 1973. Washington, D. C.: American Association for Health, Physical Education and Recreation, 1973.

¹E. G. Booth, Jr. "Personality Traits of Athletes as Measured by the MMPI." Research Quarterly, XXVIV (May, 1958), 127-138.

²Walter, Kroll, "Sixteen Personality Factor Profiles of Collegiate Wrestlers." Research Quarterly, XXXVIII (March, 1967), 49-57.

³Walter Kroll and Kay H. Peterson, "Personality Factor Profiles of Collegiate Football Teams." Research Quarterly, XXXVI (December, 1965), 433-440.

⁴Bruce C. Ogilvie, "The Personality of the Male Athlete." The Academy Papers Number 1, The American Academy of Physical Education, March, 1968.

⁵Jack Schendel, "Psychological Differences Between Athletes and Non-participants in Athletics at Three Educational Institutions." Research Quarterly, XXXVI (March, 1965), 52-67.

⁶Robert N. Singer, "Personality Differences Between and Within Baseball and Tennis Players." Research Quarterly, XXX (October, 1969), 582-587.

The paucity of research conducted on women collegiate athletes has prompted the investigator to endeavor to contribute to the existing knowledge by comparing women athletes in a team sport, basketball, and an individual sport, tennis. A unique factor of this investigation is the study and comparison of individual personality profiles of the participating athletes. This approach should rectify weaknesses, brought out by Harris¹ and Cooper², of the strictly trait approach while overlooking the integration of personality characteristics. In many studies isolate traits have been compared but none have considered the integration of the various traits and whether the profiles are identifiable within various sports and between athletes and the normal population. If personality profiles could be identified which are capable of differentiating athletes in one sport from another, several possibilities exist. There would be promise for development of techniques for screening the personality of potential athletes, which might eventually lead to a procedure by which aspiring

¹Dorothy V. Harris, "Needed Approaches for A Better Understanding of Behavior and Performance," Women and Sport: A National Research Conference. (Pennsylvania State University, University Park, Pennsylvania, 1972), 173-182.

²Lowell Cooper, "Athletics, Activity and Personality: A Review of the Literature." Research Quarterly, XXXX (March, 1969), 17-21.

candidates for athletics could be matched with the sport for which they are best suited. Also, if prerequisites of success in terms of personality attributes were established for an athletic sport then the manner in which participants were trained could be modified so as to promote optimum cultivation of the successful personality attributes.

Many claims have been made concerning the values of competitive athletics to the individual. If competition enables the individual to develop his capabilities to the utmost it would seem that this development of qualities would lead to desirable personality development. Slusher has stated that, "I like to think of the sportsman as one who maintains the absorbing values of the culture within his organism and emerges with a totality of being that both reflects and reveals life."¹ If the sportsman is capable of this development, sport could enable him to be more self-fulfilled, become more self-actualized. The question is whether athletics as a developer of self-actualization is a viable contention. Contemporary psychology has not yet agreed upon self-actualization as the philosophy of human nature or psychology of the personality but it is accepted by many leading psychologists in the world today and is

¹Howard S. Slusher, Man, Sport and Existence. (Philadelphia: Lea and Febiger, 1967), p. 1.

an available means of studying personality development.¹ Athletes should be above the norm on self-actualization if the many claims that have been made about the value of athletics are true. Although the present study is but a beginning, examining the athlete's personality through self-actualization could add credence to or negate the claims of desirable outcomes from competition which have long lacked factual support.

Statement of the Problem

The problem was to investigate the personality profiles and self-actualization of intercollegiate women athletes who participated on the first, second and third place basketball teams in the Texas Association on Intercollegiate Athletics for Women State Basketball Tournament and those of all of the participants in the Texas Association on Intercollegiate Athletics for Women State Tennis Tournament.

Definitions and/or Explanations of Terms

For the purpose of clarification, the following definitions and/or explanations of terms were established for use in this study.

¹Abraham H. Maslow, Toward a Psychology of Being. 2nd ed.: (New York: Van Nostrand Reinhold Company, 1968), pp. 189-218.

Personality: The investigator defined personality as the score obtained on the various scales of the Personal Orientation Inventory.

Intercollegiate Athlete: The intercollegiate athlete means any undergraduate student participating in the intercollegiate program of her college or university. These participants will have fulfilled all of the eligibility requirements of the Texas Association on Intercollegiate Athletics for Women.

Self-Actualized Person: A self-actualized person is one who is more fully functioning and lives a more enriched life than does the average person. As Maslow states:

Ongoing actualization of potentials, capacities and talents, as fulfillment of mission (or call, fate, destiny, or vocation), as a fuller knowledge of, and acceptance of, the person's own intrinsic nature, as an unceasing trend toward unity, integration or synergy within the person.¹

TAIAW: These initials refer to The Texas Association on Intercollegiate Athletics for Women, the main governing body for women's intercollegiate athletics in Texas.

POI: This abbreviation refers to The Personal Orientation Inventory.

¹Abraham H. Maslow, Toward a Psychology of Being 2nd ed: (New York: Van Nostrand Reinhold Company, 1968), p. 25.

Limitations of the Study

This study was limited to (1) The intercollegiate women athletes in the State of Texas who were on the first, second or third place teams in the 1974 TAIW State Basketball Tournament and those who qualified and participated in the 1974 TAIW State Tennis Tournament; (2) The extent to which the participating players reflected their true beliefs on the instrument utilized in the study; (3) The extent to which the instrument yielded the data necessary for analysis.

Purposes of the Study

The general purpose of this study was to describe the personality profiles and self-actualization of thirty intercollegiate women athletes in a team sport and thirty women athletes in an individual sport.

The specific purposes of the study are reflected in the following hypotheses:

- A. There is no significant difference between intercollegiate women athletes participating in the TAIW State Tournaments in basketball and tennis and the normative group with respect to factors on the POI.
- B. There is no significant difference between women basketball and tennis players with respect

to the factors on the Personal Orientation Inventory.

- C. There is no significant difference between women basketball players on the Championship team in the TAIAW State Tournament and players on the second or third place teams with respect to the factors on the POI.
- D. There is no significant difference in women tennis players in the top four in the TAIAW State Tennis Tournament in singles and doubles and those who are not in the top four with respect to the factors on the POI.

Survey of Previous Studies

A survey of previous research indicates that the proposed study will not duplicate completed investigations. The review includes studies which, in the investigator's opinion, are most related to the present inquiry.

Wendt¹ studied personality variables between women participating in intercollegiate team sports compared to women involved in individual sports competition at Colorado

¹Diane T. Wendt, "Characteristics of Intercollegiate Competitors." Abstracts of Research Papers, 1973, Washington D. C.: American Association for Health, Physical Education and Recreation, 1973.

State University. The Edwards Personal Preference Schedule was used for personality assessment and administered to twenty-one team sport and twenty-one individual sport competitors who volunteered to take part in the study. Mean scores for each group on each variable were computed and the uncorrelated t test was used to determine significant differences. The only significant difference between the two groups was on the heterosexuality trait. In regard to this variable, the individual sport competitors scored significantly higher than the team sports competitors.

Thomas¹ used three criterion groups to determine if there were any distinguishable personality traits of women who did not participate in organized athletic competition as opposed to women who participated in team sports and individual sports competition. The subjects in the two sports groups included sixty-five college women from Southwest Missouri State University. Twenty subjects were included in the control group. The findings indicated that the sports groups were significantly more dominant than the control group but no distinct personality differences were found between the individual and team sports participants.

¹Peggy Thomas, "Personality of Women Athletes in Athletic Competition as Measured by the Edwards Personal Preference Schedule." Abstracts of Research Papers, 1973, Washington D. C.: American Association for Health, Physical Education and Recreation, 1973.

The investigator stated that the results seemed to indicate that the female athlete would be unable to select her sport on the basis of personality.

Dayries and Grimm¹ studied twenty-one volunteer members of various women's intercollegiate athletic teams at the University of Montana. Participants were members of the basketball, volleyball, tennis and track and field teams. The Edwards Personal Preference Schedule was administered to the participants and comparisons were made with the normative group of college women. Significant differences were found on two variables: the women athletes scored higher on the variable of order and lower than the normative group on interaction.

Dayries and Grimm compared their results to the results Neal obtained with high level athletic competitors. They found the two sports groups to be identical on the variables of achievement and exhibition, however, the University of Montana athletes were significantly lower in their need for affiliation than were the competitors in Neal's study.

¹John L. Dayries and Ronald L. Grimm, "Personality Traits of Women Athletes as Measured by the Edwards Personal Preference Schedule." Perceptual and Motor Skills, XXX (February-June, 1970), 229-230.

Neal¹ used forty-seven volunteer women athletes who competed at the 1959 Pan American Games to determine whether specific traits were associated with outstanding women athletes and to determine if they differ, and if so how they differ from the norm of college women. The women athletes competed in equestrian events, fencing, gymnastics, swimming and diving, tennis, track and field, basketball and volleyball. Means of the fifteen variables on the EPPS were compared to the means of the normative group. It was found that the sports group was significantly higher on the six variables of achievement, affiliation, aggression, order, autonomy and nurturance.

Schreckengaust² studied and compared personality traits of women athletes who participated competitively only in individual sports with those women athletes who participated competitively only in team sports. The Edwards Personal Preference Schedule was the instrument selected to determine personality traits. The subjects

¹Patsy Neal, "Personality Traits of United States Women Who Participated in the 1959 Pan-American Games, as Measured by the Edwards Personal Preference Schedule." Unpublished Master's thesis, University of Utah, Salt Lake City, Utah, 1963.

²Virginia J. Schreckengaust, "Comparison of Selected Personality Variables Between Women Athletes in Individual Sports and Women Athletes in Team Sports." Unpublished Master's thesis, Pennsylvania State University, University Park, Pennsylvania, 1968.

were thirty-eight women who were varsity letter winners in a team sport and thirty-three varsity participants in individual sports at the Pennsylvania State University. The individual sports included fencing, gymnastics, bowling, golf and tennis. The team sports included hockey, basketball, softball and lacrosse. Participants volunteered for participation in the study. The findings showed a significant difference, at the .05 level of confidence, for the heterosexuality variable with the individual sports group's mean being higher than the team sports group's mean. It was noted, however that the mean for the team sports group was slightly above the normative group on this variable. There were no other significant differences between the means of the individual sports group and the team sports group.

Peterson, Weber and Trousdale¹ used the Cattell 16 Personality Factor Questionnaire to study personality traits of women who competed in team sports and women who competed in individual sports. The subjects were chosen from a selected group of AAU athletes and the 1964 United States Olympic Team. The team sport participants were fifty-nine basketball and volleyball players and thirty-eight individual sport participants from swimming, diving, riding,

¹Sheri L. Peterson, Jerome C. Weber and William W. Trousdale, "Personality Traits of Women in Team Sports vs. Women in Individual Sports," Research Quarterly, XXXVIII (December, 1967), 686-689.

fencing, canoeing, gymnastics and track and field. Findings of the study indicated that women athletes who compete in individual sports rated higher on the personality factors of dominance, adventurousness, sensitivity, introversion, radicalism, and self-sufficiency and lower on the factor of sophistication when compared to women athletes who compete in team sports. Both groups were more serious than the normative group and were intellectually brighter, more conscientious, aggressive and persevering than the norms for others of equivalent age and education.

