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The Ohio State University, Ph.D., 1973
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A COMPARISON OF SELECTED PERSONALITY, BIOGRAPHICAL AND MORALICAL TRAITS AMONG WOMEN ATHLETES, PHYSICIANS, AND ATTORNEYS

DISSERTATION
Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By Marcia Ruth Morgan, B.A., M.A.

The Ohio State University
1973

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DEDICATION

To Dr. L. Delyte Morris, teacher, adviser, and friend.
ACKNOWLEDGEMENTS

The investigator wishes to express her sincere gratitude to Dr. L. Delyte Morris, without whose unending patience and gentle prodding this work would never have been completed, and to Dr. Edward C. Olson who provided the inspiration to pursue a graduate degree.

The investigator also wishes to extend a special thanks to those women who took time out from their busy schedules to participate in this study. The interest and support voiced by many of the subjects provided an additional impetus to carry out this research.

Mrs. Lynda Duhl deserves a very special expression of gratitude for her efforts in the presentation of this manuscript.

The thanks of the experimenter also go to the many friends whose interest and encouragement were continual sources of strength. But most of all, the experimenter wishes to thank her family, whose encouragement and support have enabled her throughout her life to pursue those goals which most other persons may only dream about.
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CHAPTER I

INTRODUCTION

In American society it has long been desirable for the male to exhibit achieving behavior while the female has not been expected to be concerned with achievement. In fact, a woman who was bold enough to gain some upward mobility was considered to be operating under the influence of neurotic drives. Little girls have been brought up with instructions from their mothers that "If you beat Johnny in that game, he won't play with you any more" or "It isn't ladylike to win!" This attitude has instilled in many females a desire to avoid success or to channel efforts into the more accepted domains such as cooking and sewing. For adolescent girls this often means a declining interest in sports and competition as well as vocations of a scientific or intellectual nature. Women themselves have been guilty of perpetuating the myth of non-achievement and of viewing with suspicion any of their own sex who dare to display aggressive, achieving tendencies.

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For women who may be high achievers and have a fear of failure as well as a fear of success, this conflict can cause great anxiety and frustration. The solution has been to avoid competitive situations where this conflict would be magnified. The result has been a perpetuation of society's stipulation that women are not achievers.

In recent years many women have begun to test this societal boundary. As Sherif points out, perhaps it is not that women are just now awakening to the need within themselves for achievement, but that they are beginning to express that need in new ways. The achievement motive for the American woman has traditionally been channeled toward marrying the most desirable man, rearing the brightest children or baking the best pies. One of the underlying forces leading to achievement is aggressiveness, and typically "The assumption that the male model of aggression (that is, physical aggression) is the only form, leads to the mistaken belief that there is very little aggression in girls and women." Female aggressiveness may be expressed.

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in a less obvious form, through verbal means or perhaps some form of negativism. "These differences may be due in part to basic constitutional attributes, such as the higher testosterone levels in males, but cultural reinforcement is no doubt also influential." Outward aggressive behavior, competitiveness, and leadership are considered desirable in boys, whereas there is pressure on girls to control and sublimate their aggressive feelings for behavior that is consistent with the feminine norm. Woman may have within her the desire for competition and achievement but so often has redirected it in order to follow socially acceptable avenues that she is considered to be deficient in this attribute. Thus, the woman who does show a competitive nature is often considered "different."

American society is very much geared toward recognizing and rewarding the achieving, successful person. It is only natural that some women want to share in the contributions and accomplishments and feel they have a right to do so. Because society's definitions of feminine and masculine are based on societally approved role-models, a female who so challenges the barriers runs the risk of having her womanhood questioned. General acceptance has yet to be gained for the individual who chooses to be different, whether it is the young woman who thrives on

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6 Ibid., p. 69.
7 Ibid.
competition and vigorous activity or the young man who enjoys the creativity of a cooking class.

