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Women's intercollegiate athletic programs have experienced tremendous growth in the decade of the 1970's. In a broader sense, women in general have become more physically active and can be found participating in numerous forms of leisure and fitness activities. The central problem of this study was to determine the self-actualization levels of three groups of college female students, with subjects categorized into groups according to the type of physical activity they had participated in during the past calendar year. Intergroup and intragroup comparisons of self-actualization scores were made between and among these three groups of college women.

One hundred and thirty one female volunteers, full time academic students at Idaho State University during the 1977-78 school year, served as subjects. All subjects were required to fill out a Personal Information Form and either a Personal Activity Inventory or an Athletic Data Request Form. In addition, each subject was administered the Personal Orientation Inventory (POI), which served as the measure of self-actualization. The data from the personal activity inventory was

used to classify subjects as either active in sport or exercise on a regular basis (n = 45) or as non-active college females (n = 43). The third group of females for this study was made up of women who had successfully completed at least one full season of varsity intercollegiate athletics (n = 43).

Five separate hypotheses were formulated and tested by the appropriate statistical methods. Analysis of variance was used to determine the differences among mean scores on the POI of groups within the study population. Other comparisons were made using Student's t-test, the test of least significant difference, and the Student-Newman-Keuls procedure. In one instance the Mann-Whitney U test was used to further verify initial findings. The .05 level of confidence was used in retaining or rejecting each of the hypotheses tested.

In general, athletes were found to score no higher on a measure of self-actualization than active or non-active college women. A significant difference was noted when comparing the active and non-active women, indicating that active women had a lower level of self-acceptance than did non-active women.

Further comparisons indicated the following:

Women participating in athletics, either college sponsored or in various other environments, were found no different on a measure of self-actualization than women who had never participated in any form of athletics.

Jogging, as a specific type of activity for physically active college women, produced no significant difference in self-actualization when compared with those physically active by other means and with non-active college women.

Non-active college women who indicated that it was a major decision not to be physically active scored significantly lower in self-actualization when compared with other non-active females.

Various groups of college female athletes did not differ from each other when compared on a measure of self-actualization. The one exception to this was that non-scholarship athletes had significantly lower self-regard than the athletes receiving an athletic scholarship.

Implications from this investigation were drawn for those within the study population as well as for coaches, physical educators and athletic administrators.

Recommendations for further study included the need for the development of additional measures of self-actualization and further research examining the value structure of non-active college women towards physical activity as related to their self-actualization level.

Comparisons of Self-Actualization
Among Three Groups of College Women

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THIS PAPER IS DEDICATED TO MY FATHER

VINCENT JAMES MATTHEWS, SR.

1913-1977

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Comparisons of Self-Actualization
Among Three Groups of College Women

CHAPTER ONE

INTRODUCTION

A recurrent theme among popular writers is that change is inevitable. Bruce (1970) advances this concept as it applies to the field of education; he identifies humanistic psychology as being a relatively new and powerful force in education. When woven into a curricular framework, humanistic psychology suggests that learning can afford the individual considerable freedom for creativity and self-development. Combs (1970) states that, "new humanistic approaches to the nature of behavior hold the keys for educators to the practices needed in the effective development of human capacities in students and teachers alike." Maslow (1968) lists the following as major tenets of a humanistic perspective to education:

1. The job of the teacher is to help the student define the nature of the true self, rather than reinforce or shape the student into a pre-arranged form.
2. Educators must acknowledge that individual differences exist among all learners.
3. A non-threatening atmosphere of acceptance and support must exist within the learning environment.
4. Those who profess to teach must learn to accept the learner for what he (or she) is and draw out the most from his inner talents and capacities. Concentrated effort must be made to

build upon personal style, aptitude, raw material, and individual strong points possessed by the student.

5. Peak experiences should be established as the goal and reward of learning. The peak experience serves a dual purpose: that of culminating one learning experience and also stimulating the beginning of another.

Self-actualization, a cornerstone concept in Maslow's theory of basic needs and motivations, is firmly integrated into these tenets. Self-actualization is defined by Maslow as the full use and exploitation of one's talents, capacities, and potentialities (Lowry, 1973).

Recent and rapid social change has produced greater interest in and acceptance of humanistic approaches to education. Education has been influenced by demands for students rights, a heightened need for relevancy in the curriculum, and greater student involvement. Weinstein and Fantini (1970) and Weinburg (1972) have authored texts on the humanistic perspective of curriculum development. Foshay (1970) views the humane curriculum as allowing for individualization of instruction, so that students proceed at their own rate and in their own way. The learning process remains free of stereotyping, classifying, relegating or grouping youngsters into specific categories.

Each discipline within education must find compatible solutions to these issues if a humanistic approach to the teaching-learning process is to be implemented. In light of this, Hellison (1973) has written of the need for a new perspective in physical education. His approach incorporates an application of Maslow's concept of self-actualization with the writings of earlier physical educators whose philosophy was

"education through the physical." Kalakian and Goldman (1976) broaden the base of educational humanism even further by writing of its implications for all interschool athletic programs.

Need for the Study

The concept of self-actualization has been examined in a variety of ways by educational researchers. Shostrom's Personal Orientation Inventory, developed in 1964, is considered by researchers to be a valid and reliable measure of self-actualization. Cangemi (1974) concluded that it is a reasonable goal of higher education to arrange for self-actualizing types of experiences for students. Others, including Wilkinson (1973) and Elliot (1969), have investigated the relationships between self-actualization scores and student-type behaviors.

However, it is important to point out the limited amount of research examining the relationships between self-actualization and physical activity, sport, and/or athletics. The writings of Maslow (1962), Hellison (1973), Kovich (1971), and Andrews (1974) develop the theoretical relationship between and among these concepts. Hargadine (1973) has studied the movement activity of creative dance and its relationship to the self-actualization of the performer. Ravizza (1974) used Maslow's concept of the peak experience to conclude that peak experiences do occur in sport. More recently, Ibrihim and Morrison (1976) have found that athletes, in general, tend to be either average or above average in traits of self-actualization. Further, they concluded that there was some indication that differences in self-actualization existed between female athletes and non-athletes at the college level.

This study has attempted to add to the body of knowledge that has begun to emerge in reference to self-actualization, physical activity and competitive athletics. As such, it is viewed as an attempt to elaborate on the research findings of Ibrihim and Morrison, clarifying which competitive factors are related to the self-actualized college female athlete and whether different groups of athletes differ from each other in terms of self-actualization. In a broader sense, this research could serve to help athletic administrators evaluate and perhaps redirect women's intercollegiate athletic programs towards more educationally oriented outcomes.

Purpose of the Study

The primary purpose of this research study was to determine the self-actualization levels of three groups of college female students, with subjects grouped according to the type of physical activity they had participated in during the past calendar year. College female athletes, college females active in sport or exercise on a regular basis, and non-active college females were tested with Shostrom's Personal Orientation Inventory. Intergroup and intragroup comparisons of self-actualization scores were made between and among these three groups of college women.

Null Hypotheses

The null hypotheses tested in this study were the following:

1. There are no significant differences in mean POI scores among college female athletes, college females active in sport or

- exercise on a regular basis, and non-active college females.
2. There are no significant differences in mean POI test scores among females currently participating in varsity intercollegiate athletics, females who have had experience as athletes, and females who have never taken part in any form of athletics.
 3. There are no significant differences in mean POI test scores among active females who jog, females active via other forms of sport or exercise, and non-active college females.
 4. There are no significant intragroup differences in mean POI test scores between those who indicated that participation in sport or in athletics was a major decision for them and those who indicated it was not.
 5. There are no significant differences in mean POI test scores among sub-groups of female varsity athletes.

Assumptions

For this study the following assumptions were recognized:

1. That the inventories and questionnaires used in the study measured what they purport to measure,
2. That the subjects used in this study were representative of the population of college female students, and
3. That the information provided by the subjects was accurate, based on the undoubted sincerity and knowledge of each subject.

Delimitations

The following delimitations outline the scope of this study:

1. One hundred and thirty one full time college female students enrolled in academic courses at Idaho State University during the 1977-78 school year served as subjects for this study,
2. The Personal Orientation Inventory and the appropriate questionnaires were administered primarily in small group settings,
3. General physical activity patterns over the past calendar year, rather than specific training programs, were considered when determining the active and non-active females, and
4. All intercollegiate athletes participating in this study had at least one complete season of varsity athletic competition behind them.

Limitations

For this study, the following limitations were recognized:

1. That the Personal Orientation Inventory was the only instrument available to measure the self-actualization level of subjects,
2. That a wide range of athletic ability existed within the sample of college female athletes used in this study, and
3. That the results and conclusions drawn from this study apply only to the college women willing to serve as subjects in this research. Extreme caution should be used when making inferences from the results of this study to other college female populations.

Definition of Terms

Terms frequently used throughout this study are defined as follows:

Active College Female. For this study, a woman is considered active if she reported a minimum of three hours per week involvement in physical activity at the time of the study and a minimum of three hours per week involvement in physical activity over the past calendar year. The mean number of hours per week reported by the active females was 7.48 and 8.33 respectively.

College Female Athlete. A college female athlete is defined as a woman who joined an intercollegiate team at the beginning of a season and fulfilled all commitments and obligations expected of her to the satisfaction of the coach of the team.

Athletics. For this study athletics represents an athletic team or program whereby regularly scheduled contests were arranged against other teams and a coach was present to organize and direct the activities.

Jogging. Jogging is a steady or easy paced run alternating with breath catching periods of walking.

Non-active College Female. For this study, a woman is considered non-active if she participated in less than two hours per week involvement in physical activity at the time of the study and less than two hours per week involvement in physical activity over the past calendar year. The mean number of hours per week reported by the non-active females was .256 and .419 respectively.

Self-Actualization. Self-actualization is an ongoing process whereby individuals make more complete use of their unique capabilities and potentialities.

Team Starter. For this study, an athlete is considered a member of the first team if she had been in the starting line-up for at least 50% of her team's games during the course of a season.

Team Substitute. For this study, an athlete is considered a substitute if she had not been in the starting line-up in at least 50% of her team's games during the course of a season.

CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

This chapter reports the viewpoints of authorities on subjects related to this study and summarizes the results of related research in the following areas: 1) the development of humanistic psychology; 2) self-actualization theory and the characteristics of the self-actualized person; 3) the reliability and validity of the Personal Orientation Inventory; 4) studies using the Personal Orientation Inventory as a measure of the self-actualization of women; 5) theoretical evidence for a relationship between self-actualization and participation in sport and athletics; 6) research examining the relationship between self-actualization, sport, and athletics; and 7) psychological studies measuring the personality of college female athletes or athletes in general.

The Development of Humanistic Psychology

The addition of a humanistic theory of psychology to the previously existing behavioristic and psychoanalytic models of behavior has been recognized by a number of authors (Hall and Lindsey, 1970; Braginsky and Braginsky, 1974; and Child, 1973). It evolved primarily as a contrast to the psychological orientations of behaviorism. Steeped in scientific methodologies and with emphasis on studying only the overt behaviors of man, behaviorism is relatively sterile and largely artificial in its approach towards understanding man (Schultz, 1969). Schultz identifies the 1950's as the chronological origin of humanistic thought in psychology. Johnson (1975) traces existential thought back to the Greek

philosophers and notes that in the 17th century Rousseau was known to have rebelled against the "modern attempts of the sciences" and to have committed himself to intuitive truth. Kierkegaard, Bergson, Rank and Rogers have all had an influence on psychological humanism. Johnson credits Maslow as having served as a bridge bringing existential thought to American psychology.

In attempting to define its nature, Bugenthal (1967) writes that humanistic psychology was directed towards exploring the immensity known as man. Its approach has been to study the uniqueness of the individual rather than the similarities within the species. As such, humanistic research has often lacked in operational definitions and precise quantification. Its assertion has been that there are limitations to the empirical method used in psychological research; humanists maintain that intuitive knowledge offers a significance of its own to the body of knowledge of psychology.

Schultz (1969) suggests that the American culture has de-humanized and de-personalized man to the extent that he is regarded as an infinitesimal part of an immense social machine. The humanistic desire to elevate the individual to his highest level serves as a counter-balance to this cultural and environmental determinism.

Poppen, Wandersman, and Ricks (1976) raise the question of the relationship between humanism and behaviorism, noting that it has been a widely debated subject in the areas of personality psychology and psychotherapy. Are the two orientations utterly irreconcilable; are they complementary; or must they be viewed from a broader perspective that allows for a synthesis of positions? Swanson (Nevill, 1977), in

adopting an integrated approach, writes:

Psychology is on the verge of developing a single, general paradigm, integrating all fields of psychology...which will transcend the old three section division of psychology into psychoanalysis, behaviorism, and humanistic psychology.

Maslow (1968) views the subject with the following observations

So many people insist on being either pro-scientific psychology or anti-scientific psychology. In my opinion all such loyalty positions are silly. Our job is to integrate these various truths into the whole truth, which should be our only loyalty.

There remain many psychologists who reject or dispute the humanistic perspective. Although Schultz (1969) claims that the relative newness of humanistic psychology makes it impossible to evaluate at this time, other psychologists and educators have critically examined the humanistic position. Lundin (1973) notes the vague terminology of humanism and its failure to develop specific principles of operation. Lundin also criticizes the lack of objective methodologies in the humanistic approach. Braginsky and Braginsky (1974) point out that humanism could be criticized for not being research oriented and for not having developed any substantive body of knowledge. Antsyferova (1973) states that humanism misinterprets the relationship between society and the individual by ignoring the determining roles that society and the environment play upon the individual.

Educators such as Siedentop (1974) have questioned the concept of "self" as it is used in humanistic terminology. He documents five distinct and different interpretations of "the self" inclusive within the general humanistic field. He also points out the misuse and potentially dangerous side effects of certain human potential methods. A final example indicating that education has not been completely

receptive towards humanistic concepts can be seen in the growing trend towards the development of strict student and teacher accountability standards. Lewis' (1974) model of school management by objectives lists as one advantage of the program the increased control and coordination of people and activities. Performance standards and performance reports developed for the explicit purpose of achieving stated educational objectives leave less room in the curriculum or the learning process for the concepts of humanism.

Self-Actualization Theory and Characteristics of the Self-Actualized Person

While the humanistic perspective can be found in the writings of Fromm, May, Rogers, Perls and Combs, it is most dramatically developed by Abraham Maslow (1907-1970). Maslow's writings (1954, 1962, 1971) are different from those of other schools of psychology, which tend to study either the abnormal or deviant qualities of man. Maslow believes that it is pertinent for psychologists also to explore the normal, healthy aspects of man. For this reason he has selected the best human specimens that he could locate and he has studied these individuals in order to discover what was so unique about them. This approach was originally initiated by Maslow in an attempt to understand better two mentors who had significantly influenced him. Maslow (1971) notes that his attempts to understand Max Wertheimer and Ruth Benedict began as prescientific activities. However, the realization that the generalizations he found in these individuals could be expanded to others led him to the development of the concept of the self-actualized person. Other

individuals, such as Lincoln, Thoreau, and Einstein were studied by means of biographical analysis and used to define the characteristics of the self-actualized person.