Malumphy¹ investigated the personality and background of women participating in intercollegiate sports competition and attempted to describe each participants' personal feelings toward competition and to describe faculty advisor estimation of the personality of the competitor. The Cattell 16 Personality Factor test of personality and a personal information questionnaire were administered. The study involved seventy-seven collegiate women athletes selected from the five larger state universities in Ohio who had competed in their sport for two seasons. The comparisons were made between individual, subjectively-judged, team and team-individual sports participants. A group of

¹Theresa M. Malumphy, "Personality of Women Athletes in Intercollegiate Competition." Research Quarterly, XXIX (October, 1968), 610-620.

forty-two nonparticipants was also studied. Results indicated the groups were similar on fourteen dimensions of personality and significantly different on nine. Of the various combinations of comparisons between groups those most important to the proposed study were: (1) the individual sports group was less anxious than the team sports group and more venturesome and extraverted than the team and team-individual groups, and (2) the team sports group showed less leadership and more anxiety than the individual sport group.

Malumphy¹ used the Cattell 16 Personality Factor Questionnaire to compare women intercollegiate tennis and golf competitors. The data were collected during the 1967 and 1968 National Collegiate Tournaments in golf and tennis. A total of sixty-four tennis players and 116 golfers participated in the study. The 1967 golf and tennis group differed significantly on one dimension of personality, the tennis group was more venturesome. In 1968 these two groups differed on three traits, the tennis group was more imaginative, self-sufficient and more relaxed. The investigator stated that the reasons for the

¹Theresa M. Malumphy, "The College Woman Athlete-- Questions and Tentative Answers." Quest XIV, National Association for Physical Education of College Women and National College Physical Education Association for Men, June, 1969, pp. 18-27.

increase of differences seemed to be obscure. Based upon the findings the author stated:

The athlete does seem to be more intelligent and tough-minded than her peers. She may also be more reserved, assertive, stable, happy-go-lucky, suspicious, casual, and placid. Perhaps sports competition provided for the expression of such differences. These differences also seem to indicate that these women were not suffering a great deal of anxiety over the possible lack of acceptance of one of their social roles, that of the 'woman athlete.' Their own comments from the questionnaire data tend to substantiate this.¹

Lopiano² investigated the relationship between personality traits of players and playing position of high school basketball players. The three positions studied were rovers, stationary forwards and stationary guards. The subjects were eighty-four full-time students, in grades nine through twelve, attending eight selected public or parochial high schools in the Southern California area. On fifteen of the sixteen personality traits measured by the Cattell 16 Personality Factor Questionnaire, there were no significant differences between any of the groups tested. Rovers were found to be significantly more unsophisticated, sentimental, and simple than guards, forwards or stationary

¹Ibid.

²Donna A. Lopiano, "Personality and Its Relationship to Playing Position in High School Women's Basketball." Unpublished Master's thesis, University of Southern California, Los Angeles, California, 1969.

players taken as a group, who were found to be significantly more polished, experienced, worldly and shrewd.

Rennekar¹ conducted a study to determine whether women intercollegiate athletes who had not participated in high school competition could be differentiated from women intercollegiate athletes who had participated in high school competition on the basis of personality factors proposed by Cattell's 16 Personality Factor Questionnaire. In addition, the study attempted to determine whether personality factor scores of team sport players differed from those of individual sport players. Students from two universities, one in Ohio and one in Illinois, were selected for use in the collection of data. There were fifty-one and thirty-three team and individual sport competitors, respectively. Findings of the study revealed no significant differences on any of the personality factors.

Bird² used the California Psychological Inventory to study whether there were similar personality characteristics of college women attending the University of Maryland

¹Cheryl A. Rennekar, "Personality Traits of Selected Women Intercollegiate Athletes." Unpublished Master's thesis, Illinois State University, Normal, Illinois, 1970.

²Anne M. Bird, "A Comparative Study of Certain Personality Characteristics of College Women Participating in Basketball and Modern Dance." Unpublished Master's thesis, University of Maryland, College Park, Maryland, 1965.

who participated in basketball in comparison to those who selected to perform with the modern dance group. The subjects were fourteen college students who voluntarily participated on the University of Maryland basketball team during the winter of 1963 and thirteen women college students who voluntarily participated in the University of Maryland Modern Dance Club during the 1962-1963 academic year. Analysis of the data showed that the basketball group scored significantly higher, at the .05 level of confidence, on the communality scale and the modern dance group scored significantly higher on the scales measuring flexibility and femininity. A comparison of the group means for all other scales proved insignificant.

Summary

In this chapter an overview of research related to athletics and personality was presented. This overview revealed that a variety of research methods and designs have been used yielding results which at this time remain somewhat confusing and sometimes contradictory. The statement of the problem, definitions and/or explanations of terms, limitations of the study, the purposes of the study and a survey of previous studies were also presented.

In the following chapter, the procedures utilized in the development of this study are presented.

CHAPTER II

PROCEDURES USED IN THE DEVELOPMENT OF THE STUDY

Introduction

The general purpose of the study was to describe the personality profiles of intercollegiate women athletes in a team sport and an individual sport in the State of Texas. The procedures followed in the development of the study are discussed under the following main headings: Selection of Subjects, Selection of the Instrument and Administration of the Instrument.

Selection of Subjects

Subjects selected for use in the present study were members of the first, second and third place basketball teams from the TAIWA State Tournament and all of the singles and doubles participants in the TAIWA State Tennis Tournament. Basketball and tennis are highly developed sports in Texas. There is extensive junior high school and high school competition in these activities and the investigator assumed that students at the college level, competing in these sports, would have had several or more years of experience and would have excelled in the activity. Due to overlapping seasons, the collegiate competitors would

have had to select between basketball and tennis competition. Tennis, in Texas, is a year-round activity and basketball, at the college level, overlaps the fall and spring semester. This fact seemed to indicate that the college competitors would essentially be either basketball (team sport) or tennis (individual sport) competitors.

The top three teams in the TIAAW State Basketball Tournament were decided upon to insure that the team sport group would include at least thirty players and to maximize the probability that the participants could be considered successful and highly skilled players. All eligible participants in the TIAAW State Tennis Tournament were selected because tennis is highly developed in the state and unlike competition in other sports, all six college women's districts are considered strong in tennis competition; therefore, all participants in the State Tournament were considered highly skilled and successful. Using all entrants in the State Tournament also increased the number of participants in the individual sport group and made it comparable to the team sport group in size. Although doubles is sometimes referred to as a team game, all participants in the District and State TIAAW Tennis Tournaments are permitted to play both singles and doubles. At the college level the doubles tennis player is most likely

a singles player also and therefore could be considered an individual sport competitor for the purposes of this study. The selection of subjects from the Texas State Tournaments was deemed necessary for administrative feasibility.

It is interesting to note that some studies involving male athletes have included large numbers, whereas the studies involving women athletes have generally included smaller numbers. Of the eleven studies reviewed in detail within the present study, the smallest number of subjects was twenty-one and the largest was 180, with all but the one using less than 100 subjects.

Selection of the Instrument

To accomplish the purposes of this study, which involved the description of personality traits and profiles of intercollegiate women athletes, the investigator selected an instrument which would reveal the necessary information regarding the self-actualization characteristics of the individual.

The instrument selected for use in this study had to meet the following criteria: be a paper-pencil form that would be self-administering; be administratively feasible; be appropriate for the age level of the subjects; have acceptable validity; and utilize terminology that would

be relevant for interpreting the findings to the general public.

Reviewing the instruments available for use in the study indicated that the following instruments might be suitable: Cattell Sixteen Personality Factor Questionnaire, Edwards Personal Preference Schedule, California Psychological Inventory, Minnesota Multiphasic Personality Inventory, Human Behavior Inventory and the Omnibus Personality Inventory. All of the above instruments have been used in studies involving female and male athletes, and personality. Of the eleven studies involving women, reviewed in detail for the present study, five used the Cattell Sixteen Personality Factor Questionnaire, five used the Edwards Personal Preference Schedule and one used the California Psychological Inventory. Close study, in relation to the criteria for selection of the instrument for the present study, revealed weaknesses in the above instruments ranging from lack of validity to completion time of one and one half hours.

Another instrument, the Personal Orientation Inventory, which as far as the investigator could determine has not been used with athletic groups, was then considered. Although the results of a study using this instrument would be difficult to compare with the results of previous studies,

this disadvantage was outweighed by the fact that the instrument best met all the criteria proposed for selection. A detailed discussion of the instrument follows.

Personal Orientation Inventory

The POI, developed by Everett L. Shostrom in 1963, was basically constructed from the writings of Abraham Maslow. It incorporates into the test items the theoretical constructs of the self-actualizing person, a person who is more fully functioning and lives a more enriched life than does the average person. In the acknowledgments of the test manual, Shostrom expresses appreciation to Dr. Maslow for his encouragement and assistance in the development of the Inventory.¹

The Personal Orientation Inventory consists of two ratio scales, time ratio and support ratio, two major scales and ten sub-scales. The scales and the meaning of the elements they are supposed to measure are described in detail in the POI Manual. Therefore only a skeletal description of the scales are included in this discussion.² The time ratio measures the degree to which the individual lives in the present as contrasted with the past or future. The

¹Everett L. Shostrom, Personal Orientation Inventory Manual (San Diego, California: Educational and Industrial Testing Service, 1966), pp. 4-5.

²Ibid., pp. 5, 6, 17, 20-21.

score indicates how well the individual integrates past experiences and future goals into living in the present. The support ratio indicates whether an individual's actions and reactions are primarily "self" or "other" oriented. The self oriented individual reacts primarily from internalized principles and motivations while the other directed individual is greatly influenced by what others think of their actions. The two major scales and ten sub-scales are as follows:

Time Competent (Tc): A high score indicates that the individual tends to live in the here-and-now.

Inner Directed (I): A high score indicates that the individual's mode of reaction is primarily guided by internalized principles and motivations.

Self-Actualizing Values (SAV): A high score indicates that the individual holds and lives by values of self-actualizing people.

Existentiality (Ex): A high score indicates that the individual is flexible in applying such values to his life.

Feeling Reactivity (Fr): A high score indicates sensitivity to one's own needs and feelings.

Spontaneity (S): A high score indicates the ability to express feelings in spontaneous action.

Self-Regard (Sr): A high score indicates the ability to like one's self because of one's strength as a person.

Self-Acceptance (Sa): A high score indicates acceptance of one's self in spite of one's weaknesses or deficiencies.

Nature of Man, Constructive (Nc): A high score means that the individual sees man as essentially good.

Synergy (Sy): A high score means that one has the tendency to see opposites of life as meaningfully related.

Acceptance of Aggression (A): A high score measures the ability to accept anger of aggression within one's self as natural.

Capacity for Intimate Contact (C): A high score measures the person's ability to develop meaningful, contactful relationships with other human beings.

The instrument consists of 150 two-choice comparative value and behavior judgement questions. The subject is asked to read the statements and to select which of the two paired statements more consistently applies to them.

Credentials:

Shostrom reported that the validity of the instrument was first determined through the use of the POI with hand picked groups of self-actualized and non-self-actualized individuals. Persons in the groups were nominated by

practicing, certified clinical psychologists. Eleven scales differentiated at the .01 level of confidence and one scale was at the .05 level. The numbers in the groups were twenty-nine and thirty-four, respectively.¹

Test-retest reliabilities obtained on a sample of forty-eight undergraduate college students for the POI ranged from .71 and .77 for the time and support ratio, respectively, and from .52 for acceptance of aggression to .82 for existentiality on the sub-scales.²

In Buros' Mental Measurements Yearbook, Bloxom commended the content validity, concurrent validity and reliability. Although he criticized the inventory for some overlap of items from scale to scale, he stated that investigators who kept the negative features in mind should find it a useful instrument.³

Coan reported that he believed that extroversion was overemphasized to the point of neglecting inner experience. He felt that some of the questions were poorly worded and that subjects might be responding from sets against generalities or from sophistication. However, he stated that

¹Ibid., p. 25.