This is not to imply that all women desire to get out of the home, away from their families and lead a completely different existence, but rather to promote thinking along the lines of acceptance for whatever mode of achievement a woman may choose, whether it is home, profession, business, or other endeavor. Sport is one area in which women's involvement has been questioned repeatedly. "For longer than one can remember, women in sport have known and experienced rejection due to their failure to live up to a particular concept of 'feminine.'"8 A typical comment which exemplifies much of today's thinking about the woman athlete appeared in Mademoiselle. "For women to compete with the same intensity as men must lead to imbalance, psychological stress, and sometimes physical distortion."9

In a recent Sports Illustrated article it was pointed out that "It is as preposterous to claim that sports masculinize girls as it is to think that horseback riding will turn men into dwarfs or basketball will make them giants."10


Rather, persons of both sexes tend to gravitate toward activities in which they would have an advantage. This means that those girls and women who possess greater than average muscular development, strength, speed, and coordination, and in some cases size, are more inclined to participate in sports. The presence of greater than average visible musculature does not mean a woman is lacking in feminine characteristics any more than a well-muscled male physique is an accurate indicator of virility.

However, because it is more common for the male to exhibit this outward symbol of strength, and because physical strength is a desirable trait among men, a muscular appearance is designated by this society as being "masculine." In addition, this masculine image has been projected not only to the physical make-up of the individual, but also to the psychological make-up. For the woman who has selected athletics as the medium in which she wishes to achieve, too often this means that a stigma is thrust on her and her womanhood is challenged.

Instead of assuming that a woman is "different" because she is in athletics, it is necessary to begin looking at the possibility that she is "different" because she is an achiever, and athletics, or any of the traditionally "male" professions, just happens to be the mode through

\[11\text{Ibid., p. 47.}\]
which her motivation to achieve is expressed. The idea that such a woman is different has come about as the result of society's being male-oriented concerning certain types of achievement. Those qualities, such as aggressiveness, dominance, tough-mindedness, which make it possible for an individual to accomplish set goals are all classified as masculine traits. Therefore, when a woman achieves in some endeavor other than one in the "approved" domains, it is most likely because she possesses those same qualities of aggression, dominance and tough-mindedness.

Statement of the Problem

The purpose of this study was to investigate possible psychological, motivational and biographical similarities or differences among women who are high achievers and to determine whether there are any underlying patterns which can be discerned. The women included were persons who have established themselves in the areas of athletics, medicine or law, occupations which have traditionally been pursued predominantly by males.

Specific questions for which answers were sought were:

1. Is there a personality profile typical of women athletes, women physicians and women lawyers?
2. Are these three profiles significantly different from one another?
3. Are these profiles different from those for the general population of women of similar age groups?

4. Do the three groups studied differ from one another on a measure of achievement motivation?

5. Are there biographical differences between groups with regard to occupation of parents, number, sex and birth order of siblings, degree of independence encouraged in the home, economic status of the family, and similar factors?

Definitions

Professional athletes -- a woman whose primary occupation is competing on a regular basis with other women for prize money in either golf or tennis

Physician -- a woman who has completed her medical degree and is currently practicing medicine

Lawyer -- a woman who has passed her bar exam and is actively engaged in the practice of law

Achievement -- the accomplishment of one's desired goals, frequently requiring superior abilities or skills

High Achiever -- one whose goals are set above those which would be found in the majority of the population

Achievement Motivation -- the "drive" or force which enabled these women to achieve in professions which are entered in only by a very select population
Limitations

This study was limited to women athletes, women doctors and women lawyers between the ages of 23 and 40. This age range was sufficient to include subjects from each of the areas studied and to control for the effects of societal pressures. By this it was meant that the lower age limit was low enough to include top active athletes and the higher limit adequate to include physicians and lawyers who have completed their training and are currently practicing their professions. It was felt that the narrowness of the age bracket would to some degree give the subjects a more common background in terms of experiences regarding women's liberation, job discrimination or other societal pressures which may have influenced their choice of professions.

The athletes in this study were restricted to those competing in individual events, i.e., golf and tennis.