Maslow (1954) describes the self-actualized person as one who makes fullest use of his potentialities, talents, and capacities, etc. Shostrom (1963) sees the self-actualized person as one who lives a more enriched life than the average person, developing and utilizing all of his unique capabilities and potentialities. Common to each definition is the concept that self-actualized people seem to be fulfilling themselves and doing the best they are capable of doing.

Goble (1970) attempts to outline the major premises of "Third Force" or humanistic psychology. He lists a series of characteristics that could be used to identify the self-actualized person. These characteristics include the following:

1. a heightened sense of reality
2. a clearer sense of right and wrong
3. better perception of the self
4. dedication to a cause: a duty or responsibility of some sort
5. creativity
6. fewer inhibitions: a more natural, expressive self
7. a low degree of self-conflict: an integrated, unified personality
8. a high level of independence
9. the ability to function within a stable set of values
10. an unusual ability to concentrate

Various other sources note that there are some additional characteristics of the self-actualized person. These include:

11. detachment from others
12. continued freshness of appreciation
13. mystic experiences
14. discrimination between ends and means
15. a sense of humor

Maslow (1962) contends that self-actualization can be found only in older people. He sees it as an ultimate, or final state of affairs. Self-actualization serves as a distant goal rather than as a definitive point on the continuum of life. The dynamic self-actualizing process is viewed by Maslow as "ongoing," not necessarily unavailable to younger people, but not fully attainable by them either.

Maslow theorizes that man's universal needs exist in a hierarchal relationship to each other and that these needs are both physiological and psychological in nature. Individual growth is based on the initial satisfaction of lower level needs followed by the fulfillment of higher level needs. As stated by Maslow (1962) and Goble (1970) the hierarchy of needs is as follows:

1. physiological needs
2. safety and security needs
3. belongingness and love needs
4. esteem needs (both from self and from others)
5. growth needs

Beyond the growth needs, at the apex of the developmental process, the state of being known as self-actualization is found. Maslow further

hypothesizes that the first four levels of need are "deficiency" needs. Whereas those who are able to satisfy their basic needs are healthier and happier individuals, those frustrated in their attempts to satisfy these needs are apt to develop psychopathological symptoms.

An extensive review of Abraham Maslow's writings finds elaboration on the concepts of motivation, human potential, humanistic therapy, creativity, human values and other topics directly related to American humanistic thought. As previously pointed out, Maslow is but one of many individuals who have made contributions to the body of knowledge of humanistic psychology. However, his concept of self-actualization is an important segment of "Third Force" thinking.

The Validity and Reliability of the Personal Orientation Inventory

Shostrom's development of the Personal Orientation Inventory (POI) has provided researchers with a comprehensive measure of values and behaviors seen to be important in the development of self-actualization. While Maslow's concepts of the self-actualizing person lie at its foundation, the instrument also draws upon the writings of Rogers, May, Reisman, Perls, and other existential and Gestalt therapists. Knapp (1971) points to the diversity of the research stimulated by the POI as indication of both its initial need and complete acceptance. What follows is a review of empirical research which aids in verifying the accuracy of the POI as a measurement tool.

Klavetter and Mogan (1967) used a test-retest sequence with a one week interval and found reliability coefficients ranging from .52 to .82 for the scales of the POI. The time competence and inner-directedness

scales had coefficients of .71 and .77 respectively. The researchers concluded that, with the exceptions of subscales A (acceptance of aggression) (.55), Nc (nature of man) (.66), and Fr (feeling reactivity) (.69), the stability coefficients were high. Bloxom (1972) reported a reliability range of .55 to .85 and concurred with the judgment of Klavetter and Mogan.

Ilardi and May (1968) examined test-retest reliability of the POI with 46 student nurses after a 50-week time lapse. They reported nearly identical correlations of the various subscales of the POI with reliability studies done on the Edwards Personal Preference Scale. They reported coefficients ranging from .32 to .74.

Shostrom (1964) demonstrated the validity of the POI when he used it to differentiate between three adult groups clinically nominated as "self-actualized" (n = 29), "normal" (n = 160), and "non-self-actualized" (n = 34). The test significantly differentiated the self-actualized group from the non-self-actualized on 11 scales (nature of man subscale was not significant). Further, the self-actualized group means were greater on 11 scales than the normal group, and the non-self-actualized group means were below the normal group on all 12 scales.

McLain (1970) found that nine of the POI scales were significantly correlated with self-evaluation of school counselors based on Maslow's criteria of self-actualization. Fox, Knapp and Michael (1968) reported that all 12 of the POI scales significantly differentiated a hospital psychotic group (n = 100) from both normal and self-actualized groups provided by Shostrom. The non-self-actualized group supplied by Shostrom also made higher scores on the instrument than did the

hospitalized group on all but the self-regard scale.

Warheim and Foulds (1971) administered the POI to 95 subjects, first under normal conditions and then following instructions whereby each subject was to picture himself applying for a job he very much wanted. Results indicated that "fake-good" responses did not increase self-actualization profiles. In fact, lower scores were reported on 10 of 12 subscales. Ecker and Watkins (1975) duplicated these findings using three groups of subjects, one of which was psychology majors with a knowledge of personality theory. It was concluded that a response set of social desirability is not a factor in the administration of the POI, even with subjects who have a background in psychology.

Tosi and Hoffman (1972) conducted a factor analysis of the POI using a sample of 132 students (30 males, 102 females) with an average age of 19.3 years. A factor analysis attempts to make a large number of correlations more manageable by reducing the interrelations among many variables to interrelations among few factors. According to the authors, the objective of the study was to determine those subscale groupings of the POI that have an optimum combination of internal consistency and differentiation between groups. It was found that three factors accounted for 72% of the total variance of the POI. They labeled these factors as follows:

- I. Extroversion: describing an extroverted, self-assumed person who does not hesitate to act on his or her feelings.
- II. Open mindedness: describing a person who is present oriented and one with an optimistic and constructive approach to life.
- III. Existential-non-conformity: describing a personality which acts fully

on its own rules, demonstrates value independence, and establishes meaningful contacts with other people.

In discussing these findings, Tosi and Hoffman noted that the POI did, in essence, measure the construct of the healthy personality. However, they urged that further research be conducted that would perhaps reduce the number of subscales without weakening the theoretical framework of the instrument. In addressing the counselor-client situation (where the POI is frequently used) their feeling was that fewer scales would greatly facilitate test interpretation for the client. As a summary of their research, the authors relate to the POI as being a promising, new instrument.

More recently, Tosi and Lindamood (1975) have critically reviewed the entire framework for the POI, citing item overlap in its subscales and its lack of parsimony as its most salient deficiencies. They concluded with the statement that the POI is a very adequate research instrument with somewhat more limited use in individual counseling and psychotherapy.

The preceding research has established that Shostrom's POI is a capable research instrument. Knapp (1971) notes that Maslow himself acknowledged, "There is today a standardized test of self-actualization (the POI). . . Self-actualization can now be defined quite operationally, as intelligence used to be defined, i.e., self-actualization is what the test (POI) tests."

Studies Dealing With the Self-Actualization of Women

Prior to studies conducted with the POI, Maslow (1939) conducted clinical-experimental research on the factor of dominance and its relationship to other aspects of feminine personality. His sample consisted of 130 women from the New York City area, generally of college education, and within an age range of 20 to 28 years. Further, the total group was of middle class background, 75% married, and with a religious preference of 75% Protestant, 20% Jewish, and 5% Catholic. Data was gathered via intensive interview techniques which relied on the subjects' own awareness of their own motivations.

Maslow's findings were descriptive in nature, indicating that women with a high degree of dominance were most self confident, exhibited more qualities of leadership, were less self conscious and experienced fewer feelings of inferiority. Conversely, low dominant females were shy and timid, more easily embarrassed, more quiet, polite, modest, and more apt to be moral, ethical and religious. Low dominant females were also profiled as less friendly and lacking in poise. Described as having no relationship to high or low dominance in women were general happiness, a tendency for weeping or crying, sense of humor and general activity or energy level.

Although the term self-actualization was not used in Maslow's dialogue, the concept had similarities to what Maslow indicated were the qualities of the highly dominant female. The researcher described dominance as the list of feelings closely correlated with it. For Maslow, dominance was a system of interrelated parts made up from many qualities. Such is also the case with the concept of self-actualization.

Rosenthal (1967) studied values and behaviors important to the self-actualization process of university freshman women students who entered the field of home economics. Her findings showed that, on the average, a positive growth towards self-actualization was experienced by women during their freshman year at an institution of higher education. Further, Rosenthal indicated that positive relationships existed between POI scores, interviews, and personal autobiographical sketches of 25 subjects selected for further study. As many other researchers have subsequently reported, Rosenthal found the I scale to be the best single indicator of the quality and level of the self-actualizing growth process. As recommendations for further study the researcher suggested that the self-actualization levels of students who chose to join certain campus student organizations be compared with those who elected not to join these same organizations. The focus of this research study has attempted to implement that recommendation.

Hooge-Rochelle (1970) designed a study to determine the self-actualization of married women in the American culture. Her sample was made up of 30 married women: 10 housewives, 10 part-time workers, and 10 full-time workers. The average age of the women was 30.13 years and the average number of children per woman was 1.8. The researcher described the educational, economic and religious backgrounds of the subjects as varied. Among her findings, Hooge-Rochelle reported that housewives and part-time workers showed significant differences in seven POI subscales. The researcher's interpretation of this data was that housewives were more dependent, support seeking, fearful of expressing feelings behaviorally, and less able to accept their own

weaknesses; they deny anger or aggression more than part-time workers, and have lower self-worth and more difficulty in developing warm, interpersonal relationships than do part-time workers. A similar study contrasted the differences between part-time workers and full-time workers on eight of the POI subscales. These findings indicated that full-time working married women were more flexible in the application of values, held values of self-actualized people, saw opposites as more meaningfully related, had more capacity for interpersonal relationships, and depended more on themselves than others for support than did part-time workers. Having found that married working women scored higher on a measure of self-actualization than did those who did not work, Hooge-Rochelle concluded that self-actualization was easier to attain via a growth oriented vocation rather than from within a typical housewife's role. Women who scored higher in self-actualization tended to derive their identities through themselves while women who derive their identities through their husbands and/or children scored lower in self-actualization as measured by the POI. Potential influences on the results and conclusions of this study were that the average age of the 10 full-time workers was five years greater than the other two groups. The full-time workers also had 2.9 years more education than the housewives and 2.0 years more schooling than the part-time workers.

Ohlbaum (1970) examined professional and non-professional women (both married and unmarried) who had chosen to fulfill themselves in meaningful ways outside the home. The researcher divided a sample of 159 women into three groups: highly educated professionals (n = 69), miscellaneous professionals (n = 35), and non-professionals (n = 55).

The age of the participants ranged from 25 to 66 years. Using the Inventory of Feminine Values, Ohlbaum found significant differences in the value characteristics of the three groups and, via the Spiegel Personality Inventory found significant differences in self concept among the groups. In self actualization the research found that the inner-directedness scale of the POI indicated that highly educated professionals were significantly different at the .01 level. The conclusion offered by Ohlbaum was that professional women have a more positive self concept and a greater degree of personal autonomy than non-professional women.

Schroeter (1973) reported that although most studies of self-actualization pool POI scores of both men and women, women are found to score higher on the inventory. Significant differences were found on 11 of 12 subscales of the POI among 570 incoming college freshmen of both sexes. Schroeter also noted that on a retest measure at the end of the school year, women showed a larger gain in self-actualization scores (inner-directedness scale) than did men. His interpretation of these results was that women were more mature than men at the onset of their college careers.

Hjelle and Smith (1975) conducted research which indicated that high self-actualized women in a college sample experienced a perceived parental attitude of acceptance, psychological autonomy, and lax control during their teenage years. College women scoring low on a measure of self-actualization identified a perceived parental attitude of psychological dominance and behaviorial restraint and control. Their discussion of this discovery included the concept that very likely there

are multifactored developmental antecedents to self-actualization, knowledge of which can help in the understanding of the phenomenon.

Hjelle and Butterfield (1974) examined the hypothesis that women with liberal, pro-feminist attitudes were more self-actualized than women endorsing traditional societal roles. In supporting this hypothesis the researchers found that liberal females scored significantly higher on 10 of 12 POI subscales.

Killman (1976) displayed the ability to increase the self-actualization level of women via marathon group training sessions. In two 16-hour sessions organized for the purposes of increasing self-understanding and self-awareness, female undergraduates experienced a significant increase in self-actualization as measured by the inner-directedness scale and the time competence scale of the POI.

Brennan (1974) analyzed correlations between self-actualization in adult women and their degree of involvement in social organizations and activities and found no relationship existed between these variables. Consistent with this research is the study of Farrier (1974) who found no relationship between self-actualization and participation in campus activities when using college females as subjects.

Summarizing the findings reported in this section, it appears evident that higher degrees of self-actualization exist in certain female populations. Also, it is noted that self-actualization scores can be improved in women under certain circumstances. Finally, the need to conduct self-actualization research with a single sex group of subjects has been indicated.

Theoretical Evidence for the Relationship Between
Self-Actualization and Participation in Sport and Athletics

Central to Maslow's theory of self-actualization is the concept of peak experiences. The growth motivated, self-actualizing person is said to enjoy more frequent peak experiences. Goble (1970) defined a peak experience as a moment in the individual's life when he is functioning fully, feels strong, is sure of himself, and is in complete control. Maslow (1970) has written that the peak experience involves

Feelings of limitless horizons opening up to the vision, the feeling of being simultaneously more powerful and also more helpless than one ever was before, the feeling of great ecstasy and wonder and awe, the loss of placing in time and place with, finally, the conviction that the subject is to some extent transformed and strengthened even in his daily life by such experiences.

Maslow (1970) and Goble (1970) both theorize that peak experiences can occur during athletic or sports activities. Maslow writes of a young athlete experiencing creativity in performing a perfectly executed tackle (p. 136), and of the calm sureness and rightness displayed by great athletes when they are functioning at their best (p. 106). Goble lists athletic achievement and dancing as two activities that may cause a person to have a peak experience.

Leonard develops the position that, in athletics, the prize is not the win but the play itself and the heightened self-awareness it brings to the participant. He states that, in addition to flattening the stomach, athletics can change the way one lives and provide the basic guidelines for a lasting transformation of consciousness. He points to outcomes of participation that are not unlike peak experiences that are available "to athletes everywhere, major and minor, known and unknown."

Thus, such experiences are something available to each of us, expressed through our own form(s) of participation in physical activity.