²Ibid., p. 32.

³Bruce Bloxom, "The Personal Orientation Inventory," The Seventh Mental Measurements Yearbook. Vol. I. Edited by Oscar K. Buros. Highland Park, New Jersey: The Gryphon Press, 1972, pp. 290-92.

the POI might be welcomed to fill a large and regrettable void and that the test deserved exploratory research.¹

In the short time that the POI has been available, a number of studies have utilized the test to measure self-actualization of various groups. The following discussions include a short summary of some of the studies.

Foulds and Warehime tested ninety-five college students under ordinary testing conditions and then from a "fake good" response set. The scores on the second testing were significantly lower, at the .05 level of confidence, on nine scales but significantly higher on one scale. The findings suggest however that subjects are unlikely to be able to inflate their scores through conscious effort.²

Vander Wilt and Kocke took twenty subjects into the wilderness for three weeks to determine whether or not the Outward Bound experience would assist in the self-actualization process. On eight scales the female portion of the

¹Richard W. Coan, "The Personal Orientation Inventory," The Seventh Mental Measurements Yearbook. Vol. I. Edited by Oscar K. Buros. Highland Park, New Jersey: The Gryphon Press, 1972, pp. 292-93.

²Melvin L. Foulds and Robert G. Warehime, "Effects of a 'Fake Good' Response Set on a Measure of Self-Actualization," Journal of Counseling Psychology, XVIII (May, 1971), pp. 279-80.

sample showed statistically significant (.10 level of confidence) improvements in their scores. There were no significant differences in the male sample.¹

Murray studied the relationship of teacher success and self-actualization. Home economics students, 2,333, rated their teachers on "teacher concern for students." A marked difference in self-actualization was found between teachers with high ratings and those with low ratings, with the more successful teachers being more self-actualized.²

Pearson studied the effects of a series of four different processes used in group guidance and their relationship to successful college adjustment. The processes were group interaction, group participation with a leader, planned class topics and lectures and being exempted from class for a semester. The process of group interaction showed the greatest increase as had been hypothesized. The increases were greatest on the major scales of time

¹Robert B. Vander Wilt and Ronald A. Klocke, "Self-Actualization of Females in an Experimental Orientation Program," National Association of Women Deans and Counselors Journal, XVIII (Spring, 1971), 125-29.

²M. E. Murray, "An Exploration of the Relationship of Self-Actualization to Teacher Success." Unpublished Master's thesis, Pennsylvania State University, University Park, Pennsylvania, 1966.

competence and inner direction as well as on eight of the ten sub-scales.¹

Hargadine investigated self-actualization and movement behavior through the use of a thirty second movement improvisation. Self-actualization scores were correlated with the subjects' subjective recollections of movements and judges' subjective recollections of movements as viewed on video tape. Only weak relationships between movement behavior and self-actualization were demonstrated and the same was true of subjects' and judges' evaluations.²

Administration of the Instrument

The subjects selected for use in the study were participants on college teams who were members of the TAIAW. The Association was contacted during its winter meeting and the investigator asked the Chairman to present the tentative study to the members of the Association for their approval. As a result of this meeting, a letter from the Association Chairman, Dr. Sue Garrison, endorsing the study was received. A copy of the letter may be found in the Appendix

¹O. Pearson, "Effects of Group Guidance Upon College Adjustment." Unpublished Doctoral dissertation, University of Kentucky, Lexington, Kentucky, 1966.

²Martha P. Hargadine, "Relationships Between Measures of Self-Actualization and Evaluations of Scope of Movement." Unpublished Doctoral dissertation, University of Southern California, Los Angeles, California, 1973.

of this study. The investigator believed that the endorsement of the Association would enhance the cooperation of the coaches and students who would be involved in the study.

The state of Texas is divided into six college women's Districts and the first and second place winners in each District are eligible to attend the State Tournament. At both District and State the losers in the semi-finals play for third and fourth place. The State Tournaments follow the District Tournaments by two weeks. At the completion of the District Tournaments the results are mailed to the State Tournament hostess. Due to the lack of time, the investigator called both the Basketball and Tennis State Tournament hostesses to obtain the results of all of the District Tournaments. When these results were obtained, a form letter was sent to the coach of each team that would be represented at the State Tournaments. A copy of this letter may be found in the Appendix. This letter briefly explained the study, asked the coaches for their cooperation and explained that the investigator would attend the State Tournaments to talk with coaches and disseminate packets to those who would be participating in the study.

Personality is an enduring construct and it was decided that the validity and reliability of the instrument would not be affected if the administration procedures

were adhered to, regardless of the administrator. Travel by the investigator to all institutions who participated in the study was prohibitive, therefore the coaches were asked to administer the tests to their players within a two week period following the two State Tournaments. A standard set of instructions was compiled for coaches to use in administering the tests. A copy of this instruction sheet may be found in the Appendix.

Packets for coaches of the various teams were compiled prior to the State Tournaments. The packets included an instruction sheet, the appropriate number of test booklets and answer sheets, and a self-addressed stamped folder for the return of the materials by mail.

The investigator attended the TAIW State Basketball Tournament at Tarleton State University, Stephenville, Texas on March 29 and 30, 1974 and the TAIW State Tennis Tournament at Lamar University, Beaumont, Texas on April 26 and 27, 1974. The first, second and third place team coaches at the basketball tournament agreed to participate in the study. The teams were: Queen Bees, Wayland Baptist College, Plainview, Texas; Stephen F. Austin State University, Nacogdoches, Texas; and Baylor University, Waco, Texas. All of the tennis coaches agreed to participate in the study and participants included players from: Texas Tech University, Lubbock, Texas; Amarillo Junior College,

Amarillo, Texas; Southern Methodist University, Dallas, Texas; University of Texas, Austin, Texas; Trinity University, San Antonio, Texas; University of Houston, Houston, Texas; Texas A. & M. University, College Station, Texas; Laredo Junior College, Laredo, Texas; Texas A. & I. University, Kingsville, Texas; and Bee County Junior College, Beeville, Texas.

When packets were not received within a two and a half week period following the State Basketball Tournament a reminder postal card was sent to the appropriate coach. A week following the State Tennis Tournament reminder notices were sent because of the fact that most colleges and universities completed the semester around the second week in May. If the coach had not replied one week after reminder notices were sent, the investigator called the coaches and was assured the material would be sent. By May 15, 1974 replies had been received from all coaches and all of the students eligible to participate in the study had completed the necessary materials. A sample reminder card may be found in the Appendix.

Summary

The procedures utilized in the development of this study were discussed in Chapter II under the three main

headings of Selection of Subjects, Selection of the Instrument, and Administration of the Instrument.

Procedures and criteria for the selection of the subjects were discussed. A detailed explanation was given with regard to the selection of the instrument used in the study to measure personality. The procedures utilized in the administration of the instrument were explained in detail.

The treatment, analysis, and interpretation of the data are presented in Chapter III.

CHAPTER III

TREATMENT, ANALYSIS AND
INTERPRETATION OF DATA

Introduction

The purpose of this investigation was to study personality profiles of women intercollegiate athletes in a team sport and an individual sport as measured by the POI. The participants were members of the first, second and third place teams in the 1974 TAIWA State Basketball Tournament and all players in the 1974 TAIWA State Tennis Tournament.

The findings of this study were based upon data collected by the coaches of the participants within a two week period following the two State Tournaments. The POI scores of all of the basketball players eligible to participate in the study are included in the report, however, three participants in the tennis group had to be deleted because they failed to answer enough questions on the POI.

Population Facts Concerning Participants

To be considered as a subject for the investigation, the athletes had to be enrolled in a college or university which was a member of TAIWA. Further, teams and individuals had to qualify for the State Tournaments by placing

either first or second in their respective District Tournaments and basketball subjects had to be members of the teams which placed first, second or third in the State Tournament.

Table 1, page 38, describes the subjects by age according to the sport in which they competed. It can be noted that in the basketball group the largest percentage (37%) were nineteen years of age, with the second largest group (27%) being eighteen years of age. These two age groups included 64% of the basketball subjects. Thirty-six percent of the tennis players were twenty years of age and twenty-four percent were twenty-one years. The average age of the basketball and tennis players, respectively, was 19.5 and 20.1 years. As indicated in Table 2, page 39, thirty-three percent of the basketball players were freshmen and twenty-five percent sophomores. The combination of these two classifications encompassed fifty-eight percent of the total group. In the tennis group the largest percentage was the sophomores with fifty-two percent while the senior classification was second with twenty-four percent. The junior classification was the smallest with only eight percent.

Table 3, page 40, containing descriptive information about the age of players according to sport and place, indicates that the youngest players were on the first place

TABLE 1
NUMBER AND PERCENTAGE OF BASKETBALL AND
TENNIS PLAYERS ACCORDING TO AGE

Athletes	Total	Age													
		17		18		19		20		21		22		Not Marked	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Basketball	33	..	..	9	27	12	37	2	6	5	15	4	12	1	3
Tennis	25	1	4	2	8	4	16	9	36	6	24	2	8	1	4
Athletes	58	1	2	11	19	16	28	11	19	11	19	6	10	2	3

Mean age of Basketball players = 19.5.

Mean age of Tennis players = 20.1.

TABLE 2
NUMBER AND PERCENTAGE OF BASKETBALL AND TENNIS
PLAYERS ACCORDING TO CLASSIFICATION

Athletes	Total	Classification									
		Freshman		Sophomore		Junior		Senior		Not Marked	
		No.	%	No.	%	No.	%	No.	%	No.	%
Basketball	33	11	33	8	25	6	18	7	21	1	3
Tennis	25	3	12	13	52	2	8	6	24	1	4
Athletes	58	14	24	21	36	8	14	13	23	2	3

TABLE 3
NUMBER AND PERCENTAGE OF PLAYERS BY PLACE AND AGE

Place	Total	Age														Average Age
		17		18		19		20		21		22		Not Marked		
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
First - Basketball	10	..	..	4	40	5	50	..	..	1	10	..	..	..	..	18.8
Second - Basketball	10	..	..	..	..	2	20	1	10	3	30	3	30	1	10	20.8
Third - Basketball	13	..	..	5	38	5	38	1	8	1	8	1	8	..	..	19.1
Top 4 - Tennis	7	..	..	..	..	2	29	1	14	3	43	..	..	1	14	20.2
Tennis	18	1	6	2	11	2	11	8	44	3	17	2	11	..	..	19.9

basketball team (average age of 18.8 years) and the oldest players (20.3 years) were on the second place basketball team. The second oldest group was the tennis players who placed in the top four of singles and doubles--average age of 20.2 years.

Table 4, page 42, shows the academic classification of the players with respect to sport and place. The first place basketball team had the largest percentage of players in any one category--eighty percent of these players were freshman. The tennis players had the second largest category with fifty-five percent falling in the sophomore group. The only other percentage that approached fifty percent was the second place basketball team, of which fifty percent were seniors.

General Treatment of Data

General treatment of the data included the hand scoring of all answer sheets and the transposition of these data onto the POI Profile Sheets. The answer sheets were scored twice, once by the investigator and once by an assistant. Means and standard deviations for comparison of groups as differentiated by the hypotheses were computed and t tests of significance between means were calculated.

TABLE 4

NUMBER AND PERCENTAGE OF PLAYERS BY PLACE AND CLASSIFICATION

Place	Total	Classification									
		Freshman		Sophomore		Junior		Senior		Not Marked	
		No.	%	No.	%	No.	%	No.	%	No.	%
First - Basketball	10	8	80	1	10	1	10	..	..	..	..
Second - Basketball	10	..	..	2	20	2	20	5	50	1	10
Third - Basketball	13	3	23	5	39	3	23	2	15	..	..
Top 4 - Tennis	7	..	..	3	43	..	..	3	43	1	14
Tennis	18	3	17	10	55	2	11	3	17	..	..