The use of objective, self-report inventories introduced the unavoidable limitations of having to rely on subjects to give honest responses in an uncontrolled situation and of having limited responses available. Whenever possible, subjects were encouraged to report any additional remarks they wished to make, but this would still not allow the total freedom of response found in open-ended inventories or personal interviews.
Basic Assumptions

It was assumed that subjects reported accurately and honestly the information requested of them.

It was assumed that individuals possess traits which make up their personalities, and that these traits can be assessed via self-report inventories.
Since a major intent of this study is to attempt to contribute to the body of knowledge available concerning women athletes and ways in which they might be similar to or different from other high achieving women, and since there has been little research regarding high achieving women in any realm of activity, this review drew together materials on the personality traits of athletes (male and female) and on studies of factors which influence achievement for women. Because the research on personality of male athletes has been more extensive and provides a foundation for research on personality of female athletes, this review will begin with the personality of male athletes.

**Personality of Male Athletes**

Personality studies of male athletes have tended to be concerned with comparisons of athletes to non-athletes, of athletes in different sports or with descriptions of psychological characteristics of athletes in general.

In one of the early studies comparing athletes with non-athletes, the athletes were found more inclined to be
dominant and outgoing than those men choosing not to participate in athletics.\(^1\) In a similar comparison using the Minnesota Multi-Phasic Inventory (MMPI) to evaluate high school athletes in baseball, basketball, swimming and wrestling, it was found that all four athletic groups were less feminine and less intelligent than a non-athletic control group.\(^2\) In a longitudinal study using the Cattell 16 Personality Factor Questionnaire (16 PF), West Point cadets were evaluated over their four years at the United States Military Academy and, although non-participants in athletics did not change to a greater extent than athletes, nor in a different pattern, nor become more like the athletes, initially they were significantly less sociable, dominant, enthusiastic, adventurous, tough, group dependent, sophisticated, and conservative than cadets who participated in sports.

In a comparison using the Gordon Personal Profile, Hunt's results suggested that white varsity athletes were significantly more dominant, responsible and emotionally stable than either black or white non-athletes. Results

\(^1\) Abraham P. Sperling, "The Relationship Between Personality Adjustment and Achievement in Physical Education Activities," Research Quarterly, XIII (October, 1942).


also suggested that black varsity athletes were significantly more responsible than black non-athletes.\textsuperscript{4}

Using his own questionnaire, Ikegami of Japan found athletes to be more outgoing socially, more outgoing in their thinking, more active, more likely to be leaders and more aggressive than non-athletes. No differences were found between athletes and non-athletes in emotional stability, tendency to fantasize, or experiencing frustration.\textsuperscript{5}

Expanding the comparison of athletes and non-athletes to include a younger sample, a longitudinal study using the California Psychological Inventory (CPI) was performed with high school students as subjects. There were eight scales which showed significant differences at the 9th grade level, while by the 12th grade, the only scales still showing a significant difference between athletes and non-athletes were dominance, sociability, self-acceptance and communality.\textsuperscript{6,7}

\begin{itemize}
\item \textsuperscript{6}Jack Schendel, "Psychological Differences Between Athletes and Nonparticipants in Athletics at Three Educational Levels," Research Quarterly, XXXVI (March, 1965).
\end{itemize}
aspect of this study was that when subgroups formed according to "achievement status" were compared, the high group had significant differences similar to those of the athlete, leading the researcher to conclude:

It appears that achievement status is important to the socio-psychological development of young men, but the nature of that achievement is not specific; i.e., achievement through athletics may not be any more meaningful in terms of the qualities measured by the CPI than achievement through other kinds of activity.

Some studies have been limited to one or perhaps two specific activities in an attempt to derive a personality description typical of the athlete who participates in that sport, or to perhaps try to isolate some factor which differentiates between average and superior participants in a particular sport.

For example, Thurstone Temperament Schedule results of competitive swimmers were correlated with rankings established from times achieved in dual meets during the season. Results indicate that faster swimmers in the 100-yard freestyle were more dominant than the slower swimmers, while the persons with better times in the 100-yard breast stroke tended to be less sociable than those with slower times, and top competitors in the 200-yard freestyle were less deliberate and thoughtful than their slower counterparts.9

---

8Ibid., p. 84.