Although noting that Maslow, Goble and Leonard are subjectively establishing a relationship between sport and personal adjustment, they have been supported by a number of physical educators and coaches. Hellison (1973) states that physical activity could serve as a means for actualizing one's potentialities. Jogging, tennis, golf, or participation in an exercise program all bear the potential to provide an individual with opportunities for developing physical abilities that can lead that person to becoming more self-actualized. Hellison cites Maslow's suggestion that the performing arts should be emphasized more in a self-actualizing school curriculum (1971) and adds that sport would be very much a part of these performing arts. In referring to sport as a "creative, fine art," Andrews (1974) complements Hellison's concept that participation in sport can lead directly to many of Maslow's criteria for self-actualization. Andrews writes that

in athletics, we seldom come upon the perfect performance, but the moving was good, and we all have glimpses of perfection in our own lives and these brief experiences of motion and energy give us perpetual insights into what a new, beautiful world physical sports might be.

However, when suggesting that sport is art it should be made clear that not all participants or spectators regard these movement activities as an art form. Art may best be regarded as a concept that eludes universal definition.

The degree to which traditional sport and athletics are ready to adapt themselves towards the development of individual values within their participants is an important factor to consider. Alternative

value systems in athletics surfaced in the 1960's and have been documented in the writings of Scott (1971), Rafferty (1971), and Petrie (1971). Schafer (1976) contrasts the major value themes which exist between an emerging youth culture and traditional sport. He contends that scholastic and collegiate athletics are likely to socialize the athlete more towards the established mainstream of society, yet he also predicts that the counterculture will continue to grow and affect the world of scholastic and collegiate sport in a variety of ways. Both Schafer and Landers (1976) identify this sports counterculture movement as humanistic, with its primary focus on the self-realization of the individual. Dorcas Butt (1976) also analyzes the traditional and emerging values found in sport. She states that the beneficial effects from the world of sport are "not due to competition, but from the development of individual competence." Her position does not call for the elimination of sports contests but rather

for the elimination of the competitive ethic within the minds of sports people, in which the feelings of well being, or identifying with a victor over a vanquished, or from gaining a position or a prize by defeating another and taking from him or her what might have been shared are overtly emphasized.
(p. iii)

The literature also recognizes the role of women participants in the attempt to establish a relationship between self-actualization and participation in sport and athletics. Kalakain and Goldman (1976) suggest that women are asserting their rights to achieve fulfillment and self-actualization through avenues that have, in the past, been either extremely limited or open only to men. Obviously, athletics is one such avenue. Landers (1976) notes that enhanced intramural programs and alternative forms of sports involvement are now available for women

on college campuses. The federal legislation of Title IX provides the same opportunities for women to compete in interscholastic and intercollegiate athletic activities as men. This leads to the contention that, if participation in sport and athletics is self-actualizing, women will benefit in ways similar to the men.

Laughlin (1974) can be cited to summarize the beliefs of the authors referred to in this section. In his essay "Existentialism, Education, and Sport" he writes that participation in sport and athletics has many potential influences on the development of self-actualization in the individual.

Research Examining the Relationship Between Self-Actualization, Sport and Athletics

Hargadine (1973) attempted to determine the relationship between the physical activity of creative dance and the level of self-actualization of the performer. Using the POI and a self devised instrument to measure scope of movement (Movement Scope Check List) Hargadine found that no significant correlations existed between scores on the two measures. From additional comparisons she concluded that only weak relationships existed between movement behavior and self-actualization as indicated by a Movement Scope Check List and the Personal Orientation Inventory.

Ravizza (1974) investigated the occurrence of the peak experience in sport. His sample consisted of 20 athletes (11 team sport and 9 individual sport participants) with the following backgrounds: 12 college varsity athletes, 3 intramural level participants, 2 recreational

level athletes, and three Olympic Games calibre athletes. Sixteen men and four women comprised this group, ranging in age from 19 to 40 years.

By using a direct interview technique, the author attempted to focus on the personal accounts of the 20 athletes' greatest moments while participating in sport. The responses of the 20 subjects to the interviewers question "what was your single, most joyous, happiest, blissful, wonderful moment in your sport experience while participating?" proved to be most revealing. Using subjective criteria, Ravizza determined that 18 of the 20 athletes described what Maslow would call a peak experience. Sport thus has the ability to free man from his mundane existence, allowing for a total immersion of self into the activity and the potential for experiencing uniqueness via sport participation. From his data, Ravizza determined that 11 unique aspects exist which, as a group, characterize the peak experience in sport and allow for its identification.

Implied from this investigation is that thrill, motivation, excitement and true value can come from the participation in sport itself and not necessarily only from such by-products of sport as headlines, trophies, medals, and other extrinsic forms of reward. Although the author makes no distinction between participation in sport and participation in athletics within his study, and although he fails to clarify the relationship between winning and the sport peak experience, his is an important contribution to the concepts of humanism as they relate to participation in sport and/or athletics. Dickinson (1973) has also written of the peak experience in sport, viewing it as being most probable where the situation is neither structured nor coerced, but

rather freely chosen and valued highly by the individual.

Ibrihim and Morrison (1976) have examined four different groups of athletes and non-athletes with measures of self-concept and self-actualization. Their sample totaled 200, 25 of which were college female varsity athletes and another 25 were college female non-athletes. The researchers found that college female athletes were significantly different from the sample of college female non-athletes on seven subscales of the Personal Orientation Inventory. Athletes scored lower in other-directedness, self-actualizing value, existentiality, feeling reactivity, nature of man and synergy. Table 1 summarizes all of Ibrihim and Morrison's findings relative to self-actualization.

Table 1. Self-actualization differences between athletes and non-athletes as measured by the POI.

POI scale	High School		College	
	Male	Female	Male	Female
Time incompetence	*			
Time competence	*			
Other-directedness	*			*
Inner-directedness				*
Self-actualizing value				*
Existentiality				*
Feeling reactivity				*
Spontaneity				
Self-regard	*			
Self-acceptance			*	*
Nature of man		*		
Synergy				
Acceptance of aggression				
Capacity for intimate contact				

* Denotes significant difference found at the .05 level of confidence.

From these comparisons the researchers concluded that athletes, in general, tend to be either average or above average in their self-actualizing traits. Further, they concluded there were some indications that significant differences existed in self-actualization between female athletes and non-athletes at the college level. Variables such as the number of years participation in competitive athletics, team status (starter vs. substitute), nature of the sport (individual sport vs. team sport competition) and others were not examined by Ibrihim and Morrison. Further stated, their study chose to dichotomize between athletes and non-athletes, overlooking that segment of the female population who are not members of school sponsored athletic teams but who participate in recreational sport and/or exercise on a regular basis.

Personality Studies Conducted With Female Athletes

Fisher (1976) notes that a significant amount of researchers have compared the personality differences between the male athlete and the non-athlete. Ryan (1974) observes that the majority of studies examining the relationship between personality and groups of athletes have been designed in such a way as hopefully to determine those factors of personality that will enhance athletic performance and allow for optimum success. Ryan adds that attempts to use personality information in such a way have met with little, if any, success.

Peterson, Weber and Troutdale (1967) examined the personality traits of women in team sports vs. women in individual sports. The Cattell Sixteen Personality Factor Inventory (form A) was the instrument used to measure personality. Thirty-eight individual sport women

responded, as did 59 team sport participants. The results of this investigation showed that women engaged in individual sports were significantly different from team sport women by being more dominant and aggressive, more adventurous, more sensitive, more imaginative, more radical, more self-sufficient and more resourceful. Individual sport women were also found to be less sophisticated than their team sport counterparts.

Malumphy (1968) studied the personality of women athletes in intercollegiate competition. She grouped 77 athletes according to team sport participants (n = 28), individual sport participants (n = 18), participants in subjectively judged events (n = 16) and team-individual sports participants (n = 18) and compared them to 42 non-participants. The Cattell Sixteen Personality Factor Inventory (form A) was the measuring instrument. Team sports participants as a group were found to be less adventuresome and less extroverted than all other groups tested; the team sport group also had less leadership capacity and experienced more anxiety than the individual sports group.

Bird (1968) conducted personality research with female ice hockey players in Canada. She reported trends towards a consistency of personality characteristics which could support a personality type for female competitors in team sports. Further, she hypothesized that upon separating first string players from those of lesser skill, a character profile for a "championship" group might emerge.

Tutko and Neal (1975) summarize the research work done in the area of women's athletics and aggression by stating that female athletes do score higher on traits that can be classified as "aggressive." Citing

Kane's work (1972) with female track and swimming athletes, Tutko and Neal indicate that female athletes are indeed significantly more anxious than other women. They attribute this to the fact that, in general, female athletes do not feel totally accepted in the athletic world. A second cause deals with cultural stereotyping. Women are expected to be emotional, according to the authors. Because women are emotional, athletics provides them with a forum for greater freedom of emotional expression than it does for men. The authors conclude that not only are females as capable as males in meeting the emotional stresses of athletics, they may well be superior.

Neal (1978) has assessed the research done in the area of personality and psychological constructs as they relate to the female athlete as follows

We still don't know everything there is to know about women and competition, or for that matter, about men and competition. The area of sociological and psychological factors (as they relate to athletics) is a relatively unexplored one, in which we definitely need more research.

CHAPTER THREE
METHODS AND PROCEDURES

This research study has been conducted to determine the differences in self-actualization among three groups of college female students. The three groups identified by the research were: 1) college female varsity athletes, 2) college females active in sport or exercise on a regular basis, and 3) non-active female college students. The research also examines the relationship between self-actualization and specific variables found within the group of athletes, as well as variables common to the group of active females.

Population Characteristics

The defined population for this research study was limited to full-time college female students enrolled in academic programs at Idaho State University during the 1977-78 school year. The University is a publicly funded state institution of higher education charged with the responsibility of servicing the educational needs of the citizens of Idaho. Geographically, the school is located in the city of Pocatello (population c. 45,000), in the southeast corner of the state. Degree programs in practically every area of the arts and sciences are offered by the University. A well-rounded vocational-technical school is also affiliated with Idaho State. Enrollment figures for the Fall 1977 semester were as follows: 9,755 full-time students were enrolled, 6,403 in academic areas and 3,352 in the school of vocational-technical education. Of the total enrollment, 4,595 were female. The actual population for this study was the 3,162 full-time female students

enrolled in academic programs at Idaho State University for the Fall term, 1977.

Characteristics of the Subjects

The subjects for this study were 131 full-time female students enrolled in academic programs at Idaho State University in the Fall term, 1977. All subjects were volunteers. As Table 2 indicates, the subjects represented a cross-section of all the full-time female students enrolled at Idaho State University at that time.

Table 2. Demographic profile of subjects.

Present year in school:	sophomore (2.366 years, mean)
Age:	20 years, 10 months (mean)
Home town population:	61% from locations with above 10,000 population 39% from locations with below 10,000 population
Intermountain States full-time residency:	81% residents of Intermountain States area 19% residents outside Intermountain States area
Number of siblings:	58% with 3 or more siblings 42% with 2 or less siblings
Marital status:	91% single 9% married
College grade point average:	42.8% with a 3.0 or better grade point 53.4% with a grade point of 2.99 or below
Parental estimated yearly income:	24% income below \$15,000 29% income between \$15,000 and \$25,000 24% income above \$25,000 23% no knowledge of parental income
Religious preference:	21% no religious preference 22% Catholic 18% Mormon 28% Protestant 11% other denominations
Recipient of financial aid:	46% receiving aid 54% not receiving aid

Grouping of Subjects

The 131 subjects participating in this study were subdivided into three groups for the purpose of making comparisons between and among groups as to levels of self-actualization.

Group One: College Female Varsity Athletes

There were 43 subjects in group one, all of whom were competing on varsity intercollegiate athletic teams at the time or had done so within the past calendar year. Six varsity intercollegiate sports were offered for women at Idaho State, namely cross-country, volleyball, basketball, tennis, track and field, and softball.

Group Two: College Females Active in Sport or Exercise on a Regular Basis

There were 45 subjects in group two. Subjects were categorized and placed in this group based on their specific responses to items 4, 5, 6 and 7 from Questionnaire B (Personal Activity Inventory). In response to items 4 and 5 this group indicated that they currently participated in various forms of physical activity with a mean score of 7.48 hours per week. In responding to an inquiry as to their activity habits over the past year (items 6 and 7, Questionnaire B) group B subjects indicated an average rate of 8.33 hours per week of participation in physical activity. It was on the basis of these responses that these 45 subjects were placed into group two.

Group Three: Non-active College Female Students

There were 43 subjects selected for placement in group three. As with group two, responses to items 4, 5, 6 and 7 of Questionnaire B were

used for classification purposes. In response to items 4 and 5, this group indicated that they currently participated in forms of physical activity with a mean score of .256 hours per week. In responding to the same inquiry made to group two subjects regarding activity habits over the past calendar year (items 6 and 7, Questionnaire B), group three subjects indicated an average rate of .419 hours per week spent in various forms of physical activity or exercise. It was on the basis of these responses that these 43 subjects were placed in group three.

It should be mentioned that an additional 51 volunteer subjects were tested but were not included in the final sample for the study. These subjects were eliminated either on the basis of providing incomplete data or of indicating activity habits and patterns that were sporadic and/or unsuitable for classification.

The Measuring Instrument

The Personal Orientation Inventory (POI) developed by Everett Shostrom (1964) served as the measuring instrument for self-actualization. The Personal Orientation Inventory consists of 150 paired opposite, forced choice statements. Items from this self-administering test can be scored twice: first to measure a subject's time competency and inner-directedness and second to gain scores on 10 additional subscales which measure conceptually important elements of self-actualization. A complete copy of the Personal Orientation Inventory is included in Appendix D.

The Personal Orientation Inventory is presently the only available published instrument for measuring self-actualization. Of the scales

available for use, the following were selected by the researcher for comparisons between groups of subjects: inner-directedness, self-actualizing value, existentiality, self-regard, self-acceptance, acceptance of aggression and capacity for intimate contact. Knapp (1974) provides interpretations of high and low scores on each of these particular scales.

Inner-directedness (I): The inner-directed person goes through life apparently independent. Internal motivations are his or her guiding force rather than external influences. Being low in inner-directedness suggests that one is oversensitive to other opinions and employs approval seeking behaviors. The need for constant acceptance is manifested by those low in inner-directedness. Meyer (1974) suggests that a score falling above the mean standard score line indicates a probability that the person is functioning relatively effectively and is somewhat competent in his development towards self-actualization.

Self-actualizing value (SAV): According to Knapp, a high score indicates that the individual holds and lives by values of self-actualizing people. A low score indicates a rejection of self-actualizing values.

Existentiality (Ex): The existentiality scale was designed to complement the self-actualizing value scale and to measure one's flexibility to the principles of life. High scores reflect flexibility in application of values, while lower scores indicate a rigidity or compulsive, dogmatic application of values.

Self-regard (Sr): Scoring high on the self-regard scale indicates the ability to like oneself because of various strengths as an individual.

A low score indicates a low self worth.

Self-acceptance (Sa): The self-acceptance scale was designed to complement the self-regard scale. A high score is interpreted to mean that individuals can accept themselves in spite of weaknesses and deficiencies. A lower score indicates an inability to accept oneself under these same circumstances.