Computational formulas for these procedures were taken from Dayton.¹

The analysis of variance² was used to determine whether differences between tennis and basketball players might be related to age. The Scheffe test³ was used as a subsequent test for the ANOVA. A two-tailed test of significance was utilized in each instance.

The data for testing the hypotheses were contributed by fifty-eight subjects. However, in treating the data under age group classification only fifty-six subjects were included because two subjects, one in the tennis group and one in the basketball group, failed to indicate age on their answer sheets.

First Null Hypothesis

The first null hypothesis was: there is no significant difference between intercollegiate women athletes participating in the TAIAW State Tournaments in basketball and tennis and the normative group with respect to factors on the Personal Orientation Inventory.

¹C. Mitchell Dayton, The Design of Educational Experiments (New York: McGraw-Hill Book Company, 1970), pp. 19 and 40.

²B. J. Winer, Statistical Principles in Experimental Design 2nd ed., (New York: McGraw-Hill Book Company, 1971), p. 212.

³Dayton, The Design of Experiments, pp. 41 and 49.

Comparisons were made between the norms for the normal adult population and the women athletes, also between the norms for a self-actualized person and the women athletes. Means and standard deviations for the comparison groups (normal adult and self-actualized groups) were obtained from the POI Manual. Table 5, page 45, shows that the athletic group was significantly lower, at the .05 or greater level of confidence, than the normal adult group on six of the twelve scales of the POI. The athletes were significantly lower than the self-actualized group on seven scales. The athletes were lower than the normal adult group on the following six scales: Inner Directed, Existentiality, Self Acceptance, Synergy, Acceptance of Aggression and Capacity for Intimate Contact. In addition to these six scales the athletes were significantly lower than the self-actualized group on the Time Competence scale. In regard to the normal adult group, in all but one instance the obtained level of significance indicates that in only one or less cases in one hundred could this difference be attributed to chance. On the basis of these findings the first null hypothesis was rejected.

Second Null Hypothesis

The second null hypothesis was: there is no significant difference between women basketball and tennis

TABLE 5

POI SCALES, MEAN, STANDARD DEVIATION, AND COMPARISON OF DIFFERENCE
BETWEEN ATHLETES, NORMAL ADULT SAMPLE
AND SELF-ACTUALIZED SAMPLE

POI Scales	Athletes		Normal Adult		Diff.	$SE_{\bar{X}}$	t	Athletes		Self Actualized		Diff.	$SE_{\bar{X}}$	t
	\bar{X}	S	\bar{X}	S				\bar{X}	S	\bar{X}	S			
Tc	16.52	2.82	17.7	2.8	1.18	1.19	0.99	16.52	2.82	18.9	2.5	2.38	0.61	3.98 ^d
I	81.53	3.58	87.2	13.6	5.67	1.79	3.16 ^c	81.53	3.58	92.9	11.5	11.37	1.63	6.98 ^d
SAV	20.12	2.86	20.2	3.0	0.08	0.45	0.18	20.12	2.86	20.7	3.6	0.08	0.70	0.83
Ex	18.20	4.22	21.8	5.1	3.60	0.74	4.86 ^d	18.20	4.22	24.8	3.5	6.60	0.90	7.33 ^d
Fr	14.98	3.17	15.7	3.3	0.72	0.50	1.44	14.98	3.17	16.3	2.8	1.32	0.68	1.94
S	12.27	2.37	11.6	3.0	0.67	0.43	1.56	12.27	2.37	12.7	2.9	0.43	0.58	0.74
Sr	12.06	2.28	12.0	2.7	0.06	0.39	0.15	12.06	2.28	12.9	1.9	0.84	0.49	1.71
Sa	14.72	3.17	17.1	4.0	2.38	0.58	4.10 ^d	14.72	3.17	18.9	3.5	4.18	0.74	5.65 ^d
Nc	11.84	2.09	12.4	1.9	0.56	0.30	1.86	11.84	2.09	12.3	2.2	0.46	0.48	0.96
Sy	6.87	1.61	7.3	1.2	0.43	0.20	2.15 ^a	6.87	1.61	7.6	1.2	0.73	0.33	2.21 ^a
A	15.56	3.10	16.6	3.7	1.04	0.24	4.33 ^d	15.56	3.10	17.6	3.1	2.04	0.70	2.91 ^b
C	17.10	3.23	18.8	4.6	1.70	0.65	2.62 ^b	17.10	3.23	20.2	3.4	3.10	0.74	4.20 ^d

^aSignificant at .05 level.^bSignificant at .01 level.^cSignificant at .002 level.^dSignificant at .001 level.

players with respect to the factors on the Personal Orientation Inventory. Table 6, page 47, indicates that on seven of the twelve scales the tennis players were significantly higher, at the .05 or greater level, than the basketball players. The tennis group was higher than the basketball players on the following scales: Time Competence, Inner Directed, Feeling Reactivity, Self Regard, Self Acceptance, Nature of Man-Constructive, and Capacity for Intimate Contact. Therefore, the null hypothesis was rejected.

This finding led the investigator to make further comparisons of the data to determine if this difference between the two athletic groups had contributed measurably to the difference found between the total group of athletes and the normal adult group. Table 7, page 48, shows that the basketball group was significantly lower, at the .05 or greater level, than the normal adult group on eight scales of the POI, and that the tennis group was significantly lower, at the .002 level on only Existentiality. At this stage, indications were that the tennis group was statistically higher than the basketball group in its development of self-actualization, and that the basketball group had contributed greatly to the difference found between the athletes and the normal adult group. This

TABLE 6

POI SCALES, MEAN, STANDARD DEVIATION, AND COMPARISON
OF DIFFERENCES BETWEEN BASKETBALL
AND TENNIS PLAYERS

POI SCALES	Basketball		Tennis		Diff.	SE \bar{x}	t
	\bar{X}	S	\bar{X}	S			
TC	15.78	2.69	17.52	2.74	1.74	0.72	2.42 ^b
I	78.09	3.57	86.08	3.01	7.99	0.88	9.07 ^c
SAV	19.69	3.18	20.68	2.47	0.99	0.77	1.28
Ex	18.33	5.02	18.20	4.87	0.13	1.31	0.09
Fr	13.93	2.88	15.56	3.12	1.13	0.79	2.06 ^a
S	11.96	2.58	12.68	2.35	0.72	0.66	1.09
Sr	11.45	2.50	12.88	1.93	1.43	0.60	2.38 ^a
Sa	13.90	3.25	15.80	2.80	1.90	0.81	2.35 ^a
Nc	11.30	1.70	12.56	2.05	1.26	0.49	2.57 ^b
Sy	6.96	1.68	6.84	1.50	0.12	0.42	0.29
A	15.03	3.33	16.28	2.56	1.25	0.80	1.56
C	16.30	3.17	18.16	3.01	1.86	0.56	3.32 ^c

^aSignificant at .05 level.

^bSignificant at .02 level.

^cSignificant at .002 level.

TABLE 7

POI SCALES, MEAN, STANDARD DEVIATION AND COMPARISON
BETWEEN BASKETBALL PLAYERS, TENNIS PLAYERS
AND THE NORMAL ADULT SAMPLE

POI Scales	Basketball		Normal Adult		Diff.	SE \bar{x}	t	Tennis		Normal Adult		Diff.	SE \bar{x}	t
	\bar{X}	S	\bar{X}	S				\bar{X}	S	\bar{X}	S			
Tc	15.78	2.69	17.7	2.8	1.92	0.56	3.42 ^d	17.52	2.74	17.7	2.8	0.18	0.62	0.29
I	78.09	3.57	87.2	13.6	9.11	2.50	3.64 ^d	86.08	3.01	87.2	13.6	1.12	2.84	0.39
SAV	19.69	3.18	20.2	3.0	0.51	0.61	0.84	20.68	2.47	20.2	3.0	0.48	0.64	0.75
Ex	18.33	5.02	21.8	5.1	3.47	1.02	3.40 ^d	18.20	4.87	21.8	5.1	3.60	1.13	3.19 ^c
Fr	13.93	2.88	15.7	3.3	1.77	0.65	2.72 ^b	15.56	3.12	15.7	3.3	0.14	0.73	0.19
S	11.96	2.58	11.6	3.0	0.36	0.53	0.68	12.68	2.35	11.6	3.0	1.08	0.65	1.66
Sr	11.45	2.50	12.0	2.7	0.55	0.50	1.10	12.88	1.93	12.0	2.7	0.88	0.58	1.51
Sa	13.90	3.25	17.1	4.0	3.20	0.78	4.10 ^d	15.80	2.80	17.1	4.0	1.30	0.86	1.51
Nc	11.30	1.70	12.4	1.9	1.10	0.37	2.97 ^b	12.56	2.05	12.4	1.9	0.16	0.86	0.19
Sy	6.96	1.68	7.3	1.2	0.34	0.26	1.30	6.84	1.50	7.3	1.2	0.46	0.28	1.64
A	15.03	3.33	16.6	3.7	1.57	0.73	2.15 ^a	16.28	2.56	16.6	3.7	0.32	0.80	0.40
C	16.30	3.17	18.8	4.6	2.50	0.88	2.84 ^b	18.16	3.01	18.8	4.6	0.64	0.99	0.65

^aSignificant at .05 level.^bSignificant at .01 level.^cSignificant at .002 level.^dSignificant at .001 level.

difference will be discussed in detail under Comparisons Based Upon Age, later in this chapter.

Third Null Hypothesis

The third null hypothesis stated: there is no significant difference between women basketball players on the championship team in the TAIWA State Tournament and players on the second or third place teams with respect to the factors on the Personal Orientation Inventory. Table 8, page 50, indicates that the Championship team was significantly higher than the second place team on three scales-- Inner Directed, Feeling Reactivity and Acceptance of Aggression. No significant differences were found between the championship team and the third place team. The third null hypothesis was therefore rejected because a difference was found to exist between the championship team and the second place team.

Fourth Null Hypothesis

The fourth null hypothesis was: there is no significant difference in women tennis players in the top four in the TAIWA State Tournament in singles and doubles and those who are not in the top four with respect to the factors on the Personal Orientation Inventory. Table 9, page 51, shows that no significant differences were found between these two groups on any of the twelve scales. On

TABLE 8

POI SCALES, MEAN, STANDARD DEVIATION AND COMPARISON OF
DIFFERENCE BETWEEN THE CHAMPION BASKETBALL TEAM
AND THE SECOND AND THIRD PLACE TEAMS

POI Scales	Champion		Second Place		Diff.	SE _{\bar{x}}	t	Champion		Third Place		Diff.	SE _{\bar{x}}	t
	\bar{X}	S	\bar{X}	S				\bar{X}	S	\bar{X}	S			
Tc	14.6	3.35	15.6	2.32	1.0	1.29	0.78	14.6	3.35	16.85	1.75	2.25	1.09	2.06
I	79.3	3.45	73.0	3.55	6.3	1.57	4.01 ^c	79.3	3.45	81.46	3.05	2.16	1.37	1.58
SAV	20.5	3.56	19.0	2.93	1.5	1.46	1.02	20.5	3.56	19.62	2.80	0.88	1.34	0.66
Ex	19.6	4.40	16.0	5.87	3.6	2.32	1.55	19.6	4.40	19.15	4.10	0.45	1.79	0.25
Fr	14.5	2.59	11.8	2.53	2.7	1.14	2.36 ^a	14.5	2.59	15.15	2.08	0.65	0.98	0.66
S	12.2	2.68	11.1	1.97	1.1	1.05	1.05	12.2	2.68	12.46	2.32	0.26	0.82	0.32
Sr	10.9	3.08	11.0	2.19	0.1	1.20	0.08	10.9	3.08	12.23	2.02	1.33	1.07	1.24
Sa	13.6	2.45	12.9	3.91	0.7	1.46	0.48	13.6	2.45	14.92	2.88	1.32	2.67	0.49
Nc	10.7	1.30	11.3	2.07	0.6	0.77	0.78	10.7	1.30	11.77	1.75	1.07	0.66	1.62
Sy	7.2	1.41	7.3	1.22	0.1	0.59	0.17	7.2	1.41	6.62	1.24	0.58	0.56	1.04
A	16.3	2.02	12.4	2.76	3.9	1.08	3.61 ^b	16.3	2.02	16.08	3.43	0.22	1.23	0.18
C	16.2	3.42	15.7	2.70	0.5	1.38	0.36	16.2	3.42	16.85	3.03	0.65	1.36	0.48

^aSignificant at .05 level.^bSignificant at .002 level.^cSignificant at .001 level.