When he compared tennis players classified as champions or near-greats, Olson found the champions to be more serious, with their aggressiveness directed toward a recognizable external object. In addition, the champion tended to be more extroverted, and more likely to extend his thoughts away from himself.\textsuperscript{10}

In his studies of swimmers, Ogilvie found that those who remain in competition seem to have most of the following personality traits: ambition, organization, deference, dominance, endurance, and aggression. He also states that emotional maturity among competitive swimmers ranges from average to high average and is complemented by other characteristics such as self-control, tough-mindedness, intelligence, and trustfulness.\textsuperscript{11}

In trying to establish a personality profile for wrestlers, Johnson and Hutton found pre-season measures from the House-Tree-Person (H-T-P) test to show that exceptional competitors in that sport displayed extremely aggressive characteristics, gave evidence of exceptional

\textsuperscript{10}Edward C. Olson, "Identification of Personality Differences Among Male Tennis Champions" (Unpublished Ph.D. dissertation, The Ohio State University, 1966).

\textsuperscript{11}Bruce C. Ogilvie, "Psychological Consistencies Within the Personality of High-Level Competitors," \textit{Journal of the American Medical Association}, CCV (1968).
drive to be successful and had strong feelings of self-assurance.\textsuperscript{12}

When members of five winning and five losing football teams were compared using the 16 PF to see if there were differences present other than skill, the players from winning teams were found to be more intelligent, bold, confident, and controlled.\textsuperscript{13}

In a later study using karate participants, Kroll found no profile components or patterns which would differentiate between levels of karate competition and proficiency, or between karate participants and the normal population.\textsuperscript{14}

Another study involving participants in combative sports was concerned only with the aspect of aggression. Results indicated that the aggression of boxers was significantly different from that of the wrestlers, cross-country runners, and control subjects. The boxers possessed less overall intensity of aggression, were more likely to direct aggression inward and to evade aggression when


possible than the other subjects. The cross-country runners tended to direct their aggression outward more than the control subjects.15

Using the MMPI, La Place was able to differentiate between major and minor league baseball players by the major leaguers ability to apply their drive and to exercise initiative. "Drive" was defined as ambitiousness, aggressiveness, and vigorousness. That drive is supplemented by an ability to exercise self-discipline and to adjust to occupations requiring initiative and social contact. Self-discipline, initiative, tendency to worry and sensitivity are also present to a greater degree in the more successful baseball player.16

Still looking for common traits within a particular sport or even more general ones across several sport groups, Kroll studied football players, gymnasts, wrestlers and karate participants of high skill levels. Results suggested homogeneity between football and wrestling groups. In addition, the gymnasts were the lowest of all groups on the trait designated as "relaxed" versus "tense," with karate participants being the highest. The general evaluation suggests gymnasts to be rather intelligent and


relaxed, with weaker ego strength, and with a serious outlook toward life. Karate participants reflected an opposite set of characteristics, being tense, conscientious, rule-bound and independent. Both groups were more self-sufficient, more reserved and detached than wrestlers and football players. 17

In trying to approach the question of why some athletes perform better than others, an investigation of champion athletes was made using projective Rorschach and H-T-P tests. These champions were readily distinguishable as an exceptional group in comparison with both test norms and the personal experience of the evaluators. The most outstanding characteristics of these national champion and All-American caliber athletes were: 1) extreme aggressiveness, 2) uncontrolled affect, 3) high and generalized activity, 4) high level of intellectual aspiration and 5) exceptional feelings of self-assurance. 18

In similar results, Antonelli found that those who practice sport professionally or as their main activity have these characteristic motivations:


a) the need to be at the top, exaggerated self-esteem
b) strong desire for self-assertion
c) advanced aggressive tendencies

From his review of the literature several years ago, Cooper suggested that there were no intellectual differences between athletes and others, although a greater motivation to achieve has been noted among athletes. Generally, the personality data on athletes suggested greater social adjustment and ascendancy, and higher emotional stability.