Acceptance of aggression (A): Higher scores denote the ability to accept anger or aggression within oneself as natural; lower scores indicate that a person denies having such feelings.

Capacity for intimate contact (C): A high score can be interpreted as meaning that a person is able to develop meaningful relationships with other human beings, without utilizing interpersonal demands and expectations. A lower score means one has difficulty with warm, interpersonal relationships.

Other subscales included in the Personal Orientation Inventory were considered not relevant to the stated purposes of this research study. The inner-directedness scale has been noted by researchers as being the single most representative measure of self-actualization (Knapp, 1965, 1974). The additional subscales were included because the concepts they measure have long been associated with occurrences or outcomes in athletics.

Questionnaires

Questionnaire A: Personal Data Request Form

A personal data request form was developed by the researcher for use in this study. Its purpose was to provide demographic data about

those participating in the research. It was constructed, piloted and rewritten according to procedures recommended by Brown (1976). It was two pages long and consisted of 14 items (eight multiple choice and six fill-in type questions). Approximately five minutes were required for completion of the questionnaire by the subjects. A copy of Questionnaire A is included in Appendix A.

Questionnaire B: Personal Activity Inventory

A personal activity inventory used by Emiola (1977) was modified by the researcher and administered to all subjects who were not participants in varsity intercollegiate athletics. The primary purpose of this inventory was to categorize subjects as either active in sport or exercise on a regular basis or as non-active, based on an individual's responses. Additional items in the inventory sought to define further the nature of one's activity habits, for example, the type of activity, the medium it was engaged through, and the type of personal decision that being an active or non-active person presented to each individual. This questionnaire was two pages long and was comprised of 10 items (seven multiple choice and three fill-in type questions). Approximately 10 minutes were required for completion of the questionnaire by the subjects. Respondents were invited to comment about any of the items in Questionnaire B. Sixteen percent chose to respond in their own words about the questionnaire. A copy of Questionnaire B is included in Appendix B.

Questionnaire C: Athletic Data Request Form

This questionnaire was developed by the researcher in order to

gain information specific to the group of varsity athletes that participated in this study. The questionnaire was two pages long and consisted of nine items (seven multiple choice and two fill-in type questions). Subjects took less than 10 minutes to respond to these items. Athletes were invited to comment about any of the items in Questionnaire C, and 46% chose to do so. A copy of Questionnaire C is included in Appendix C.

Test Administration

The Personal Orientation Inventory and appropriate questionnaires were administered to the 131 subjects during a three month period during the 1977-78 academic year. The following is a breakdown of groups and the data sources they responded to:

<u>Group</u>	<u>Data Sources</u>
#1- college female varsity athletes	POI, Questionnaires A, C
#2- college females active in sport or exercise on a regular basis	POI, Questionnaires A, B
#3- non-active college females	POI, Questionnaires A, B

The athletes were tested first, either in a group setting at a mutually agreed upon time or through personal appointment. Exactly the same introductory remarks and series of test instructions were given to each athlete or group of athletes.

The active and non-active subjects were all students in classes in which the researcher made a brief presentation explaining the nature of the research and requesting volunteer subjects. Sociology, Marketing, English Composition, Philosophy, French, German, Nutrition and Physical Education activity classes were among those contacted by the researcher. In all situations where volunteers came forward, they were excused from

class by their instructor and went with the researcher to an adjacent classroom for completion of the questionnaires and the POI. Exactly the same explanation of the research and series of test instructions were given to each individual or group of individuals.

The researcher should also point out that 4% of the sample in the active and non-active groups were obtained via response to an open invitation to participate in the research. This invitation was presented in the form of a letter sent to all female dormitory students on the Idaho State University campus. Over 450 such letters were placed in the mailboxes of females in the three residence houses on campus. Three students chose to respond to this letter of invitation, a copy of which is included in Appendix E.

Actual test instructions were given according to the following format:

1. The researcher was either introduced by the instructor or introduced himself to the subjects. A brief explanation concerning the purpose of the research was given to all participants prior to their actual testing.

2. All subjects were reminded that they were volunteers, that their responses would remain anonymous and be treated with complete confidentiality by the researcher. The use of reference numbers on each set of test items was also explained.

3. Subjects were asked to sign a log book which provided the researcher with the names and local addresses of all those who took part in the study. The purpose of the log book was that participants could be contacted at a later date and informed as to the results,

conclusions and recommendations of the research.

4. In preparation for the Personal Orientation Inventory, subjects were informed that the test did not delineate between "right" and "wrong" responses and that the researcher had no pre-conceived notions as to how a college female student should respond to any particular statement.

5. In all testing experiences, the questionnaires were administered first, followed by the POI. Subjects were informed that they could ask questions about any of the test material. Aside from a few random inquiries, the test environment remained orderly and quiet.

6. Upon completion of all test materials, subjects were allowed to leave the testing area. At no time did the total time for testing exceed one hour for any individual.

7. The researcher was careful to acknowledge each subject and thank them as they returned their test materials.

Data Treatment

Answer sheets for the Personal Orientation Inventory were hand scored and transcribed onto a personal data summary sheet that was developed for each subject. Responses to the various questionnaires were reviewed and transcribed on the left hand margin of each page of the questionnaires. This information was then transcribed on the same personal data summary sheet that had the subject's POI scores. At this point, the material was transferred to IBM cards and processed at the Idaho State University data processing center. Random checks were made to insure that all data was copied correctly. The IBM keypunch operator reviewed all data cards with a recheck procedure before approving them

for statistical analysis. A copy of the personal data summary sheet is listed as Appendix F.

Analysis of variance was selected as the appropriate statistical tool to examine hypotheses one through five. The Student's t-test was also used with hypothesis four and with certain comparisons in hypothesis five. The .05 level of confidence was selected as the acceptable level of statistical significance with all comparisons.

Analysis of variance, often referred to as the F statistic, was used to determine whether significant differences existed between groups of subjects as indicated by mean scores of the POI. According to Courtney and Sedgwick (1975), the F statistic may be applied to data which are collected for descriptive as well as experimental studies. Its actual use is in the comparison of variance and to test differences between means.

Two major assumptions must be met before the F statistic may be appropriately employed to analyze data. First, the dependent variable, in our case the various POI scale scores, must be normally distributed. Second, the samples used must have been randomly drawn. Analysis of variance is a commonly used tool for research studies similar in design to this study.

When appropriate, the Student-Newman-Keuls procedure or the test of least significant difference (LSD test) were used to indicate the exact source of the significant difference where the null hypothesis was rejected in the tested hypothesis. In one instance, the Mann-Whitney U test was used to verify findings of a significant difference.

Statistical Hypotheses

This investigation was designed to examine the following null hypotheses as measured by the Personal Orientation Inventory:

- HO₁ There are no significant differences in mean scores among groups one, two and three as measured by the POI.
- HO₂ There are no significant differences in mean scores among females currently participating in varsity intercollegiate athletics, females who have had experience as athletes, and females who have never taken part in any form of athletics as measured by the POI.
- HO₃ There are no significant differences in mean test scores among active females who jog, females active via other forms of sport or exercise, and non-active college females as measured by the POI.
- HO₄ There are no significant intragroup differences in mean test scores between those who indicated that participation in sport or in athletics was a major decision for them and those who indicated it was not, as measured by the POI.
- HO₅ There are no significant differences in mean test scores among subgroups of female varsity athletes as measured by the POI.

Summary

This research was designed to investigate the difference in self-actualization existing among three groups of college female students: college female varsity athletes, college females active on a regular basis, and non-active college female students. This study was also designed to assess whether differences in self-actualization existed among various subgroupings of the group of college female athletes and

the group of active college females. The subjects for this research were all full-time academic students enrolled at Idaho State University during the 1977-78 school year. The Personal Orientation Inventory developed by Everett Shostrom was the instrument used to measure self-actualization. The questionnaires and the procedures for the collection of the data were reviewed. The statistical hypotheses and the methods of analysis were also discussed.

CHAPTER FOUR

PRESENTATION OF DATA AND DISCUSSION

This study was conducted for the purpose of determining whether any differences in self-actualization existed among three selected groups of college female students. These groups of college females were as follows: female varsity intercollegiate athletes, females active in sport or exercise on a regular basis, and non-active college females.

The Personal Orientation Inventory was administered to 131 college female students enrolled in academic courses at Idaho State University during the 1977-78 school year. Each subject also filled out two questionnaires designed to gather pertinent background data for the study. The mean scores of the various scales of the POI for different groups within the sample population were compared. Differences which existed between any of the stated groups were determined. Each of the stated hypotheses was considered separately. Discussion pertinent to the comparisons made when testing each hypothesis is also included.

This chapter presents the data obtained and the statistical procedures followed.

Analysis Procedures

For the purpose of statistical analysis, all hypotheses were stated in the null form. The inner-directedness scale, self-actualizing value and existentiality scales, self-regard and self-acceptance scales, and acceptance of aggression and capacity for intimate contact scales of the POI were used to make comparisons between and among the stated

groups. The .05 level of confidence was selected as the acceptable level of statistical significance. To aid the reader, the POI scales used in the study are restated and defined below:

Inner-directedness: measures whether a person's orientation is basically towards others or towards self.

Self-actualizing value: measures the affirmation and personal acceptance of values held by self-actualizing persons.

Existentiality: measures one's ability to react situationally and without rigid adherence to principles.

Self-regard: measures one's personal affirmation of self because of perceived strengths or sense of worth.

Self-acceptance: measures a person's acceptance of self in spite of weaknesses or deficiencies.

Acceptance of aggression: measures the ability to accept one's aggressiveness.

Capacity for intimate contact: measures the ability to develop intimate relationships with other people unencumbered by expectations and obligations.

The groups of subjects are identified in this chapter in the following manner:

Group one: college female varsity athletes.

Group two: college females active in sport or exercise on a regular basis.

Group three: non-active college females.

Examination of Hypotheses

Hypothesis one:

H_{01} There are no significant differences in mean scores among groups one, two and three as measured by the POI.

Table 3. Analysis of variance data, groups one, two and three for POI scale scores.

Scale	Group one (n = 43)		Group Two (n = 45)		Group Three (n = 43)		F Ratio	F Prob- ability
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
I	84.46	8.57	83.02	9.37	85.34	9.59	.720	.488
SAV	20.55	2.92	20.88	2.27	20.23	2.99	.630	.534
Ex	19.67	3.72	19.75	4.12	20.94	3.28	1.59	.207
Sr	12.65	2.06	11.95	2.22	12.55	2.61	1.18	.310
Sa	15.16	2.88	14.37	3.40	16.20	3.00	3.82	.024*
A	16.20	2.53	15.95	3.35	16.11	2.64	.088	.916
C	17.79	3.05	17.51	4.12	18.18	3.41	.397	.673

Note: * Significant at the .05 level of confidence.

A Student-Newman-Keuls Multiple Range Test was applied to the data relative to the Sa scale. This procedure determined that the significant difference existed between groups two and three, with group one not differing from either group two or group three.

Based on this data H_{01} was rejected.

Hypothesis one: Discussion

It was speculated that categorizing the subjects into three distinct groups might provide the researcher with the opportunity to make more suitable comparisons between and among the groups. When compared

on a measure of self-actualization, college female athletes were found to be no different from those in the college female active group and no different from the non-active college females. Fuoss and Troppman (1977) have discussed the goals and objectives of athletics and stated that

athletics has goals that are unique...self-actualization, self-fulfillment, and self-realization should be the ultimate results of an interscholastic athletic experience.

While the data of this study does not refute that athletics can serve as a means for an individual's personal growth towards self-actualization, it does serve to argue against the claim that outcomes of a self-actualizing nature are unique and exclusive to everyone participating in athletics. The non-active group, in fact, displayed a tendency to score higher than the athletes on a number of POI scales, although these differences in score did not approach the stated level of significance.

Kniker (1974) has reviewed the literature dealing with the justifications for athletics on all levels. One of the most commonly advocated benefits gained from participation in athletics is said to be emotional development and greater emotional control. Cooper (1969) notes that much of the research done in the area of personality and athletics seems to have been written in an attempt to justify participation in athletics and physical education. Reviewing the POI scores of the three groups examined in this research study, it would appear judicious to avoid attributing to athletics or to participation in physical activity any unique self-actualizing capabilities.

It should be noted that the lack of a significant difference in self-actualization between athletes and other groups of college women

is consistent with the findings of Farrier (1974), who discovered no relationship between level of self-actualization and participation in extracurricular activities among college women.

The significant difference found in self-acceptance between the active college female group and the non-active college females needs to be carefully analyzed. We can only speculate as to whether the active females had lower acceptance of self strictly because they were dissatisfied with their present activity levels. Maddocks (1978) has noted that the late 1970's may go down in history as the Age of Physical Culture. The physical cultists claim that they are exercising their way not only to physical health but to psychological health as well. Maddocks' theory that improved body awareness may be achieved at the expense of other kinds of awareness can be supported by the particular findings of this investigation. The significantly lower self-acceptance score of the physically active group appears to indicate such an occurrence.

Reviewing the data provided by each active and non-active subject, it can be seen that 58% of those in the active group rated their present level of physical activity as being average, when in fact their self-respect inventories indicated that they were well above average. On the other hand, the non-active females tended to be more accurate in their self-evaluations of present activity levels. Seventy percent of this group perceived themselves to be either "low" or "very low" in this area. Goble (1974) indicated that perhaps the most universal and common aspect of self-actualized people is their ability to perceive reality clearly. Our inventories and test scores show that, to some

extent, the non-active group displays this ability to a slightly greater degree than do the active college females. Though not statistically significant, the non-active group displayed a tendency to score higher on the POI scales in five of six other comparisons with the active group.

Hypothesis two:

HO₂ There are no significant differences in mean test scores among females currently participating in varsity intercollegiate athletics, females who have had experience as a competitive athlete, and females who have never taken part in any form of competitive athletics as measured by the POI.

Table 4. Analysis of variance data for POI scales: three groups with different competitive experiences in athletics.

Scale	Varsity Athletes (n = 43)		Previous Competitive Experience (n = 41)		No Previous Competitive Experience (n = 47)		F Ratio	F Probability
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
I	84.46	8.57	84.97	8.39	83.44	10.40	.317	.729
SAV	20.55	2.92	20.87	2.11	20.29	3.04	.489	.614
Ex	19.67	3.72	20.09	3.46	20.55	4.03	.613	.543
Sr	12.65	2.06	12.63	1.78	11.91	2.85	1.50	2.26
Sa	15.16	2.88	15.17	3.34	15.36	3.34	.056	.945
A	16.20	2.53	16.24	3.32	15.85	2.73	.259	.772
C	17.79	3.05	18.36	3.49	17.38	4.00	.840	.430

The F probability for the seven POI scales did not approach the level of significance needed to reject the null hypothesis; therefore, HO₂ was accepted.