TABLE 9

POI SCALES, MEANS, STANDARD DEVIATIONS AND COMPARISON
OF DIFFERENCE BETWEEN THE TOP FOUR TENNIS
PLAYERS AND THE TENNIS GROUP

POI Scales	Top 4		Tennis		Diff.	$SE_{\bar{x}}$	t
	\bar{X}	S	\bar{X}	S			
Tc	17.71	3.42	17.44	2.81	0.27	1.33	0.20
I	87.56	3.23	86.33	3.04	1.24	1.38	0.90
SAV	20.00	3.46	20.94	1.96	0.94	1.09	0.86
Ex	18.57	5.45	17.83	4.37	0.74	2.09	0.35
Fr	16.29	1.93	16.39	3.12	0.10	1.28	0.08
S	12.29	2.27	12.83	2.39	0.54	1.28	0.42
Sr	12.43	1.65	13.05	1.75	0.62	0.77	0.81
Sa	17.00	2.62	15.33	2.58	0.74	2.09	0.35
Nc	11.71	2.59	12.89	1.86	1.18	0.93	1.26
Sy	7.14	1.81	7.06	0.97	0.08	0.56	0.14
A	15.29	2.73	16.67	2.31	1.38	1.09	1.27
C	19.14	2.17	17.11	3.30	2.03	1.36	1.49

Demanded value for significance at the .05 level =
2.069.

the basis of these findings, the null hypothesis was supported. These results also indicate that the tennis group was more homogeneous with respect to scores on the POI than the basketball group.

Comparisons Based Upon Age

Due to the fact that the average age of the tennis group was approximately seven months older than the basketball group the investigator wondered if the age factor might have been the contributing factor to the differences found between the two sports groups. The data were regrouped according to age. The eighteen year group included one seventeen year old and the twenty-one year group included six twenty-two year olds, other age groups remained pure. These calculations were based upon fifty-six athletes.

A one way analysis of variance was used to determine the difference between the groups on the twelve scales. Table 10, page 53, indicates that the only statistically significant difference found was on the Self Regard scale. This significance indicated that there was a difference but did not indicate where the difference existed. The Scheffe test, using the harmonic mean, was calculated to ascertain the location of the difference. Table 11, page 54, shows that the twenty year old group was significantly higher than the nineteen year old group and that

TABLE 10

SUMMARY TABLE OF SIGNIFICANCE OF DIFFERENCES BETWEEN
AGE GROUPS AND SCORES ON THE 12 POI SCALES

Scale	Source	df	SS	MS	F
Tc	Between	3	40.78	13.60	1.79
	Within	52	395.06	7.60	
I	Between	3	306.28	102.09	0.92
	Within	52	5,764.28	110.85	
SAV	Between	3	35.35	11.78	1.42
	Within	52	429.20	8.25	
Ex	Between	3	70.18	23.39	0.98
	Within	52	1,239.37	23.83	
Fr	Between	3	44.21	14.74	1.57
	Within	52	488.65	9.40	
S	Between	3	3.82	1.27	0.22
	Within	52	299.16	5.75	
Sr	Between	3	65.97	21.99	4.96*
	Within	52	230.58	4.43	
Sa	Between	3	33.21	11.07	1.18
	Within	52	487.29	9.37	
Nc	Between	3	28.79	9.60	2.63
	Within	52	189.71	3.65	
Sy	Between	3	11.00	3.67	2.00
	Within	52	95.14	1.83	
A	Between	3	56.16	18.72	2.12
	Within	52	459.55	8.84	
C	Between	3	17.06	5.69	0.52
	Within	52	565.49	10.87	

*Demanded value for significance
 $F_{3,52} (.05 \text{ level}) = 2.76.$

TABLE 11

SUMMARY TABLE OF SIGNIFICANCE OF DIFFERENCE
BETWEEN TREATMENT MEANS

Age Groups	Means	10.5	12.0	12.94	13.18
19	10.5	. . .	1.5	2.44*	2.68*
18	12.0	. . .	. . .	.94	1.18
21	12.94	. . .	. . .	. . .	.24
20	13.18	. . .	. . .	. . .	. . .

$$C^+ = 2.29$$

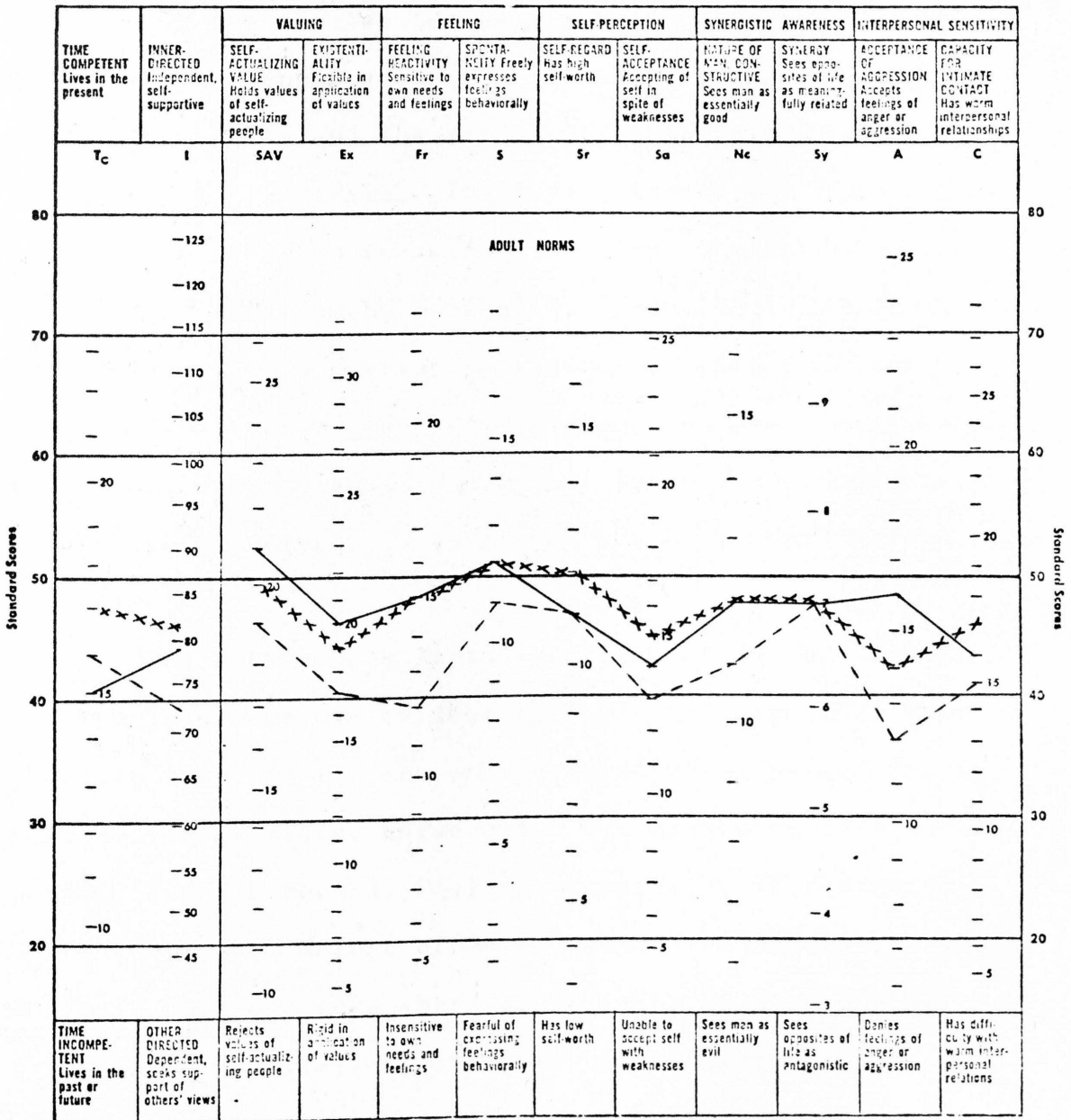
*Note: If the difference between means is greater than 2.29, it is significant.

the twenty-one year old group was significantly higher than the nineteen year old group on the Self Regard scale. The lowest mean score was the nineteen year old group and the highest was the twenty year old group. Therefore, the investigator believes that the difference found between tennis and basketball players on factors measured by the POI could not be attributed to age.

Profiles of the Sports Groups

The profiles of the groups in this study are a result of the mean scores of the athletes in each group on each scale. Table 12, page 55, reflects the mean scores for

TABLE 12
PROFILES OF THE BASKETBALL TEAMS



Raw Scores



POI 040

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Champion _____ Second Place - - - - Third Place + + +