After varied research using British athletes, Warburton felt it was reasonable to propose that outstanding athletic ability is associated with personality factors supporting stable extraversion.

In opposition to these findings, and based on a series of earlier studies of his own, Rushall proposes that "personality is not a significant factor in sport performance." In more recent work he still contends that


personality as such is not too closely related to sports performance, but that with a working knowledge of a player's personality the coach can more advantageously control the behavior for a maximum performance.23

There is a degree of consistency in the research concerned with personality and athletics, although some discrepancies are evident. Basically, the traits of aggressiveness, tough-mindedness, dominance, and extraversion seem associated with participation in sport. Sociability, emotional stability, responsibility and self-acceptance have also been repeatedly identified. Because of the variety of testing instruments used, and the vast differences in groups being examined, it is not too surprising that differing results have occasionally appeared. These seem minor, especially when viewed with the overall similarity of findings in mind. Kane, Ogilvie and others feel there is sufficient evidence to support the theory that there is indeed an "athletic personality,"24,25 although more and better-designed research is needed to discern its features clearly.


24Kane and Warburton, "Personality Relates to Sport and Physical Ability."

25Ogilvie, "Psychological Consistencies Within the Personality of High-Level Competition."
Personality Traits of Women Athletes

Research concerning women athletes has followed much the same lines as that for men, with comparisons being made between athletes and non-athletes, team sport members and individual sport members, or with trying to define a personality for a particular sportswoman.

When looking at both individual and team sports participants, Peterson, et al., found both groups to be a little more serious than the average and to have a tendency to express themselves less freely. These women were intellectually brighter, more conscientious, aggressive, and persevering than the women in the general population of equivalent age and education. Socially, both groups tended to be somewhat cool and aloof.26

Using the Cattell 16 PF to investigate college women classified as athletes or non-athletes, Chadwick found that the athletes were significantly more tough-minded, practical, group-dependent, extraverted and subdued. They also possessed more tough poise and were less intelligent than the non-athletes.27


Also using the 16 PF, but on women physical education students and general students, Kane found insufficient evidence to indicate a common factor structure. However, indications were that real differences existed when the superior athlete was compared to the average person.²⁸

In an investigation of athletes who participated in individual sports, team sports, subjectively judged sports, or in both team and individual sports, Malumphy used a biographical questionnaire along with the 16 PF in an attempt to get other pertinent information regarding college women athletes. Her results indicated that the individual and subjectively judged groups were significantly more venturesom, tough-minded, and extraverted. They also had a tougher poise and were higher in leadership than were the team and team-individual groups.²⁹

In one study focusing more on just the difference in team and individual sports competitors, results indicate that individual sportswomen are higher in such personality traits as dominance, self-sufficiency and impulsiveness. These women tend to be more independent minded, introverted and self-absorbed than team sports athletes. The individual sports athletes are self-assured and have a higher degree of


emotional, artistic, and creative interests. They are also more radical in their thinking and are less inhibited, which may be important to their ability to perform before others by themselves.

The team sports athletes show themselves to be self-reliant, responsible, and emotionally disciplined. The team sports athletes would tend to be less affected by fads, realistic, and tend to generate group solidarity. These women are higher in sophistication than individual sports athletes.\textsuperscript{30}

Malumphy, as the result of an investigation concerning women golfers and tennis players, came to the conclusion that the athlete does seem to be more intelligent and tough-minded than her peers. She may also be more reserved, assertive, stable, happy-go-lucky, suspicious, casual, and placid. However, Malumphy did not feel that a specific golf or tennis personality had yet appeared.\textsuperscript{31}

Edwards Personal Preference Survey and the 16 PF were administered to thirty national level fencers by Williams and associates. The profile suggested that the female fencer tends to be a very reserved, self-sufficient, autonomous individual with below average desire for affiliation and nurturance. The top-level fencer was also