Hypothesis two: Discussion

The data indicates that females who participated in one year of varsity athletics scored no differently in a measure of self-actualization than females with previous competitive experience or college females who never participated in any form of competitive athletics. While this finding is in disagreement with the general findings of Ibrihim and Morrison (1976), a number of causes may account for the differences. One such cause may be the fact that this study was conducted with subjects primarily from the Intermountain region of the United States, while the previous study used subjects from the more populated and more liberal region of southern California. Also, the skill level and calibre of athletes serving as subjects in each study may have varied a great deal. Further, the influence and coaching styles of the coaches of the athletes in question may have had a bearing on the issue. Ryan (1976) has pointed out that when researching personality traits found in athletes it is not surprising occasionally to find differences between certain groups; however, neither is it surprising that when attempts to replicate a study are made, researchers usually fail to find the same differences as in the initial attempt. While the purpose of this study was not merely to replicate previous research, Ryan's position is quite appropriate.

The broader implication drawn from the retention of hypothesis two is that participants in various forms of competitive athletics are no different in self-actualization than those who have never had the opportunity or the inclination to be so involved. Alderman (1974) writes that sports participation as a vehicle for self-actualization,

though occasionally present in the younger years, necessarily requires a certain degree of emotional and intellectual maturity and, as such, is more likely to occur in later life. The data showing no differences in self-actualization between groups having some previous competitive experiences in athletics and no competitive experience can be used to support Alderman's theory. High school age athletes and those younger may not be mature enough to experience any growth towards self-actualization via participation in interscholastic athletics. It may also be that professional female athletes, who as a group might be considered more emotionally and intellectually mature than college female athletes, need to be examined with a similar research design.

Another perspective is provided by Fait and Billings (1974). They note that competition is neither inherently good nor bad, implying that the environment in which it exists determines its effect(s) on the competitors. For athletics to serve as a vehicle towards one's self-actualization, it is theorized that the competition must be free of a "win at all costs" attitude and be organized by persons who have a sincere interest in the psychological well-being of the competitors.

Oglivie and Tutko (1971) have stated that while participation in sport or athletics may well build character, an individual has as much chance of developing the same type of character through activities other than sport or athletics. The researcher has chosen to interpret the data in this study as consistent with the position of Oglivie and Tutko. Involvement in a competitive athletic experience, per se, affords an individual no greater opportunity to move towards self-actualization than does no such involvement.

Hypothesis three:

HO₃ There are no significant differences in mean test scores among active females who jog, females active via other forms of sport or exercise, and non-active college females as measured by the POI.

Table 5. Analysis of variance data for POI scales: joggers, those active via other means, and non-active college females.

Scale	Joggers (n = 28)		Active Via Other Means (n = 17)		Non-active (n = 43)		F Ratio	F Prob- ability
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
I	83.07	10.49	82.94	7.45	85.34	9.59	.477	.698
SAV	20.82	2.27	21.00	2.34	20.23	2.34	.431	.730
Ex	20.03	4.45	19.29	3.60	20.95	3.28	1.19	.314
Sr	11.82	2.29	12.17	2.15	12.55	2.61	.866	.460
Sa	14.35	3.80	14.41	2.74	16.20	3.00	2.53	.060Y
A	15.78	3.70	16.23	2.75	16.11	2.64	.144	.933
C	17.89	4.16	16.80	4.09	18.18	3.41	.540	.651

Note: Y Significant at the .10 level of confidence.

The F probability for the POI scales did not meet the predetermined level of significance necessary to reject the null hypothesis; therefore, HO₃ was accepted.

Hypothesis three: Discussion

The President's Council of Physical Fitness and Sports (Physical Fitness Research Digest, January 1977) has pointed out that jogging has moved to the forefront of the cardiovascular fitness scene. Generally, the research conducted in this area has concentrated either on the physiological effects of jogging on the human organism or the relative

merits of various training regimens.

Hanson and Neede (1974) have conducted a study which has implications of a psychological nature. They subjected eight sedentary females to an eight-month, five-session per week training program. The training regimen consisted of jogging, swimming, paddleball, and volleyball. They note that indices of self-concept were altered in a positive manner at the conclusion of the training program.

Forty-five women were placed in the active group (Group B) of this research study. Of that number, 28 reported they they were regular joggers. Neither the distance travelled nor the jogger's rate of speed were taken into consideration.

In spite of the numerous physiological benefits attributed to jogging, the research data indicates that female joggers scored no differently on a measure of self-actualization than did females active via other forms of activity. Spino (1976) observes that jogging could be hazardous to both the mind and spirit (of the jogger) because of jogging's one dimensional nature and its repetitiveness. If this were true, one would expect to find differences between the two subgroups of active females, with joggers scoring lower on the various POI scales. Bowerman and Harris (1976) have adopted a viewpoint in contrast with Spino: they maintain that jogging causes one to feel better about one's self. Our research data, while not able to refute Bowerman and Harris' claim, appears to indicate that jogging offers to females no unique self-actualizing benefits that cannot be found in other forms of physical activity. Fixx (1977) relies on the subjective opinions of runners and concludes that "there seems little doubt that running does enhance

mental health." Our comparisons and outcomes do not support this position. Additional study in this area may shed light on the matter.

No significant differences were found on a measure of self-actualization when the non-active college females were compared to both groups of active females. It was noted that the non-active group had a tendency to have higher mean scale scores than either subgrouping of active females; however, as these differences did not prove to be statistically significant at the predetermined level of confidence, it was assumed that no differences in self-actualization existed among these groups of college women.

Hypothesis four:

HO₄ There are no significant intragroup differences in mean test scores between those who indicated that participation in sport or in athletics was a major decision for them and those who indicated it was not, as measured by the POI.

Table 6. Intragroup comparisons between those who indicated that participation in sport or athletics was a major decision for them and those who indicated it was not, as measured by the POI.

Scale	Group A Varsity Athletes	Group B Active Females	Group C Non-active Females
I	no difference	no difference	significant difference
SAV	no difference	no difference	no difference
Ex	no difference	no difference	significant difference
Sr	no difference	no difference	no difference
Sa	no difference	no difference	significant difference
A	no difference	no difference	no difference
C	no difference	no difference	significant difference

Table 7. T-test for mean scores on POI scales of I, Ex, Sa and C for Group C females who indicated that choosing not to participate in physical activity was a major decision for them and those who indicated it was not a major decision.

Scale	Response	Mean	S.D.	t-Value
I	Yes	78.25	6.49	-2.45**
	No	86.97	9.51	
Ex	Yes	18.62	2.20	-2.34*
	No	21.48	3.27	
Sa	Yes	13.87	1.88	-2.60**
	No	16.74	2.97	
C	Yes	15.50	4.01	-2.63**
	No	18.80	2.97	

Note: * Significant at the .05 level of confidence.

** Significant at the .01 level of confidence.

"Yes", n = 8; "No", n = 35

Table 8. Mann-Whitney U test for mean scores on POI scales of I, Ex, Sa and C for Group C females who indicated that choosing not to participate in physical activity was a major decision for them and those who indicated it was not a major decision.

Scale	Z-Value	2-Tailed p
I	-2.59	.009**
Ex	-2.38	.017*
Sa	-2.55	.011**
C	-2.16	.030*

Note: * Significant at the .05 level of confidence.

** Significant at the .01 level of confidence.

Analysis of variance and an LSD test of contrasting means were applied to the data relevant to hypothesis four. Further treatment, in the form of a t-test and a Mann-Whitney U test were applied to verify the differences found in Group C. These procedures determined that significant differences existed within Group C, while no differences existed within Group A or within Group B.

On the basis of this data, H_{04} was rejected.

Hypothesis four: Discussion

The process of decision making can be analyzed from a variety of viewpoints. Cummins (1973) has examined the political decisions of four world leaders and has found their choices to be closely related to their individual value structures. Janis and Mann (1977) have studied choice (decision making) in terms of conflict and commitment. The authors acknowledge health related activities (such as to be active or not active) as a source of viable decisional conflict. They add that an individual's time and energy resources play a pivotal role in their subsequent decision to be active or non-active. Commitment to a decision will vary according to one's personal and social orientations and can be most accurately viewed by assuming that there are varying degrees of commitment. Janis and Mann note that an act of commitment will have a stabilizing effect on a decision. Epstein and Fenz (1965) have found that for those electing to participate in a given sports activity, the point of maximal stress caused by decisional conflict comes at the time of their initial decision to participate.

While groups A and B showed no intragroup differences in the comparisons made in hypothesis four, the non-active college females indicated certain differences within their group. Those responding that it was a major decision to choose not to participate in a minimum of two hours of physical activity per week scored significantly lower on POI scales of inner-directedness, existentiality, self-acceptance and capacity for intimate contact than those who responded in the negative to the same inquiry. The lower scoring group may be generalized as

being different from the remainder of group C in that they were overly concerned with the opinions of others, less able to accept recognized weaknesses or deficiencies in themselves, less able to establish interpersonal relationships, and more rigid in their application of values. One subject in group C who indicated that it was a major decision to choose not to be physically active also elected to elaborate on the nature of her response. Her comments are as follows

The subject of physical activity is always on my mind. I feel that I should be participating in something, but my time is not well organized, and it is also a matter of discipline. I love all sports, but I have always felt that I had to be some sort of "jock" or something to be as good as my teammates. Thus I have avoided participation, as I was always unsure of being accepted on a team.

It is apparent that the interpretations of the POI scales tend to be supported by the statements of this individual.

Group C individuals who answered "no" to the inquiry whether participation in physical activity was a major decision also elected to elaborate on their responses. Their statements tend to reflect far less personal conflict over their decision. For example,

When I decide to exercise, I just do it.

It presented no difficulty to me. I enjoy athletics--(I) simple hadn't the time outside of class.

It may be that group C females who scored significantly lower on these POI scales placed higher value on participation in physical activity than the remainder of group C. As individuals they may have felt they were not maximizing themselves to their fullest potential while in their present state of inactivity. However, if this were the case, one would expect to find correspondingly high POI scores from group B females who also said it was a major decision to participate in physical

activity. No differences were found to exist when an intergroup comparison was made between these group B and group C females. While it appears that participation in physical activity does not increase one's self-actualization level, it may also be that females who choose to be non-active and who find themselves uncomfortable in that role have a tendency to be less self-actualized than other non-active college females.

Maslow (1971) suggests that a mind-body correlation exists in humans that influences their movement towards self-actualization. Simply stated, the human organism has a tendency to make choices that will result in psychological health and growth. In terms of group C females, the magnitude of the decision also appears to be a factor in moving an individual towards self-actualization and, for some, this decision may in fact hinder their development of self-actualization. The findings associated with group C females and hypothesis four can be summarized as follows

1. non-active females move towards self-actualization as normally as active college females or college female athletes; and
2. a high value orientation towards physical activity not reinforced by subsequent participation results in a measurably lower level of self-actualization in non-active college females.

Hypothesis five:

HO₅ There are no significant differences in mean test scores among subgroups of female varsity athletes as measured by the POI.

Hypothesis five A:

The first intragroup comparison made within the sample of college female athletes was to contrast their POI scores according to team membership. Table 9 shows that no significant differences in self-actualization were found among these team groupings.

Table 9. Analysis of variance data for POI scales, female varsity athletes grouped according to team membership.

Scale	F-Ratio	F-Probability
I	.456	.803
SAV	.944	.476
Ex	.092	.992
Sr	.825	.548
Sa	1.137	.376
A	.216	.951
C	.236	.941

Softball, n = 4; tennis, n = 3; track and field, n = 6; volleyball, n = 7; basketball/softball, n = 4; softball;volleyball, n = 3; cross-country/track and field, n = 6.

Hypothesis five A: Discussion

When compared on seven scales of the POI, college female varsity athletes displayed no intragroup differences when grouped according to team membership. As the sample size for each team was small, any reported differences would have been viewed with marked speculation. A larger sample of athletes would provide for more suitable comparisons. Oglivie (1968) reports evidence to support the hypothesis that specific sport-type personalities do exist. Studies generating larger samples

of athletes could more adequately determine if specific sport-type profiles exist for the POI.

Hypothesis five B:

The athletes were grouped as being either team sport participants, individual sport participants, or both team and individual sport participants and compared on a measure of self-actualization. Table 10 indicates that no significant differences were found between or among groups on any of the POI scales.

Table 10. Analysis of variance data for POI scales, female varsity athletes groups according to team sport participants, individual sport participants, or team and individual sport participants.

Scale	F-Ratio	F-Probability
I	.554	.579
SAV	.465	.631
Ex	.151	.860
Sr	.175	.839
Sa	.549	.581
A	.527	.594
C	.676	.514

Team sport participants, n = 22; individual sport participants, n = 15; team and individual sport participants, n = 6.

Hypothesis five B: Discussion

When compared on seven scales of the POI, team sport athletes, individual sport athletes and combination team and individual sport participants were found to have no significant differences among them.

Other investigators (Malumphy; Peterson, Weber and Troutsdale) have reported that other personality instruments have established differences between team sport and individual sport females.

The mean scores of the team and the individual sport athletes on the capacity for intimate contact scale showed that individual sport athletes scored higher than the team sport competitors, though this difference was not statistically significant. The generally accepted belief that competitive team sports afford a person with special opportunity to develop interpersonal relationships and socialization skills (Gallon, 1974) is not supported by this data.

Hellison (1973) writes of the centrality of interaction among participants when discussing sport experiences. Fagan (1975) praises competitive athletics because they provide opportunities for acceptance to a group and because they help participants adapt to the give and take actions of a group. Ulrich (1963) summarizes the attitude of most writers in this area when she states that sport "is the epitome of interaction." However, in this research study, non-active females had a higher mean score on the capacity for intimate contact scale than did joggers, individual sport athletes, and team sport athletes. While it is not possible to refute the theory that participation in sport or athletics may enhance one's ability to experience warm, interpersonal relationships, the data indicates that such involvement offers no unique capabilities for developing intimate contact. Unless an athletic coach or physical education instructor establishes the development of interpersonal relationships as a goal for their team or class and then takes subsequent steps to promote such outcomes (Sheehan and Alsop,

1972), it is likely that no measurable increase in socialization skills may result from participation in athletics or physical activity.

Hypothesis five C:

The athletes were divided according to those who were receiving an athletic scholarship and those who were not, and compared on a measure of self-actualization. Table 11 shows that certain significant differences were found to exist between these two groups, as measured by the POI.

Table 11. Analysis of variance data for POI scales, female athletes receiving athletic scholarships and those not receiving athletic scholarships.

Scale	Mean Scores		F-Ratio	F-Probability
	Scholarship	Non-Scholarship		
I			.259	.613
SAV	21.13	19.35	3.735	.060Y
Ex			.003	.959
Sr	13.17	11.57	6.378	.015**
Sa			.966	.331
A			.019	.890
C			.000	1.000

Note: Y Significant at the .10 level of confidence.

** Significant at the .01 level of confidence.

Scholarship athletes, n = 29; non-scholarship athletes, n = 14.

Hypothesis five C: Discussion.