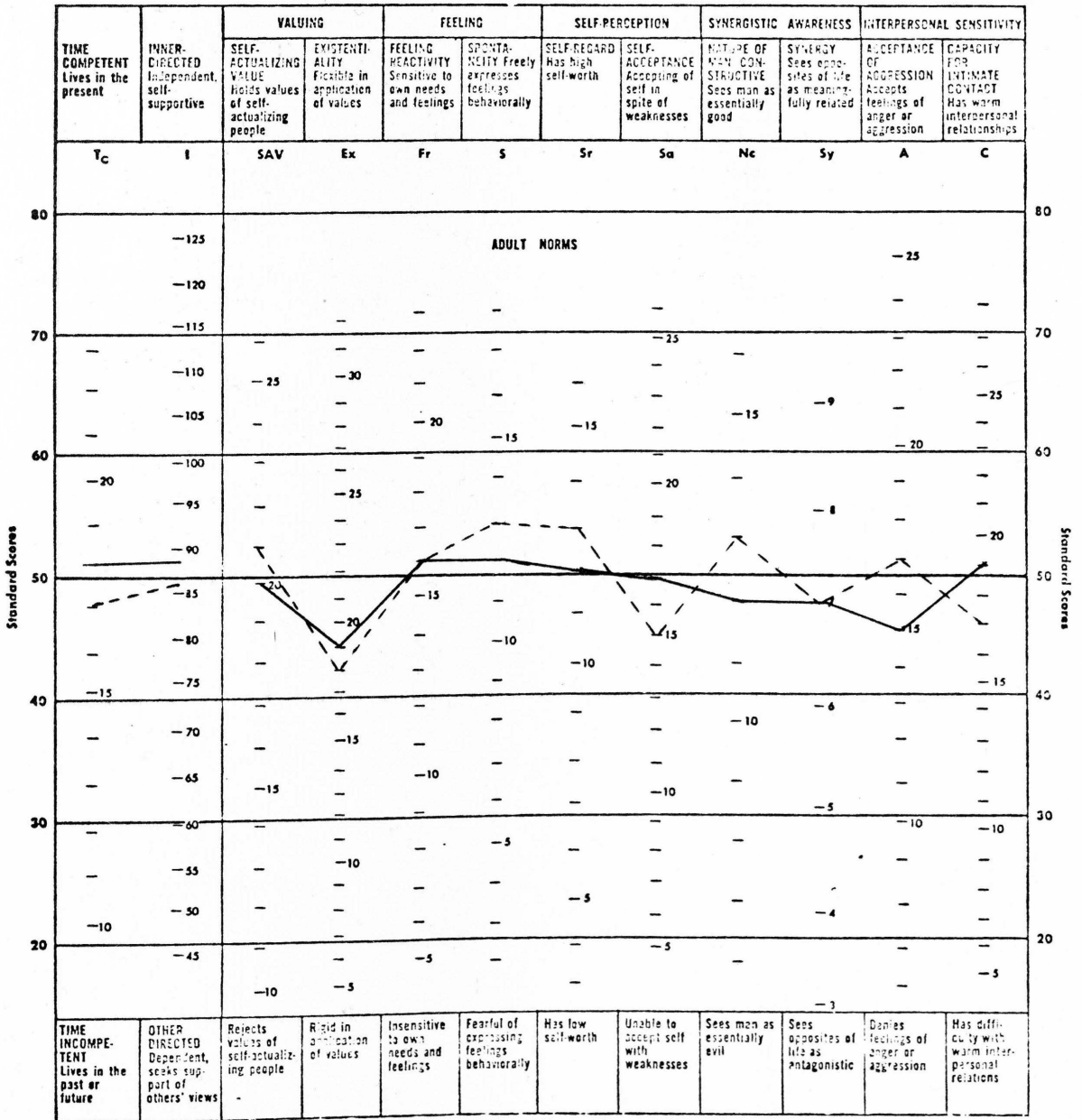
the three basketball teams and Table 13, page 57, shows the mean scores for the two tennis groups. The profiles indicate that the tennis group had the highest mean scores as a composite profile and the second place basketball team had the lowest mean profile. The three significant differences between the champion basketball team and the second place team and no differences between the champion team and the third place team are visually indicated. The profiles of the top four tennis players as a group and the remainder of the tennis group visually show that these two groups are, with three exceptions, higher than the basketball groups on every scale.

The differences in the profiles of the basketball and tennis groups are evident in Table 14, page 58. The two groups are most alike on the Existentiality and Synergy scales. The distance between the two groups on Time Competent, Inner-Directed, Feeling Reactivity, Self-Regard, Self-Acceptance, Nature of Man-Constructive and Capacity for Intimate Contact shows where significant differences were found in the statistical analysis of data reported previously in this chapter.

Integration Within Categories

The ten sub-scales on the POI are grouped into five categories, with two sub-scales under each category. These

TABLE 13
PROFILES OF THE TENNIS GROUPS



Row Scores



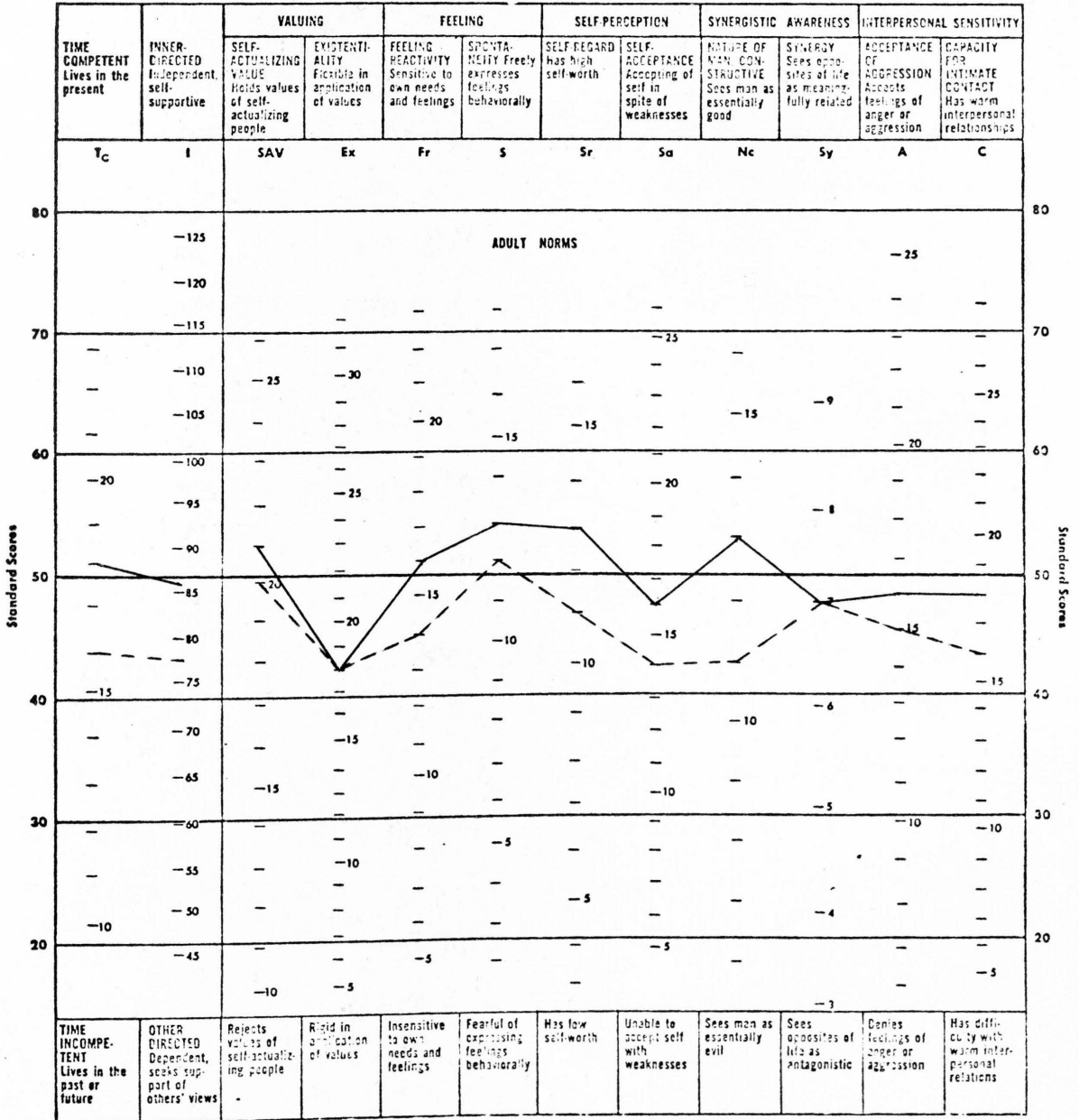
PQI 040

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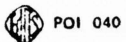
Top Four _____

Tennis Group - - - -

TABLE 14
PROFILES OF THE BASKETBALL AND TENNIS GROUPS



Raw Scores



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Basketball - - - -

Tennis - - - -

divisions are: Valuing--Self-Actualizing Value and Existentiality; Feeling--Feeling Reactivity and Spontaneity; Self-Perception--Self-Regard and Self-Acceptance; Synergistic Awareness--Nature of Man-Constructive and Synergy; and Interpersonal Sensitivity--Acceptance of Aggression and Capacity for Intimate Contact. "These paired scales seem to be synergic and represent the balancing that is critical to self-actualization."¹

Table 15, page 60, represents the percent of basketball and tennis players who had scores in each of the five categories which were above the mean for the norm of the adult group. In most instances approximately one-fourth of the athletes in either group evidenced integration within the categories. Only one-tenth of the basketball participants were consistent in their scores for Synergistic Awareness and the highest percentages were within the tennis group on Feeling and Interpersonal Sensitivity where over one-third were consistent in these categories. This table also shows that when the z-test for significance of difference between two proportions² was applied to these data the only category in which the basketball and tennis players differed significantly was Interpersonal Sensitivity. The tennis group was

¹Shostrom, POI Manual, p. 20.

²James L. Bruning and B. L. Kintz, Computational Handbook of Statistics (Glenview, Illinois: Scott, Foresman and Company, 1968), pp. 199-201.

TABLE 15

NUMBER, PERCENT, AND SIGNIFICANCE OF DIFFERENCE
OF PARTICIPANTS WITH BOTH SCORES IN A
CATEGORY ABOVE THE MEAN

Categories	Both Traits in Category Above Mean				z
	Basketball		Tennis		
	No.	%	No.	%	
Valuing	9	27	7	28	.085
Feeling	9	27	11	44	1.34
Self- Perception	6	18	5	20	.19
Synergistic Awareness	3	9	6	24	1.58
Interpersonal Awareness	6	18	10	40	2.63*

*Note: The demanded value for significance was 1.96

significantly more consistent in their scores on Acceptance of Aggression and Capacity for Intimate Contact. The difference between the two groups in the category of Synergistic Awareness approached significance at the .05 level with a z value of 1.58 compared to the demanded value of 1.96.

Profiles of Individual Athletes

The investigator was particularly interested in studying the integration of the self-actualizing traits within each of the athletes who participated in the study. Assuming that a range was more appropriate than an arbitrary score (50 standard score) for discussing the relationship among these traits within the individual, the investigator tabulated the frequency with which each athlete's scores on each of the categories fell within the range of forty to sixty. Individuals who scored above sixty on any scale were included in the forty to sixty range for convenience of tabulation and because the difference was in a favorable direction. Table 16, page 62, shows that only twelve percent of the basketball players and forty percent of the tennis players had all (10) scores within the forty to sixty range. The profile sheet for the POI is based upon standard scores and normally sixty-eight percent of the scores would be expected to fall within the forty to sixty range. This indicates great variability in the individual scores, particularly in the basketball group.

Individual profiles which revealed scores below forty on any of the ten sub-scales on the POI were tabulated. Table 17, page 63, shows the number and percent of individuals who had one or more scores below the standard score

TABLE 16
NUMBER AND PERCENT OF INDIVIDUAL SCORES
ON EACH SCALE BETWEEN 40-60

Groups	Between 40-60+	
	No.	%
Basketball	4	12
Tennis	10	40

of forty. One tennis player and six basketball players had six or more scores below forty. Percentage wise there were only slight differences; however, when the tabulations for the individuals in each group who had all scores between forty and sixty and those who had only one score below forty were combined, the totals encompassed thirty-three percent for the basketball players and fifty-six percent for the tennis players. A difference of one-third for the basketball group and over one-half for the tennis group.

Table 18, page 64, reveals the number and percent of individuals in the two sports groups who scored below forty on each of the ten scales. The scale which encompassed the greatest percentages for both groups was Existentiality, forty-two percent and forty-four percent for basketball and tennis, respectively. The scale which had the least

TABLE 17
NUMBER AND PERCENT OF INDIVIDUALS WHO HAD ONE
OR MORE SCORES BELOW FORTY

Groups	1 Below 40		2 Below 40		3 Below 40		4 Below 40		5 Below 40		6 Below 40		7 Below 40		8 Below 40		9 Below 40	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Basketball	7	21	5	15	5	15	1	3	5	15	3	9	1	3	1	3	1	3
Tennis	4	16	4	16	3	12	1	4	2	8	..	..	1	4	..	..	..	..