\textsuperscript{31}Theresa Mary Malumphy, "The College Woman Athlete -- Questions and Tentative Answers," \textit{Quest}, 51V (June, 1970).
identified as more dominating than the low-level competitor.32

Superior athletes (as indicated by their having participated in the equivalent of national finals in their sports) in the areas of basketball, bowling, field hockey and golf were compared using the California Psychological Inventory (CPI). That there were no significant differences among these groups for the measures of socialization, sense of well-being, good impression, communality, flexibility and feminity leaves room for speculation that perhaps at least some of these measures are characteristic of top level women athletes. Basketball players were found to be lower than the other three groups on dominance, capacity for status, achievement via conformance, achievement via independence and intellectual efficiency.33

In a study which revealed a highly significant correlation between sports participation and combined personality measures, the most important contributing factors for women were group dependence, dominance, and low ergic tension.34

34 Kane, "Personality and Physical Abilities."
Basically in agreement with the above results, Ogilvie has found that young (10-14 years) female swimmers tend to be "more intelligent, more emotionally stable, have higher conscience development, become more tough-minded, more individualistic, more self-disciplined and slightly less anxious and tense" as compared to national norms. These findings are quite similar to Ogilvie's results with male swimmers, although the differences from the norm are not as great in females as in males.

Ikegami's results indicated that there were significant differences for social extroversion, thinking extraversion, general activity, social leadership, and aggressiveness when comparing athletes and non-athletes of both sexes. He also found a marked similarity in the results for male and female athletes.

Thus, when looking at combined results, it would seem that women athletes possess many of the same personality characteristics as men, although perhaps not to as great a degree. One factor to be considered is that since these characteristics are not generally approved when found in women, it is possible that they might be suppressed somewhat.

35 Bruce C. Ogilvie, "Psychological Consistencies Within the Personality of High-Level Competitors," p. 781.
36 Ogilvie.
37 Ikegami, "Character and Personality Changes in the Athlete."
and therefore not appear to the same extent that they do in men.

The factors which appear most frequently are those of extraversion, aggressiveness, dominance and tough-mindedness. Also mentioned are the traits of being somewhat reserved and self-sufficient. Occasionally groups have appeared introverted and shy\textsuperscript{38,39} or in some way not fitting this pattern, but generally the profiles are quite consistent. One factor in which there has been inconsistency is that of intelligence. Some studies have shown women athletes to be less intelligent than non-athletes\textsuperscript{40,41} while others found athletes more intelligent, or the same as the population norms.\textsuperscript{42,43,44,45}

\textsuperscript{38} Peterson, et al., "Personality Traits of Women."


\textsuperscript{40} Chadwick, "A Comparison of the Personality Traits and Kinesthetic Augmentation and Reduction of College Female Athletes and Non-Athletes."

\textsuperscript{41} Johnson, "Comparison of Superior Skilled Women."

\textsuperscript{42} Peterson, "Personality Traits of Women in Team Sports vs. Women in Individual Sports."

\textsuperscript{43} Malumphy, "The College Woman Athlete -- Questions and Tentative Answers."

\textsuperscript{44} Ogilvie, "Psychological Consistencies Within the Personality of High-Level Competitors."

\textsuperscript{45} Kane and Warburton, "Personality Relates to Sport and Physical Abilities."
In an overall consideration of the personality of the athletes, the studies cited above indicate that male and female athletes differ in personality from the general population, that they differ from each other in personality in ways consistent with basic sex differences, and that these differences tend to be consistent over a period of time.

Factors Influencing Achievement Among Females

There are emerging signs that the previously underused resource of female ability is beginning to be utilized. Researchers have attempted to isolate factors which may have influenced high achieving women to embark on their particular chosen paths. There seems to be a general consensus that the childhood home life of the individual is extremely important. McClelland states that achievement motivation is closely related to early independence training experienced by the child, linking that motive to religious and cultural background factors, to economic development and to differences in parental occupational achievement. This is substantiated in part by college women who "reported they had been granted earlier independence by their parents (or perhaps wrested it from them)."