Athletes receiving an athletic scholarship were found to have significantly higher self-regard (Sr scale) than non-scholarship college

female athletes. Neal (1976) has pointed out that

scholarships have been a status symbol for the women, just as they have been for the men...possibly even more so for the women at this point in the development of the women's program.

Data and findings of this investigation are interpreted as an indication of the high value that female athletes place on athletic scholarships. This interpretation is supported by Neal's statement. Further, the data implies that receiving such a scholarship positively affects one's self-regard more than does merely participating in varsity intercollegiate athletics. The data suggests that coaches of female athletes might seek to provide opportunities that could lead to the improved self-regard of their non-scholarship team members. Identical intragroup comparisons between group B and group C females showed no differences similar to those found within the group of athletes. This finding has been interpreted as indicating the existence of a "self-regard syndrome" unique to women's intercollegiate athletics and influenced by the awarding of athletic scholarships.

Hypothesis five D:

The athletes were grouped according to the number of varsity sports they participated in during the calendar year and compared on a measure of self-actualization. Table 12 summarizes this comparison, which found that no significant differences existed on any of the POI scales between female athletes participating exclusively in one varsity sport and female athletes participating in two or more sports during the same calendar year.

Table 12. Analysis of variance data for POI scales, female athletes competing in one varsity sport and those competing in two or more varsity sports.

Scale	F-Ratio	F-Probability
I	.499	.483
SAV	.021	.884
Ex	.409	.526
Sr	.149	.701
Sa	2.319	.135
A	.367	.548
C	.010	.921

Athletes competing in one varsity sport, n = 24; athletes competing in two or more varsity sports, n = 19.

Hypothesis five D: Discussion

Previous comparisons made in hypothesis one indicated that college female athletes were no different from active and non-active college women when compared on a measure of self-actualization. The findings of the present comparison are consistent with that conclusion. This allows for the interpretation that participation in athletics, even for periods of time exceeding 50% of the school year, affords one no increased development towards self-actualization.

Mitchner (1975) has recommended that athletes be limited to participation in only one intercollegiate sport in each calendar year of their college experience. The purpose of this would be to encourage all students to broaden themselves and develop interests in other areas. Bypassing the legal implications of Mitchner's restrictive policy, it

would appear safer to defend year round participation in college athletics from the standpoint of physiological gains, rather than from a position of psychological gain or growth towards self-actualization.

Hypothesis five E:

The athletes were divided into two groups determined by their status as either a first team player or substitute and then compared on a measure of self-actualization. The two groups were made up of athletes who were exclusively first team players during their athletic experiences of the past year and those who were either exclusively used as substitutes or who served as first team players in one sport and as substitutes in a second sport (starter/sub combination). Table 13 summarizes the data relative to this comparison; no significant differences in self-actualization exist between the two groups.

Table 13. Analysis of variance data for POI scales, female athletes who served exclusively as first team players during the past year and female athletes who served either as substitutes or as combination starter/substitute.

Scale	F-Ratio	F-Probability
I	1.094	.301
SAV	3.269	.077Y
Ex	.016	.899
Sr	1.261	.268
Sa	.495	.485
A	.576	.452
C	.047	.829

Note: Y Significant at the .10 level of confidence.

First team players, n = 29; substitutes and starter/sub, n = 14.

Hypothesis five E: Discussion

No significant differences were found to exist between female college athletes identified as first team members and female college athletes identified as either substitutes or starter/substitute combinations when compared on a measure of self-actualization. Following Maslow's premise that movement towards self-actualization is based on utilizing one's potentials, capacities, and talents to their fullest extent, first string players might have been expected to score significantly higher on the POI scales than the substitutes or starter/subs. It is noted that the starting players had higher mean scores on all seven scales that were compared, however, these differences did not approach the stated level of significance. Bird's theory (1968) that first string players might develop a character profile different from the remaining team members has not been substantiated by this research. As pointed out in previous discussion sections, the lack of ability to develop specific sport profiles may be attributed to the measuring instrument or to the athletes themselves. Acknowledging that the scale scores all favored the first string players to a slight degree, it appears warranted to recommend that further investigation be conducted with a larger sampling.

Hypothesis five F:

The athletes were divided into two groups according to the number of years they had participated in organized interschool athletics prior to their college athletic experiences. Twenty-two women indicated that they had previous interscholastic experience at the high school level only, while 18 women said that their interschool competitive background

went as far back as junior high school. Three female athletes were excluded from this comparison because they had competitive experience only on the college level. For the group of 22 women, the mean number of years of previous competitive experience was 3.0 years; the mean for the group of 18 women was 6.3 years of previous school sponsored competitive experience. Table 14 summarizes the findings obtained by this comparison.

Table 14. T-test comparison of POI scores, female athletes with competitive experience in high school and female athletes with competitive experiences in junior high school.

Scale	T-Value	2-Tailed Probability
I	-1.46	.152
SAV	-0.29	.776
Ex	-0.84	.408
Sr	0.80	.430
Sa	-1.21	.232
A	-1.71	.092Y
C	-1.83	.076Y

Note: Y Significant at the .10 level of confidence.

Female athletes with competitive experience in high school, n = 22; female athletes with competitive experience in high school and junior high school, n = 18.

Hypothesis five F: Discussion

At the .05 level of confidence, no significant differences were found between the two groups of college female athletes. However, noticeable trends were identified at the .10 level on two of the POI

scales by the treatment of the data. There was a marked tendency for athletes with more competitive experience to score higher on the scales of acceptance of aggression and capacity for intimate contact. According to Shostrom (1966-74) these scales complement each other and serve as an indication of one's interpersonal sensitivity. The interpretation of the differences found between the groups is that females who have competed in school athletics for a longer period of time have tendencies towards accepting anger and aggression in themselves and towards being able to establish warm, personal relationships with others.

Overall, the data shows that athletes with greater competitive experience had higher mean scores on six of the seven POI scales compared. While none of these differences reached the accepted level of statistical significance, this tendency should be noted and perhaps investigated further. As it exists, the data from this comparison suggests that long term participation in interschool athletics may have some positive influences on one's movement towards self-actualization.

Hypothesis five G:

The college female athletes were divided into two groups based on the number of years they had participated in intercollegiate athletics and compared on a measure of self-actualization. Seventeen women were grouped together having had one year of college athletic experience; 19 women having either three or four years experience in intercollegiate athletics formed the second group. Seven athletes having two years of intercollegiate athletic experience were omitted from this comparison, the purpose of which was to create more of a dichotomy between the groups. A t-test was used to compare the mean scores of each group.

Table 15 summarizes the results of this comparison.

Table 15. T-test comparison of POI scores, college female athletes with one year of intercollegiate athletic experience and college female athletes with three or four years of intercollegiate athletic experience.

Scale	T-Value	2-Tailed Probability
I	-0.15	.897
SAV	0.57	.569
Ex	-0.21	.831
Sr	0.22	.826
Sa	0.69	.492
A	0.03	.977
C	0.17	.850

Females with one year of collegiate athletic experience, n = 17, females with three or four years of collegiate athletic experience, n = 19.

Hypothesis five G: Discussion

The data indicated that no significant differences existed between these two groups of college female athletes when compared on a measure of self-actualization. The additional exposure to more competition on the collegiate level did not appear to be a factor in moving the athletes in the direction of greater self-actualization. Expanding on Maslow's concepts of defense and growth (1968), one might view the more experienced athletes as somewhat fixated on their athletic pursuits, afraid to jeopardize what they already have established in terms of personal identity. This minimal attraction to experiences outside of athletics can limit their growth towards self-actualization. The safety

needs of a person need to be assured before a person can move towards self-actualization, as safety needs are preponent to growth needs. The possibility that female athletes with three or four years of collegiate experience are still fixated at the level of safety needs bring one to the inference that perhaps few opportunities for psychological growth can be found in women's intercollegiate athletics.

Summary of Hypothesis Five Comparisons:

The hypothesis states that when various subgroups of college female athletes were compared on a measure of self-actualization, no significant differences existed between and among the groups. Female athletes not receiving an athletic scholarship were found to be significantly lower in self-regard than female athletes who did receive an athletic scholarship. This finding was discussed in section C. Other differences between groups were found at the .10 level of confidence and identified in the appropriate discussion section as "noticeable tendencies." Overall, few differences in self-actualization were found to exist between and among various subgroups of college female athletes; however, based on the data and the statistical treatments applied to it, hypothesis five was rejected.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Summary

Women's intercollegiate athletic programs have experienced tremendous growth in the decade of the 1970's. In a broader sense, women in general have become more physically active and can be found participating in numerous forms of leisure and fitness activities. The central problem of this study was to determine the self-actualization levels of three groups of college female students, with subjects categorized into groups according to the type of physical activity they had participated in during the past calendar year. Intergroup and intragroup comparisons of self-actualization scores were made between and among these three groups of college women.

One hundred and thirty one female volunteers, full-time academic students at Idaho State University during the 1977-78 school year, served as subjects. All subjects were required to fill out a Personal Information Form, and either a Personal Activity Inventory or an Athletic Data Request Form. In addition, each subject was administered the Personal Orientation Inventory (POI), which served as the measure of self-actualization. The data from the personal activity inventory was used to classify subjects as either active in sport or exercise on a regular basis ($n = 45$) or as non-active college females ($n = 43$). The third group of females for this study was made up of women who had successfully completed at least one full season of varsity intercollegiate athletics ($n = 43$).

Five separate hypotheses were formulated and tested by the appropriate statistical methods. Analysis of variance was used to determine the differences among the mean scores on the POI of groups within the study population. Other comparisons were made using Student's t-test, the test of least significant difference (LSD test), and the Student-Newman-Keuls procedure. In one instance the Mann-Whitney U test was used to further verify initial findings. The .05 level of confidence was used in retaining or rejecting each of the hypotheses tested.

In general, athletes were found to score no higher on a measure of self-actualization than active or non-active college females. A significant difference was noted when comparing the active and the non-active women, indicating that active women had a lower level of self-acceptance than did non-active women.

Further comparisons indicated the following:

Women participating in athletics, either in college or in various other environments, were found no different on a measure of self-actualization than women who had never participated in any form of athletics.

Jogging, as a specific type of activity for physically active college women, produced no significant increase or decrease in self-actualization when compared with those physically active by other means and with non-active females.

Non-active college women who indicated that it was a major decision not to be physically active scored significantly lower in self-actualization when compared with other non-active women.

Various groups of college female athletes did not differ from each

Table 16. Summary of findings.

Hypothesis	Groups Participating			Decision		Nature of Difference
	Athletes	Active	Non-active	Hypothesis Accepted	Hypothesis Rejected	
There are no significant differences in mean scores among groups 1, 2 and 3 as measured by the POI	X	X	X		X	Active and non-active women were significantly different on the scale of self-acceptance
There are no significant differences in mean scores among females currently active in varsity athletics, females with previous experience as athletes, and females who have never taken part in any form of athletics, as measured by the POI	X	X	X	X		
There are no significant differences among active females who jog, females active via other forms of sport or exercise, and non-active college females, as measured by the POI		X	X	X		

(Continued)

Table 16. Summary of findings (continued).

Hypothesis	Groups Participating			Decision		Nature of Difference
	Athletes	Active	Non-active	Hypothesis Accepted	Hypothesis Rejected	
There are no significant intragroup differences between those who indicated participation in sport or in athletics was a major decision for them and those who indicated it was not, as measured by the POI	X	X	X		X	Within the group of non-active women, those who indicated that the decision not to participate was a major one were found to be significantly different on scales of inner-directedness, existentiality, self-acceptance and capacity for intimate contact
There are no significant differences in test scores among subgroups of female varsity athletes as measured by the POI	X				X	Within the group of athletes, those receiving an athletic scholarship were found to be significantly different on the scale of self-regard than those athletes not receiving an athletic scholarship

other when compared on a measure of self-actualization. The one exception to this was that non-scholarship athletes had significantly lower self-regard than the athletes receiving an athletic scholarship.

Conclusions

Based on the results of the statistical analyses of the various scores, the following conclusions have been drawn from the results of this study:

1. Based on the samples used in this research, no differences in self-actualization exist among college female athletes, active college females, and non-active college females.
2. Active college women are lower in self-acceptance than non-active college women. The reasons for this occurrence are discussed in the appropriate section of Chapter Four.
3. Based on the samples used in this research, no differences in self-actualization exist among women who have intercollegiate athletic experiences, women who have previously experienced some participation in athletics, and women who have had no such competitive experiences in their past history.
4. Based on the samples used in this research, no differences in self-actualization exist among college female joggers, college females active by other means, and non-active college females.
5. Non-active college women who indicated it was a major decision not to be physically active are less self-actualized than other non-active college females. The reasons for this occurrence are discussed in the appropriate section of Chapter Four.

6. Various groups of college female athletes do not differ from one another in self-actualization. The one exception to this is that women receiving an athletic scholarship have higher self-regard than women athletes not receiving an athletic scholarship.
7. The awarding of an athletic scholarship to a college female athlete has a significant positive influence on her level of self-regard.

Implications

Analysis of the data collected during this research study has motivated the researcher to draw a number of implications.

Implications for the study population:

1. Active women should recognize that there may be a relationship between being active and having a lower level of self-acceptance.
2. Athletes should be informed that there is no evidence that participation in athletics will cause them to move in the direction towards greater self-actualization. Such participation, however, does not appear to hinder self-actualization.
3. College women who jog should not anticipate any significant change in their level of self-actualization.
4. Non-active women with a high value orientation towards physical activity may find themselves lower in self-actualization due to their inactivity.
5. Among college female athletes, receiving an athletic scholarship

has a greater influence on positive self-regard than does the overall process of participation in intercollegiate athletics.

Implications for groups outside the study population:

1. Physical education activity instructors need to consider the possibility of negative psychological outcomes resulting from involvement in physical activity. As such, a "participation for all" philosophy needs to be carefully considered before adoption.
2. Coaches who understand and accept the concept of self-actualization should realize that growth towards self-actualization is not likely to occur in environments of either dogmatic team control or "benign neglect." Specific strategies need to be adopted by the coach if players are to move towards becoming more self-actualized.
3. Participation in school athletics or in physical activity programs should not be promoted or justified by claims that cannot be supported by empirical research. The clearest benefits from participation in such programs appear to be physiological; psychological growth and/or improvement made on the part of the participants of athletics or physical activity has yet to be consistently established.

Recommendations

The findings of this study have lead the researcher to make the following recommendations:

1. The reader is cautioned that the differences found within the population used in the present study cannot be transferred to any other population. Other studies dealing with similar variables have found contrasting results (Ibrihim and Morrison, 1976; Bird, 1968). Thus, any generalizations drawn from this particular study must be prudently developed.
2. The need exists for the development of additional measures of self-actualization. Use of such measurement instruments would serve to cross-validate and verify the findings made by the Personal Orientation Inventory and add to the general body of knowledge pertinent to self-actualization.
3. Because of the apparent difference in self-acceptance between active and non-active women, it is recommended that a study be developed to investigate more thoroughly the reasons for such a situation.
4. Since the findings relative to the non-active women indicate a syndrome of lower self-actualization scores among those who stated it was a major decision not to participate in physical activity, further research examining the value structure of non-active people towards physical activity as related to their self-actualization level appears warranted.
5. Self-actualization comparisons between females of a very high skill level (such as Olympic caliber athletes) and more routinely skilled college female athletes may reveal additional information relative to the self-actualization potential of competitive athletics.