TABLE 18

NUMBER AND PERCENT OF BASKETBALL AND
TENNIS PLAYERS WHO SCORED BELOW
FORTY ON EACH SCALE

Scales	Basketball		Tennis	
	No.	%	No.	%
SAV	7	21	3	12
Ex	14	42	11	44
Fr	11	33	2	8
S	3	9	1	4
Sr	6	18	1	4
Sa	15	45	6	24
Nc	10	30	4	16
Sy	10	30	8	32
A	14	42	4	16
C	13	39	2	8

percentage for both groups was Spontaneity. Of the total number of subjects in the study only four (seven percent) were below forty on Spontaneity, meaning ninety-three percent freely expressed feelings behaviorally. The big problem area for the entire group was Existentiality where forty-three percent of the total group fell below the

standard score of forty indicating they were rigid in their application of values. Fifteen (forty-five percent) and fourteen (forty-two percent) of the individuals in the basketball group were below forty on the Self-Acceptance and Acceptance of Aggression Scales. The basketball players showed an inability to accept their own weaknesses and a tendency to deny feelings of anger or aggression within themselves. Thirteen (thirty-nine percent) of the basketball players were below forty on Capacity for Intimate Contact, indicating difficulty in establishing warm interpersonal relationships. Acceptance of Aggression and Capacity for Intimate Contact form the category of Interpersonal Sensitivity which has been previously determined as being the category for which a significant difference exists between the basketball and tennis players.

The percentages of individual scores below the standard score of forty indicate large differences between scales within a category except on Synergistic Awareness and Interpersonal Sensitivity for the basketball group. These differences indicate a lack of integration within categories.

Ratio Scores

The time and support ratio scores of the POI cover two major areas important in personal development and interpersonal interaction. The time ratio expresses how well the

individual has integrated past, present and future. It may also be used as an expression of the use or waste of time. The ratio scores are another means of explaining individual scores on Time Competent and Inner Directed. A fully functioning individual is autonomous but not to the extent of abusing others. The support ratio score indicates the degree to which the individual is inner directed--guided primarily by internalized principles and motivations or other directed--influenced by their peer group or other external forces. Table 19, page 67, shows that the tennis and basketball groups are below the expected average for the normative group on their support ratio scores. However, the tennis group ratio does fall into the range of the normative group ratio. The tennis group is slightly above the expected score on the time ratio but the basketball group is below both the score and the range for the normative group. This observation substantiates previously reported findings and indicates that the tennis group is more inner directed and time competent than the basketball group.

Summary

In this chapter the investigator presented the analysis and interpretation of data upon which the findings of this study were based. Population facts concerning the participants were tabulated, placed into tables and discussed.

TABLE 19

TIME AND SUPPORT RATIOS FOR THE BASKETBALL,
TENNIS AND NORMAL ADULT GROUPS

Ratios	Basketball	Tennis	Normal Adult	Range
Support	1:1.73	1:2.30	1:2.5	2.2 to 2.6
Time	1:2.82	1:5.65	1:5.0	3.6 to 6.5

The information pertaining to age of the participants indicated that the average age of the basketball and tennis participants was 19.5 and 20.1 years of age, respectively. Sixty-four percent of the basketball players were either eighteen or nineteen years of age. Sixty percent of the tennis players were within the twenty and twenty-one year age groups. The academic classification showed that thirty-three percent of the basketball players were freshmen and twenty-five percent were sophomores. Fifty-two percent of the tennis players were sophomores.

Significant mean differences between the athletes and the normative adult group were revealed on six scales of the POI when the data were subjected to the t-test--the athletes were below the normative scores. Seven significant mean differences were found to exist between the athletes and the nominated self-actualized group. Statistically significant mean differences were found between the

basketball and tennis groups on seven scales of the POI. The champion basketball team was found to be significantly higher than the second place team on three scales. There were no significant differences between the top four tennis players as a group and the remainder of the tennis players. The analysis of variance and subsequent Scheffe test showed that the differences between the basketball and tennis groups could not be attributed to age.

The profiles of the individual athletes indicated that twelve percent of the basketball players and forty percent of the tennis players had scores on all ten sub-scales which were between the standard scores of forty and sixty. Seventeen basketball players had between one and three scores below the standard score of forty and eleven tennis players had scores within the same range. Twelve basketball players and four tennis players had four or more scores below the standard score of forty.

The basketball players scored lowest on the Existentiality, Self-Acceptance and Acceptance of Aggression scales and the tennis players were lowest on Existentiality and Synergy.

Chapter IV contains a summary of the study, conclusions and implications based upon the findings and suggestions for future studies.

CHAPTER IV

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE STUDIES

This chapter includes a summary of the study, conclusions based upon the findings and implications drawn from them. In addition, suggestions for future studies are presented based upon experiences which the investigator encountered during the conduct of the present study.

Summary of the Study

The purpose of this study was to investigate the personality profiles of intercollegiate women athletes who participated in either a team sport or an individual sport. Specifically, the problem inherent in the investigation was to study group self-actualization traits and the individual profiles of intercollegiate women athletes who participated on the first, second and third place basketball teams in the 1974 Texas Association on Intercollegiate Athletics for Women State Basketball Tournament and those of all of the participants in the 1974 TAIAW State Tennis Tournament.

Although many investigations concerning personality and the male athlete have been completed, relatively few have been conducted concerning personality and the female

athlete. Actually, research in the area of the personality of athletes is in its infancy. Although some investigators believe that they have identified a "type" for various athletic sport groups there is still much confusion and contradiction in the literature. The present investigation was undertaken as an endeavor to contribute additional information to the existing body of knowledge.

The review of literature was limited to those studies directly related to the present investigation. The detailed review included eleven studies concerning personality and the female athlete, which substantiated a previous statement that results of research in this area have been both confusing and contradictory.

The subjects used in the study were thirty-three women basketball players and twenty-five women tennis players. The reader is reminded that in order to qualify for the TIAAW State Tournaments, from which all of the subjects were selected, the team or individual had to place first or second in one of six TIAAW District Tournaments. One hundred percent of the players eligible to participate in the study did complete the necessary material. This is an indication of the interest of both intercollegiate coaches and players in furthering research regarding women athletes.

The instrument selected for use in the study was Shostrom's Personal Orientation Inventory (POI). The test is a relatively new one, 1963, and is based upon what might be referred to as the "now" psychology or humanistic psychology. It incorporates into the test items the concept of positive, or above normal mental health, self-actualization. The basis for the test comes essentially from the writings of Abraham Maslow and it includes most of the traits Maslow discusses in his writings. Other contemporary psychologists upon whose theoretical formulations the test is based are David Reisman, Carl Rogers and Frederick Perls. The investigator was aware of certain weaknesses in the instrument but believed it best met all criteria proposed for selection of an instrument.

The investigator secured the endorsement of the TAIAB for the research design and then corresponded with all coaches who had teams or individuals participating in the 1974 TAIAB State Basketball and Tennis Tournaments, explaining the purpose of the investigation and asking for their cooperation. The investigator then traveled to the State Tournaments to talk with each coach, to affirm their cooperation and to disseminate packets containing the instruction sheet, test booklets, answer sheets and a self-addressed stamped envelope. The coaches of the various athletes administered the test, within a two week period

following the State Tournaments, and returned all of the materials by mail to the investigator. General information concerning the subjects' age and academic classification was reported in percentages. Treatment of the data included hand scoring each of the answer sheets twice, once by the investigator and once by an assistant, and the transposition of the resulting scores onto individual profile sheets. Means and standard deviations for comparison of groups, as differentiated by the hypotheses, were computed and t-tests of significance between means were calculated. The analysis of variance was used to determine whether differences between tennis and basketball players might be related to age. The Scheffe test was utilized as a subsequent test for the ANOVA.

The individual profiles of the members of the two sport groups were analyzed. The number and percent of individuals who had scores within the forty to sixty range, one standard deviation above and below the mean, on each of the POI scales were tabulated and reported for the basketball and tennis groups. The number and percent of individuals who had one or more scores below the standard score of forty were calculated. The ratio scores for Inner Directed and Time Competent were calculated for each group and were compared to the normative group ratio.

Summary of the Findings

The results of the treatment and analysis of data led the investigator to support or fail to support the following hypotheses:

Hypothesis 1: There is no significant difference between intercollegiate women athletes participating in the TIAIW State Tournaments in basketball and tennis and the normative group with respect to factors on the Personal Orientation Inventory. Fail to Support. (Table 5, page 45)

Hypothesis 2: There is no significant difference between women basketball and tennis players with respect to the factors on the Personal Orientation Inventory. Fail to Support. (Table 6, page 47)

Hypothesis 3: There is no significant difference between women basketball players on the championship team in the TIAIW State Tournament and players on the second or third place teams with respect to the factors on the Personal Orientation Inventory. Fail to Support. (Table 8, page 50)

Hypothesis 4: There is no significant difference in women tennis players who placed in the top four in the TIAIW State Tournament in singles and doubles and those who are not in the top four with

respect to the factors on the Personal Orientation Inventory. Support. (Table 9, page 51)

The following facts summarize the findings of descriptive information regarding the participants in the study.

1. The mean age for the basketball and tennis participants was 19.5 and 20.1 years of age, respectively.
2. The nineteen year old group included the largest percentage of participants, twenty-eight percent. The eighteen, twenty and twenty-two year old groups each included nineteen percent of the participants.
3. The sophomore group comprised thirty-six percent of the total population and the freshman and senior groups represented twenty-four and twenty-three percent, respectively.
4. The second place basketball team was the oldest group, 20.8 years and the first place basketball team was the youngest, 18.8 years of age.
5. The first place basketball team was composed of eighty percent freshmen with the tennis group being composed of fifty-five percent sophomores and the second place basketball team having fifty percent seniors.

The results of the statistical treatment and analysis of data are summarized as follows:

1. Statistically significant mean differences between the athletes and the normative adult group were found on six scales of the POI. The athletes were significantly lower on Inner Directed, Existentiality, Self-Acceptance, Synergy, Acceptance of Aggression and Capacity for Intimate Contact.
2. Statistically significant mean differences between the athletes and the nominated self-actualized group were found on seven scales of the POI. In addition to the six scales listed above, the athletes were significantly lower on the Time Competence scale.
3. Statistically significant mean differences between the basketball and tennis groups were found on seven scales of the POI. The basketball group was significantly lower than the tennis group on Time Competence, Inner Directed, Feeling Reactivity, Self-Regard, Self-Acceptance, Nature of Man-Constructive and Capacity for Intimate Contact.
4. Statistically significant mean differences were found between the basketball group and the

normative adult group on eight scales of the POI. The basketball players were significantly lower than the adult group on Time Competent, Inner Directed, Existentiality, Feeling Reactivity, Self-Acceptance, Nature of Man-Constructive, Acceptance of Aggression and Capacity for Intimate Contact.

5. Mean differences between the tennis group and the normative adult group indicated that the tennis group was significantly lower on Existentiality. The tennis and normative group were alike with the exception of this one scale.
6. Mean differences between the champion basketball team and the second place team showed that the champion team was significantly higher on Inner Directed, Feeling Reactivity and Acceptance of Aggression.
7. No statistically significant mean differences were found between the champion basketball team and the third place team.
8. No statistically significant differences were evident between tennis players who placed in

the top four (in singles and doubles) and the remainder of the tennis group.

9. Data grouped according to age showed a significant difference between the basketball and tennis groups on the Self-Regard scale but even this one difference, because of the arrangement of means, could not be attributed to age.
10. The tennis group was significantly more integrated than the basketball players on their individual profiles on two scales--Acceptance of Aggression and Capacity for Intimate Contact--under the category of Interpersonal Sensitivity.
11. The difference between the integration of traits for the basketball and tennis groups in the category of Synergistic Awareness approached significance at the .05 level.

The analysis of the individual profiles revealed:

1. Forty percent of the tennis group and twelve percent of the basketball group had scores on each of the ten sub-scales which fell between the standard scores of forty to sixty.
2. One tennis player and six basketball players had six or more scores below the standard score of forty.