6. Because coaches play a pivotal role in the developmental process of an athlete, a study correlating the self-actualization level of coaches with the players on their particular team might prove revealing.

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APPENDICES

APPENDIX A

GENERAL TESTING DIRECTIONS

As a participant in this research study, you will be asked to respond to two questionnaires and one standardized test. Please pay close attention to the instructions provided with each questionnaire and with the test.

Questionnaire A will be given to all groups of subjects in order to determine the homogeneity of all participants.

Questionnaire B will be given to those women who have never participated in varsity intercollegiate athletics. Its purpose is to discriminate between female college students who are physically active in sport or exercise and those who are not physically active.

Questionnaire C will be given to those women who have participated in varsity intercollegiate athletics during the last calendar year. The purpose of this questionnaire is to make distinctions between various groups of women athletes.

All subjects will be given the Personal Orientation Inventory. This inventory will serve as a measure of the self-actualization level of each participating subject.

You are asked to respond to all questions openly and honestly. By doing so, you will provide information that will be used for important education research. Please note that all responses will be treated with confidentiality. The anonymity of all participating subjects is guaranteed. Reference numbers appear on each questionnaire so that each person's set of questionnaires and their POI response sheet can be grouped as a unit. Subjects will also be asked to sign a log book during the testing session. This will allow each participant to be contacted at a later date with information pertaining to the results of this study.

One final note . . . your willingness to participate in this research study is greatly appreciated.

QUESTIONNAIRE A

PERSONAL INFORMATION DATA: To be filled out by all groups.

DIRECTIONS: Please answer all questions in the space provided to the right of the vertical line. Do not make any response in the margin. All responses should be as accurate as possible.

REFERENCE NUMBER: _____

1. _____	1. Present year in college: (Please Circle) 1 2 3 4
2. _____	2. Age: Years _____ and months _____
3. _____	3. Estimated population of your home town: (Please Circle) 1. under 1,000 2. 1,001 to 5,000 3. 5,001 to 10,000 4. 10,001 to 25,000 5. Above 25,000
4. _____	4. Is your full-time home residence in one of the following states: Colorado, Idaho, Montana, Utah, Wyoming? (Please Circle) 1. Yes 2. No
5. _____	5. Number of older brothers: _____
6. _____	6. Number of older sisters: _____
7. _____	7. Number of younger brothers: _____
8. _____	8. Number of younger sisters: _____
9. _____	9. Total number of brothers and sisters: _____
10. _____	10. Marital Status: (Please Circle) 1. Single 2. Married
11. _____	11. Cumulative college grade point average: (Please Circle) 1. 3.5 and above 2. 3.0 to 3.49 3. 2.5 to 2.99 4. 2.0 to 2.49 5. Below 2.00

QUESTIONNAIRE A

Page two

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12. _____ 12. Parents' approximate joint yearly income at present:
(Please Circle)
1. \$5,000 or Less
 2. \$5,001 to \$10,000
 3. \$10,001 to \$15,000
 4. \$15,001 to \$20,000
 5. \$20,001 to \$25,000
 6. \$25,001 and Above
 7. I have no knowledge of this information
13. _____ 13. Personal religious preference: (Please Circle)
1. No Preference
 2. Catholic
 3. Jewish
 4. Mormon
 5. Protestant
 6. Other Religious Demonination: Please List
-
14. _____ 14. Are you currently receiving financial aid of any type
from Idaho State University? (Please Circle)
1. Yes
 2. No

APPENDIX B

QUESTIONNAIRE B

PERSONAL ACTIVITY INVENTORY: To be filled out by all subjects who are not participating in intercollegiate varsity athletics at Idaho State University.

DIRECTIONS: This questionnaire is divided into three sections. Please read each question carefully and place your answer in the space provided to the right of the vertical line. Do not make any responses to the left of the margin.

REFERENCE NUMBER: _____

SECTION A. FORMER ATHLETES

1. _____ 1. Did you ever participate in any form of competitive athletics above the intramural level? (Please Circle)
1. Yes 2. No
2. _____ 2. If yes to Question 1, please identify those sports participated in by circling the appropriate number(s):
- | | | |
|------------------|-----------------|----------------------------------|
| 1. Archery | 6. Field Hockey | 11. Swimming |
| 2. Badminton | 7. Golf | 12. Tennis |
| 3. Basketball | 8. Gymnastics | 13. Track and Field |
| 4. Bowling | 9. Soccer | 14. Volleyball |
| 5. Cross-country | 10. Softball | 15. Other: Please Identify _____ |
3. _____ 3. When did you stop participating in organized athletic competition? (By organized competition we mean participating under the guidance of a coach and partaking in regularly scheduled contests.)
- _____ Years ago
4. _____ 4. Do you currently participate in any form of physical activity on a minimum basis of two hours weekly? (Please Circle)
1. Yes 2. No
5. _____ 5. If yes to Question 4, please complete the following:
- | Name of Activity | Frequency (Hours per week) |
|------------------|----------------------------|
| | |

QUESTIONNAIRE B

Page two

SECTION B. PEOPLE ACTIVE IN SPORT OR EXERCISE ON A REGULAR BASIS

6. _____ 6. During the past year, have you participated regularly (i.e., at least two hours weekly) in any type of sport or physical activity? (Please Circle)
1. Yes 2. No

7. _____ 7. If yes to Question 6, please complete the following:

Name of Activity	Frequency (Hours per week)

8. _____ 8. Indicate if your activity occurred through any of the following mediums: (Please Circle)
1. Physical Education class
2. Intramurals
3. Combination of numbers 1 and 2
4. Sport club membership (e.g., YMCA or local health spa
5. Workout sessions scheduled at random for personal convenience

SECTION C. FOR ALL SUBJECTS RESPONDING TO THIS QUESTIONNAIRE

9. _____ 9. How would you rate your present overall level of physical activity EXCLUSIVE OF WORK OR JOB RELATED physical activity? (Please Circle)
1. very high 4. low
2. high 5. very low
3. average

10. _____ 10. Has the decision to participate at least two hours weekly in physical activity or to not participate been a major decision in your life--that is, has it been a decision that required serious thought and consideration? (Please Circle)
1. Yes 2. No

Please feel free to elaborate on the nature of your response to Question 10 or to comment about any of the items in this Questionnaire.

APPENDIX C

QUESTIONNAIRE C

ATHLETIC DATA REQUEST FORM: To be filled out by varsity intercollegiate athletes only.

DIRECTIONS: Please read each question carefully and place your answer in the space provided to the right of the vertical line. Do not make any responses to the left of the margin.

REFERENCE NUMBER: _____

1. _____	<p>1. From the list provided, circle the sports that you have participated in on a varsity intercollegiate basis at Idaho State University, or elsewhere, in the past calendar year.</p> <table border="0" style="margin-left: 40px;"> <tr> <td>1. Basketball</td> <td>4. Tennis</td> </tr> <tr> <td>2. Cross-country</td> <td>5. Track and Field</td> </tr> <tr> <td>3. Softball</td> <td>6. Volleyball</td> </tr> </table>	1. Basketball	4. Tennis	2. Cross-country	5. Track and Field	3. Softball	6. Volleyball												
1. Basketball	4. Tennis																		
2. Cross-country	5. Track and Field																		
3. Softball	6. Volleyball																		
2. _____	<p>2. Please classify yourself by circling one of the following:</p> <ol style="list-style-type: none"> 1. Team sport participant 2. Individual sport participant 3. Both team and individual sport participant 																		
3. _____ _____ _____	<p>3. Please list the total number of years you have participated in organized <u>interschool</u> athletics:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>College/university level</td> <td>_____</td> <td>years</td> </tr> <tr> <td>High school and below</td> <td>_____</td> <td>years</td> </tr> <tr> <td></td> <td>_____</td> <td>years total</td> </tr> </table>	College/university level	_____	years	High school and below	_____	years		_____	years total									
College/university level	_____	years																	
High school and below	_____	years																	
	_____	years total																	
4. _____ _____ _____	<p>4. Applying the definition that a first team performer is one who has been in the starting line up for at least 50% of her team's games or contests, identify yourself as either a starter or a substitute in the sports you have participated in during the last calendar year:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>1. Basketball</td> <td>1. starter</td> <td>2. substitute</td> </tr> <tr> <td>2. Cross-country</td> <td>1. starter</td> <td>2. substitute</td> </tr> <tr> <td>3. Softball</td> <td>1. starter</td> <td>2. substitute</td> </tr> <tr> <td>4. Tennis</td> <td>1. starter</td> <td>2. substitute</td> </tr> <tr> <td>5. Track and Field</td> <td>1. starter</td> <td>2. substitute</td> </tr> <tr> <td>6. Volleyball</td> <td>1. starter</td> <td>2. substitute</td> </tr> </table>	1. Basketball	1. starter	2. substitute	2. Cross-country	1. starter	2. substitute	3. Softball	1. starter	2. substitute	4. Tennis	1. starter	2. substitute	5. Track and Field	1. starter	2. substitute	6. Volleyball	1. starter	2. substitute
1. Basketball	1. starter	2. substitute																	
2. Cross-country	1. starter	2. substitute																	
3. Softball	1. starter	2. substitute																	
4. Tennis	1. starter	2. substitute																	
5. Track and Field	1. starter	2. substitute																	
6. Volleyball	1. starter	2. substitute																	

QUESTIONNAIRE C

Page two

5. 5. For both team and individual sport respondents: identify
 your team's percentage of success in terms of won-lost
 percentage over the past calendar year.
- | | <u>Above .500</u> | <u>Below .500</u> | <u>Exactly .500</u> |
|--------------------|-------------------|-------------------|---------------------|
| 1. Basketball | 1. <u> </u> | 2. <u> </u> | 3. <u> </u> |
| 2. Cross-country | 1. <u> </u> | 2. <u> </u> | 3. <u> </u> |
| 3. Softball | 1. <u> </u> | 2. <u> </u> | 3. <u> </u> |
| 4. Tennis | 1. <u> </u> | 2. <u> </u> | 3. <u> </u> |
| 5. Track and Field | 1. <u> </u> | 2. <u> </u> | 3. <u> </u> |
| 6. Volleyball | 1. <u> </u> | 2. <u> </u> | 3. <u> </u> |
6. 6. In preparation for the past year in athletics, did you
 participate in a pre-season development program or year-
 round series of activities in order to improve your level
of skill or better prepare yourself for the in-season
period of competition?
- | | | |
|--------------------|--------|-------|
| 1. Basketball | 1. Yes | 2. No |
| 2. Cross-country | 1. Yes | 2. No |
| 3. Softball | 1. Yes | 2. No |
| 4. Tennis | 1. Yes | 2. No |
| 5. Track and Field | 1. Yes | 2. No |
| 6. Volleyball | 1. Yes | 2. No |
7. 7. Do you presently have an athletic scholarship? (Please
Circle)
1. Yes 2. No
8. 8. At what age did you first participate in organized forms
of competitive athletics? (By organized forms of athle-
tics we mean participating under the guidance of a coach
and participating in regularly scheduled contests.)
- years old
9. 9. Has the decision to participate in intercollegiate athle-
tics been a major decision in your life--that is, has it
been a decision that required serious thought and consid-
eration? (Please Circle)
1. Yes 2. No

APPENDIX D

PERSONAL ORIENTATION INVENTORY

©

EVERETT L. SHOSTROM, Ph.D.

DIRECTIONS

This inventory consists of pairs of numbered statements. Read each statement and decide which of the two paired statements most consistently applies to you.

You are to mark your answers on the answer sheet you have. Look at the example of the answer sheet shown at the right. If the first statement of the pair is TRUE or MOSTLY TRUE as applied to you, blacken between the lines in the column headed "a". (See Example Item 1 at right.) If the second statement of the pair is TRUE or MOSTLY TRUE as applied to you, blacken between the lines in the column headed "b". (See Example Item 2 at right.) If neither statement applies to you, or if they refer to something you don't know about, make no answer on the answer sheet. Remember to give YOUR OWN opinion of yourself and do not leave any blank spaces if you can avoid it.

Section of Answer Column Correctly Marked	
	a b
1.	█ ∴
2.	∴ █

In marking your answers on the answer sheet, be sure that the number of the statement agrees with the number on the answer sheet. Make your marks heavy and black. Erase completely any answer you wish to change. Do not make any marks in this booklet.

Remember, try to make some answer to every statement.

Before you begin the inventory, be sure you put your name, your sex, your age, and the other information called for in the space provided on the answer sheet.

NOW OPEN THE BOOKLET AND START WITH QUESTION 1.

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1. a. I am bound by the principle of fairness.
b. I am not absolutely bound by the principle of fairness.
2. a. When a friend does me a favor, I feel that I must return it.
b. When a friend does me a favor, I do not feel that I must return it.
3. a. I feel I must always tell the truth.
b. I do not always tell the truth.
4. a. No matter how hard I try, my feelings are often hurt.
b. If I manage the situation right, I can avoid being hurt.
5. a. I feel that I must strive for perfection in everything that I undertake.
b. I do not feel that I must strive for perfection in everything that I undertake.
6. a. I often make my decisions spontaneously.
b. I seldom make my decisions spontaneously.
7. a. I am afraid to be myself.
b. I am not afraid to be myself.
8. a. I feel obligated when a stranger does me a favor.
b. I do not feel obligated when a stranger does me a favor.
9. a. I feel that I have a right to expect others to do what I want of them.
b. I do not feel that I have a right to expect others to do what I want of them.
10. a. I live by values which are in agreement with others.
b. I live by values which are primarily based on my own feelings.
11. a. I am concerned with self-improvement at all times.
b. I am not concerned with self-improvement at all times.
12. a. I feel guilty when I am selfish.
b. I don't feel guilty when I am selfish.
13. a. I have no objection to getting angry.
b. Anger is something I try to avoid.
14. a. For me, anything is possible if I believe in myself.
b. I have a lot of natural limitations even though I believe in myself.
15. a. I put others' interests before my own.
b. I do not put others' interests before my own.
16. a. I sometimes feel embarrassed by compliments.
b. I am not embarrassed by compliments.
17. a. I believe it is important to accept others as they are.
b. I believe it is important to understand why others are as they are.
18. a. I can put off until tomorrow what I ought to do today.
b. I don't put off until tomorrow what I ought to do today.
19. a. I can give without requiring the other person to appreciate what I give.
b. I have a right to expect the other person to appreciate what I give.
20. a. My moral values are dictated by society.
b. My moral values are self-determined.
21. a. I do what others expect of me.
b. I feel free to not do what others expect of me.
22. a. I accept my weaknesses.
b. I don't accept my weaknesses.
23. a. In order to grow emotionally, it is necessary to know why I act as I do.
b. In order to grow emotionally, it is not necessary to know why I act as I do.
24. a. Sometimes I am cross when I am not feeling well.
b. I am hardly ever cross.

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25. a. It is necessary that others approve of what I do.
b. It is not always necessary that others approve of what I do.
26. a. I am afraid of making mistakes.
b. I am not afraid of making mistakes.
27. a. I trust the decisions I make spontaneously.
b. I do not trust the decisions I make spontaneously.
28. a. My feelings of self-worth depend on how much I accomplish.
b. My feelings of self-worth do not depend on how much I accomplish.
29. a. I fear failure.
b. I don't fear failure.
30. a. My moral values are determined, for the most part, by the thoughts, feelings and decisions of others.
b. My moral values are not determined, for the most part, by the thoughts, feelings and decisions of others.
31. a. It is possible to live life in terms of what I want to do.
b. It is not possible to live life in terms of what I want to do.
32. a. I can cope with the ups and downs of life.
b. I cannot cope with the ups and downs of life.
33. a. I believe in saying what I feel in dealing with others.
b. I do not believe in saying what I feel in dealing with others.
34. a. Children should realize that they do not have the same rights and privileges as adults.
b. It is not important to make an issue of rights and privileges.
35. a. I can "stick my neck out" in my relations with others.
b. I avoid "sticking my neck out" in my relations with others.
36. a. I believe the pursuit of self-interest is opposed to interest in others.
b. I believe the pursuit of self-interest is not opposed to interest in others.
37. a. I find that I have rejected many of the moral values I was taught.
b. I have not rejected any of the moral values I was taught.
38. a. I live in terms of my wants, likes, dislikes and values.
b. I do not live in terms of my wants, likes, dislikes and values.
39. a. I trust my ability to size up a situation.
b. I do not trust my ability to size up a situation.
40. a. I believe I have an innate capacity to cope with life.
b. I do not believe I have an innate capacity to cope with life.
41. a. I must justify my actions in the pursuit of my own interests.
b. I need not justify my actions in the pursuit of my own interests.
42. a. I am bothered by fears of being inadequate.
b. I am not bothered by fears of being inadequate.
43. a. I believe that man is essentially good and can be trusted.
b. I believe that man is essentially evil and cannot be trusted.
44. a. I live by the rules and standards of society.
b. I do not always need to live by the rules and standards of society.
45. a. I am bound by my duties and obligations to others.
b. I am not bound by my duties and obligations to others.
46. a. Reasons are needed to justify my feelings.
b. Reasons are not needed to justify my feelings.

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47. a. There are times when just being silent is the best way I can express my feelings.
b. I find it difficult to express my feelings by just being silent.
48. a. I often feel it necessary to defend my past actions.
b. I do not feel it necessary to defend my past actions.
49. a. I like everyone I know.
b. I do not like everyone I know.
50. a. Criticism threatens my self-esteem.
b. Criticism does not threaten my self-esteem.
51. a. I believe that knowledge of what is right makes people act right.
b. I do not believe that knowledge of what is right necessarily makes people act right.
52. a. I am afraid to be angry at those I love.
b. I feel free to be angry at those I love.
53. a. My basic responsibility is to be aware of my own needs.
b. My basic responsibility is to be aware of others' needs.
54. a. Impressing others is most important.
b. Expressing myself is most important.
55. a. To feel right, I need always to please others.
b. I can feel right without always having to please others.
56. a. I will risk a friendship in order to say or do what I believe is right.
b. I will not risk a friendship just to say or do what is right.
57. a. I feel bound to keep the promises I make.
b. I do not always feel bound to keep the promises I make.
58. a. I must avoid sorrow at all costs.
b. It is not necessary for me to avoid sorrow.
59. a. I strive always to predict what will happen in the future.
b. I do not feel it necessary always to predict what will happen in the future.
60. a. It is important that others accept my point of view.
b. It is not necessary for others to accept my point of view.
61. a. I only feel free to express warm feelings to my friends.
b. I feel free to express both warm and hostile feelings to my friends.
62. a. There are many times when it is more important to express feelings than to carefully evaluate the situation.
b. There are very few times when it is more important to express feelings than to carefully evaluate the situation.
63. a. I welcome criticism as an opportunity for growth.
b. I do not welcome criticism as an opportunity for growth.
64. a. Appearances are all-important.
b. Appearances are not terribly important.
65. a. I hardly ever gossip.
b. I gossip a little at times.
66. a. I feel free to reveal my weaknesses among friends.
b. I do not feel free to reveal my weaknesses among friends.
67. a. I should always assume responsibility for other people's feelings.
b. I need not always assume responsibility for other people's feelings.
68. a. I feel free to be myself and bear the consequences.
b. I do not feel free to be myself and bear the consequences.

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69. a. I already know all I need to know about my feelings.
b. As life goes on, I continue to know more and more about my feelings.
70. a. I hesitate to show my weaknesses among strangers.
b. I do not hesitate to show my weaknesses among strangers.
71. a. I will continue to grow only by setting my sights on a high-level, socially approved goal.
b. I will continue to grow best by being myself.
72. a. I accept inconsistencies within myself.
b. I cannot accept inconsistencies within myself.
73. a. Man is naturally cooperative.
b. Man is naturally antagonistic.
74. a. I don't mind laughing at a dirty joke.
b. I hardly ever laugh at a dirty joke.
75. a. Happiness is a by-product in human relationships.
b. Happiness is an end in human relationships.
76. a. I only feel free to show friendly feelings to strangers.
b. I feel free to show both friendly and unfriendly feelings to strangers.
77. a. I try to be sincere but I sometimes fail.
b. I try to be sincere and I am sincere.
78. a. Self-interest is natural.
b. Self-interest is unnatural.
79. a. A neutral party can measure a happy relationship by observation.
b. A neutral party cannot measure a happy relationship by observation.
80. a. For me, work and play are the same.
b. For me, work and play are opposites.
81. a. Two people will get along best if each concentrates on pleasing the other.
b. Two people can get along best if each person feels free to express himself.
82. a. I have feelings of resentment about things that are past.
b. I do not have feelings of resentment about things that are past.
83. a. I like only masculine men and feminine women.
b. I like men and women who show masculinity as well as femininity.
84. a. I actively attempt to avoid embarrassment whenever I can.
b. I do not actively attempt to avoid embarrassment.
85. a. I blame my parents for a lot of my troubles.
b. I do not blame my parents for my troubles.
86. a. I feel that a person should be silly only at the right time and place.
b. I can be silly when I feel like it.
87. a. People should always repent their wrongdoings.
b. People need not always repent their wrongdoings.
88. a. I worry about the future.
b. I do not worry about the future.
89. a. Kindness and ruthlessness must be opposites.
b. Kindness and ruthlessness need not be opposites.
90. a. I prefer to save good things for future use.
b. I prefer to use good things now.
91. a. People should always control their anger.
b. People should express honestly-felt anger.

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92. a. The truly spiritual man is sometimes sensual.
b. The truly spiritual man is never sensual.
93. a. I am able to express my feelings even when they sometimes result in undesirable consequences.
b. I am unable to express my feelings if they are likely to result in undesirable consequences.
94. a. I am often ashamed of some of the emotions that I feel bubbling up within me.
b. I do not feel ashamed of my emotions.
95. a. I have had mysterious or ecstatic experiences.
b. I have never had mysterious or ecstatic experiences.
96. a. I am orthodoxly religious.
b. I am not orthodoxly religious.
97. a. I am completely free of guilt.
b. I am not free of guilt.
98. a. I have a problem in fusing sex and love.
b. I have no problem in fusing sex and love.
99. a. I enjoy detachment and privacy.
b. I do not enjoy detachment and privacy.
100. a. I feel dedicated to my work.
b. I do not feel dedicated to my work.
101. a. I can express affection regardless of whether it is returned.
b. I cannot express affection unless I am sure it will be returned.
102. a. Living for the future is as important as living for the moment.
b. Only living for the moment is important.
103. a. It is better to be yourself.
b. It is better to be popular.
104. a. Wishing and imagining can be bad.
b. Wishing and imagining are always good.
105. a. I spend more time preparing to live.
b. I spend more time actually living.
106. a. I am loved because I give love.
b. I am loved because I am lovable.
107. a. When I really love myself, everybody will love me.
b. When I really love myself, there will still be those who won't love me.
108. a. I can let other people control me.
b. I can let other people control me if I am sure they will not continue to control me.
109. a. As they are, people sometimes annoy me.
b. As they are, people do not annoy me.
110. a. Living for the future gives my life its primary meaning.
b. Only when living for the future ties into living for the present does my life have meaning.
111. a. I follow diligently the motto, "Don't waste your time."
b. I do not feel bound by the motto, "Don't waste your time."
112. a. What I have been in the past dictates the kind of person I will be.
b. What I have been in the past does not necessarily dictate the kind of person I will be.
113. a. It is important to me how I live in the here and now.
b. It is of little importance to me how I live in the here and now.
114. a. I have had an experience where life seemed just perfect.
b. I have never had an experience where life seemed just perfect.
115. a. Evil is the result of frustration in trying to be good.
b. Evil is an intrinsic part of human nature which fights good.

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116. a. A person can completely change his essential nature.
b. A person can never change his essential nature.
117. a. I am afraid to be tender.
b. I am not afraid to be tender.
118. a. I am assertive and affirming.
b. I am not assertive and affirming.
119. a. Women should be trusting and yielding.
b. Women should not be trusting and yielding.
120. a. I see myself as others see me.
b. I do not see myself as others see me.
121. a. It is a good idea to think about your greatest potential.
b. A person who thinks about his greatest potential gets conceited.
122. a. Men should be assertive and affirming.
b. Men should not be assertive and affirming.
123. a. I am able to risk being myself.
b. I am not able to risk being myself.
124. a. I feel the need to be doing something significant all of the time.
b. I do not feel the need to be doing something significant all of the time.
125. a. I suffer from memories.
b. I do not suffer from memories.
126. a. Men and women must be both yielding and assertive.
b. Men and women must not be both yielding and assertive.
127. a. I like to participate actively in intense discussions.
b. I do not like to participate actively in intense discussions.
128. a. I am self-sufficient.
b. I am not self-sufficient.
129. a. I like to withdraw from others for extended periods of time.
b. I do not like to withdraw from others for extended periods of time.
130. a. I always play fair.
b. Sometimes I cheat a little.
131. a. Sometimes I feel so angry I want to destroy or hurt others.
b. I never feel so angry that I want to destroy or hurt others.
132. a. I feel certain and secure in my relationships with others.
b. I feel uncertain and insecure in my relationships with others.
133. a. I like to withdraw temporarily from others.
b. I do not like to withdraw temporarily from others.
134. a. I can accept my mistakes.
b. I cannot accept my mistakes.
135. a. I find some people who are stupid and uninteresting.
b. I never find any people who are stupid and uninteresting.
136. a. I regret my past.
b. I do not regret my past.
137. a. Being myself is helpful to others.
b. Just being myself is not helpful to others.
138. a. I have had moments of intense happiness when I felt like I was experiencing a kind of ecstasy or bliss.
b. I have not had moments of intense happiness when I felt like I was experiencing a kind of bliss.

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139. a. People have an instinct for evil.
b. People do not have an instinct for evil.
140. a. For me, the future usually seems hopeful.
b. For me, the future often seems hopeless.
141. a. People are both good and evil.
b. People are not both good and evil.
142. a. My past is a stepping stone for the future.
b. My past is a handicap to my future.
143. a. "Killing time" is a problem for me.
b. "Killing time" is not a problem for me.
144. a. For me, past, present and future is in meaningful continuity.
b. For me, the present is an island, unrelated to the past and future.
145. a. My hope for the future depends on having friends.
b. My hope for the future does not depend on having friends.
146. a. I can like people without having to approve of them.
b. I cannot like people unless I also approve of them.
147. a. People are basically good.
b. People are not basically good.
148. a. Honesty is always the best policy.
b. There are times when honesty is not the best policy.
149. a. I can feel comfortable with less than a perfect performance.
b. I feel uncomfortable with anything less than a perfect performance.
150. a. I can overcome any obstacles as long as I believe in myself.
b. I cannot overcome every obstacle even if I believe in myself.

APPENDIX E

Larry Matthews
'Self-Actualization Research'
c/o Physical Education Department
Idaho State University
Pocatello, ID 83209

Dear Student:

I am conducting educational research that will determine the self-actualization level of three groups of college female students. The three groups of college women are as follows:

Group A - Female Varsity Athletes

Group B - Females Active in Sport or Exercise on a Regular Basis
(Minimum - 5 hours/week)

Group C - Non-active, Non-athletic College Females

Thus far, I have tested 99 students at Idaho State University: 51 in Group A and 48 in Group B.

Presently, I am seeking to locate volunteers who would categorize their physical activity levels as either "low" or "non-active." In terms of number of hours per week spend in physical activities and/or exercise, low or non-active people would be spending 0 to 1 hour's time. It is very important that I located approximately 50 college women for Group C. If you judge yourself to be within the activity range of Group C, please consider participating in this research study.

As a subject in this study, you will be required to do two things: First, you will fill out two questionnaires that will more accurately define your rate of physical activity, and second, you will be asked to respond to the questions found in the Personal Orientation Inventory, which is a standardized test that measures self-actualization.

The entire testing procedure will take less than one hour of your time. Testing will be conducted in groups and you will have a choice of an arranged day and time (see enclosed schedule). All information gathered will remain anonymous and participation will be referred to by code number only.

I should, therefore, be most grateful for your willingness to participate in this study. Please select from the testing schedule listed a time that is convenient for you, and return that slip to the box provided. Note that all testing will be conducted at Reed Gymnasium in the Century Club Room (1st floor level).

Thanks very much for your cooperation.

Sincerely,

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Larry Matthews, Instructor
Physical Education Department
236-2656

APPENDIX F

SELF-ACTUALIZATION RESEARCH
 PHYSICAL EDUCATION DEPARTMENT
 IDAHO STATE UNIVERSITY

RESPONDENT'S SUMMARIZED DATA SHEET

REFERENCE NUMBER _____

Questionnaire A	Questionnaire B	Questionnaire C	POI Scale Scores
1. _____	1. _____	1. _____	1. TI _____
2. _____	2. _____	_____	2. TC _____
3. _____	_____	2. _____	3. O _____
4. _____	_____	3. _____	4. I _____
5. _____	_____	_____	5. SAV _____
6. _____	_____	_____	6. Ex _____
7. _____	_____	4. _____	7. Fr _____
8. _____	3. _____	_____	8. S _____
9. _____	4. _____	_____	9. Sr _____
10. _____	5. _____	5. _____	10. Sa _____
11. _____	_____	_____	11. Nc _____
12. _____	6. _____	_____	12. Sy _____
13. _____	7. _____	6. _____	13. A _____
14. _____	_____	_____	14. C _____
	8. _____	_____	
	_____	7. _____	
	9. _____	8. _____	
	10. _____	9. _____	
	_____	_____	