3. Eleven tennis players and seventeen basketball players had either one, two or three scores below the standard score of forty.
4. Fifty-six percent of the tennis players and thirty-three percent of the basketball players had either all scores between the standard scores of forty and sixty or only one score below forty.
5. The scale which encompassed the greatest percentage of scores below the standard score of forty for both groups was Existentiality.
6. The scale which had the least percentage of scores below the standard score of forty for both groups was Spontaneity.
7. The support ratio for both the basketball and tennis groups was below the normative group ratio. However, the tennis group ratio did fall within the range of the normative group.
8. The tennis group time ratio was slightly above the normative group score but the basketball group was below both the score and the range for the normative group.

Conclusions

The findings of this study appear to justify the following conclusions with respect to the first, second and third place basketball teams and all of the tennis participants in the 1974 TAIWA State Tournaments.

1. Women athletes as a group are not as self-actualized as the normative adult group.
2. Women tennis players are more highly developed in self-actualization than basketball players.
3. Women tennis players are more integrated on their individual profiles within the categories of the Personal Orientation Inventory than women basketball players.
4. Age is not a determining factor in the self-actualization profiles of women athletes.

Implications

The following implications appear justified based upon the findings of the study and the investigator's interpretations of these findings.

1. The age old problem of, "Which came first, the chicken or the egg?" seems to apply to the findings of this study. Did the tennis players choose tennis because of their personality

characteristics or did tennis aid in the development of their self-actualization. The design of this study did not allow the investigator to answer this question but it does imply that those who are concerned with women athletes should endeavor to find the answer. This is an illusive question but, if there are differences in self-actualization between various sports groups, investigators should endeavor to find out "why." Persistence in the study of personality and athletics will eventually provide an answer.

2. The basketball players were more "other directed" than the tennis players or the normative adult group. This finding seems to imply that coaches in basketball (team sport) should be more aware of the needs of the individual and endeavor to contribute to the growth of the individual as well as be concerned about the "team" welfare. On the other hand, if individuals select basketball because of a need for approval and acceptance of others, the coach needs to be aware of this fact also. It is entirely possible that success in basketball, or any team sport

necessitates "other directed" participants. The present study did not attempt to determine criteria for success in basketball but such a study would be both interesting and valuable.

3. The tennis players were significantly higher than the basketball players on the Self-Regard and Self-Acceptance scales. The investigator would like to point out that tennis has been an accepted and approved competitive sport for "ladies" for many years and that basketball for women is still struggling for this acceptance in the United States. This one fact could have led to the more desirable, Self-Actualized, Self-Perception of the tennis players.
4. It is interesting to speculate as to why the tennis players have a tendency to see man as essentially good whereas the basketball players see man as essentially evil. Could it be the type of competition in which these individuals are engaged? The tennis competitor being separated from her opponent by a net and the basketball player being in direct contact with the opponent.

5. The tennis players were more sensitive to their own needs and feelings than the basketball players were. Logically one might expect to find this difference between a team sport person and an individual sport person. The implication here seems to be that the team sport person, to be successful, might of necessity have to be less sensitive to their own feelings and willing to sublimate their personal feelings for "the good of the team."
6. Integration within the individual profiles was most evident in the tennis group. Forty percent of the tennis group was integrated within themselves and only twelve percent of the basketball players showed this integration. It would appear that the sport of competitive tennis attracts and/or requires an individual who is more self-contained or self-actualized. One who is able to stand alone rather than depend upon others. This implication would support Allport's theory of Functional Autonomy of Motives in the development of the personality.

Recommendations for Future Studies

The following recommendations for future studies appear warranted to the investigator as a consequence of having engaged in the present study.

1. A replication of the present study in other states or geographical regions of the United States.
2. A study to determine the difference between a coach's profile on the POI and the profiles of her players.
3. A study to compare the POI profiles of team sport coaches with those of individual sport coaches.
4. A study using the POI to determine differences between intercollegiate women in a team or individual sport and professional women athletes in the same sports.
5. A study to determine the difference between women intercollegiate athletes in a particular geographical area and a random sample of non-athletes from the same area.
6. A longitudinal study to determine the effect of competition on various sports groups.

7. A study to evaluate the flexibility of personality modification during the college-age years.

APPENDIX

Texas Commission On Intercollegiate Athletics For Women



January 18, 1974

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Ms. Pat Schmitt
Department of Health & Physical Education
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Corpus Christi, Texas 78404

Dear Pat:

The Commission approved your request to use TCIW basketball teams (state) and tennis entries in state tournament in gathering data for your dissertation, with the stipulation that you get approval and co-operation of individual coaches. You and I discussed the necessity of this when we were talking, I believe.

Our meeting in Waco was most productive, and all members institutions will be receiving information next week. We are finally on our way to reorganization.

It was good to chat with you. Best wishes in your data-gathering and in the finalizing of your degree,

Cordially,

Sue Garrison

SG:lb

March 20, 1974

Dear Coach,

As you know, the question of the importance of the athlete's personality in sport participation has for some-time been an area in which sport psychologists, coaches and players have been interested. The personality of the woman athlete has been studied very little in comparison to the studies completed concerning male athletes. In an effort to contribute additional knowledge to this area, I am undertaking a research study to fulfill the requirements for a Doctor of Philosophy Degree at the Texas Woman's University, Denton, Texas. The study is being directed by Dr. Bettye Myers and has been endorsed by the Texas Commission on Intercollegiate Athletics for Women.

The data will be collected through the use of the Personal Orientation Inventory, which purports to measure self-actualization. The Inventory is a paper-pencil test which is self-administering and may be completed in twenty to thirty minutes.

It is my desire to utilize players on the first, second and third place teams from the State TCIW Basketball Tournament and all of the participants in the TCIW Tennis Tournament. As winners in your District tournaments, I am taking this opportunity to acquaint you with the study and to ask for your cooperation in the collection of data.

I will attend the State Basketball and Tennis Tournaments and will disseminate the necessary materials to coaches so that you may administer the test at your convenience, within a two week period following the State Tournaments. Included with the materials will be a self-addressed, stamped envelope for the materials to be returned to me.

I am excited about this project and hope that you will assist me in furthering the accumulation of knowledge concerning women athletes. Your cooperation will be greatly appreciated.

See you at the State Tournaments!

Sincerely yours,

Patricia Schmitt

INSTRUCTION SHEET

1. If at all possible, the test should be administered in a quiet place.
2. The test may be administered to the entire group or individually, whichever is most convenient.
3. Instruct players to not place any marks on the test booklets.
4. Instruct players to use pencil and to print their names and the additional information called for on the answer sheet.
5. Ask players to read the directions on the front cover of the inventory Booklet. After the directions have been read, you may answer questions.
6. Inform players that there is no time limit for the Inventory but that they should be able to complete the Inventory within thirty minutes.
7. Emphasize the fact that there are no right or wrong answers.
8. Encourage players to answer all questions honestly.
9. During the test, you may answer questions regarding definition of words. Questions dealing with concepts or interpretation of test items should be responded to by encouraging the player to use her own judgment in choosing the most appropriate alternative. If an item seems to be particularly troublesome, it may be left blank. This should not be encouraged. Where possible the player should be encouraged to go back and try again to answer items she omitted the first time through.
10. If you have any questions concerning the administration of the Inventory, please call me collect at 852-6668, AC 512.

Reminder Notice

Dear _____

I would like to remind you of your commitment to administer the Personal Orientation Inventory to your athletes within a two week period following the State Tournament. Please mail the answer sheets and test booklets to me as soon as possible.

In the event you have mailed the requested material please disregard this card. Thank you for your cooperation.

Sincerely,

Pat Schmitt

RAW DATA FROM FIFTY-EIGHT BASKETBALL AND TENNIS
PLAYERS WHO COMPLETED THE POI

Player	Tc	I	Sav	Ex	Fr	S	Sr	Sa	Nc	Sy	A	C
1	14	74	22	11	16	13	12	13	12	7	16	13
2	16	82	24	17	14	12	14	14	12	9	16	14
3	16	91	21	25	16	15	13	15	11	5	17	20
4	17	90	24	25	16	16	13	18	10	9	17	22
5	21	88	21	22	18	14	12	16	9	8	18	22
6	10	66	22	15	17	9	4	10	9	8	18	13
7	10	72	16	19	9	12	10	13	11	6	15	12
8	16	77	21	22	13	14	12	11	10	8	18	17
9	15	90	22	23	14	10	12	15	11	7	17	17
10	11	61	12	17	12	7	7	11	12	5	11	11
11	12	58	13	18	7	9	7	9	11	3	7	15
12	14	58	18	9	12	8	10	8	13	5	9	14
13	15	88	20	6	15	13	9	16	12	8	13	17
14	19	84	22	23	11	13	13	18	13	9	14	20
15	18	88	22	26	15	13	12	17	13	9	17	20
16	19	65	15	16	12	11	10	9	6	7	15	17
17	16	76	22	16	13	14	13	13	11	8	13	15
18	14	72	18	20	8	10	14	18	10	7	11	14
19	15	69	21	11	9	11	13	11	11	7	13	12
20	14	67	19	15	14	9	9	10	13	7	12	13
21	15	69	20	14	15	10	11	10	13	7	17	14
22	19	85	23	20	15	12	14	17	11	8	23	19
23	17	70	17	16	12	9	8	13	10	6	13	14
24	18	89	20	22	17	15	13	19	14	7	13	16
25	19	93	23	27	14	15	15	18	12	8	13	21
26	14	86	22	22	18	14	10	14	12	7	18	18
27	15	70	13	16	12	12	11	15	11	4	13	13
28	16	93	19	24	16	14	12	16	12	6	13	22
29	19	92	20	23	17	11	14	19	10	6	20	17
30	17	80	22	15	16	14	13	11	14	8	20	15
31	16	81	21	16	15	13	14	13	11	7	14	17
32	17	68	18	14	12	8	10	15	14	6	13	13
33	17	81	17	20	18	15	14	14	9	6	19	20
34	22	103	25	28	17	16	15	18	13	9	18	22
35	18	99	23	25	19	15	13	18	14	7	19	20
36	14	78	19	13	15	10	12	12	10	6	12	16
37	18	79	20	14	14	10	14	17	12	7	12	16
38	20	82	17	19	15	11	11	18	11	4	13	21
39	16	92	22	17	19	13	12	15	15	7	16	20

RAW DATA--Continued

Player	Tc	I	Sav	Ex	Fr	S	Sr	Sa	Nc	Sy	A	C
40	16	79	14	14	15	11	10	21	7	4	17	19
41	12	86	22	15	19	13	12	12	9	7	21	20
42	18	96	22	25	19	14	13	18	14	7	17	21
43	20	76	17	16	13	14	9	18	10	5	14	16
44	17	91	21	23	17	14	13	18	12	7	14	19
45	14	61	19	10	8	7	11	11	12	6	12	8
46	13	81	21	15	19	11	11	16	13	6	16	14
47	18	91	20	17	18	15	14	17	14	6	18	18
48	16	79	20	15	11	14	14	16	13	7	14	17
49	19	97	22	27	18	17	15	16	14	9	17	24
50	21	88	21	18	20	11	14	15	14	7	19	18
51	22	80	19	18	14	12	11	13	15	8	15	15
52	21	85	24	18	17	13	13	15	12	8	17	19
53	15	90	24	16	16	12	15	19	13	8	17	18
54	17	97	21	24	19	15	12	16	15	7	20	19
55	16	82	22	18	17	13	14	11	11	6	17	19
56	20	90	22	19	15	15	16	17	13	8	16	19
57	16	84	19	13	16	11	15	17	15	7	17	17
58	19	82	21	15	19	10	13	11	13	8	19	19

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