In addition to granting or encouraging independence at an early age, parents—especially fathers—influence their daughters by their attitudes. Among women mathematicians it was found that they identified primarily with their fathers. Women in other male-dominated careers had experienced approval of careers for women by their fathers. In some instances the more educated working mother may serve as a role model for achieving daughters, but they may also have more conflicts.

Factors evident in the lives of married professional women include coming from an upper middle class home, with both parents highly educated. Also, the father was remembered as very intellectual and the mother as a dominant, very competitive woman who often worked. In addition, as a girl the married professional was often a "tomboy," cheerful, independent and self-assertive. Birnbaum also


found the single professional women to have been a "tomboy," but with parents who were not well educated and a mother who did not work.52

The sex of siblings and ordinal position has also been reported as being related in certain situations.53,54,55,56 Konig describes the first-born as being ambitious, aggressive, independent, and leader and defender of the family's attitudes, i.e., the one to carry on family traditions or protect the family reputation.57

In a conflicting opinion, Kammeyer wrote that first-born girls were more likely to preserve the traditional culture by being more oriented toward the feminine role, by having more traditional beliefs about feminine personality

52Ibid.

53Helson, "Women Mathematicians."


traits, and by being more likely to choose marriage over graduation from college.58

In many cases the pressures against a career are very subtle or disguised. For example, it might be observed that women are somewhat less committed to their jobs than men, but when it is taken into consideration that "no matter what she does, she is still expected to return home in the evenings and manage her household -- quite an additional burden,"59 a more accurate perspective is achieved. Two roadblocks to a woman's having a career are:

(1) The family base upon which all societies rest at present requires that much of the daily work of the house and children be handed over to women. Doubtless, men can do this nearly as well, but they have shown no eagerness to assume these tasks, and (2) families continue to rear their daughters to take only a modest degree of interest in full-time careers in which they would have equal responsibilities with men.60

Even the arts have helped perpetuate the status of women by their portrayals of females. "If heroines have initiative and competence, it is also indicated that they


lack more feminine qualities." That such biases exist in everyday life is substantiated by a study in which married professional men showed a negative attitude toward married professional women although it was not established whether the bias was because they were married or because they were professional women.

Other women may even contribute to the pressures on achieving females and help perpetuate the stereotyped images of male and female. A mixed group of students were given a sample set of research papers with fictitious names attached. Those attributed to male students were scored higher than those supposedly belonging to female students, even when the name of the fictitious author was changed to the opposite sex and the papers re-evaluated. Tucker reports that "The characteristics attributed to women in science by others could be a discouraging factor in the choice of science as an occupation by many women, even if

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63 Sandra L. Bem and Daryl J. Bem, "We're All Non-conscious Sexists," Psychology Today, IV (November, 1970).
they have initial interests and aptitudes necessary for successful pursuit of this field."64

In other studies it has been indicated that women's perceptions of male views toward "ideal" women has influenced their career (or lack of career) choice65 and that the level of vocational interest in women, irrespective of marital status, would be raised if home-career conflict were reduced.66

Rossi reports that "Those women who have entered the top professional fields have had to have extraordinary motivation, thick skins, exceptional ability, and some unusual pattern of socialization in order to reach their occupational destinations,"67 indicating that women have to possess more than average determination if they are to attain certain goals.

Basically, these findings tend to indicate that those women who are high achievers come from an upper middle class home, have parents who are well-educated and who encouraged


independence as a child, and that the mother was a competitive woman who often worked. Both married and single professional women were often classified as "tomboys" in their youth. In addition, these women are frequently the eldest or only child.

Pressures against becoming high achieving professional women include such things as the suspicious or negative attitudes of other women, the expectation also to manage the household, and even the continuing negative portrayal of women in the arts.

With regard to women who have chosen medicine or law for their career, there is very little specific information available. Coe included them in an investigation involving various occupational groups and found attorneys to be more outgoing, active and dominant than three or more of the other occupations. Physicians tended to be more "masculine" and objective than most of the other occupation groups.68

When women medical students were compared to other educated women, they were found to be relatively more self-accepting, dominant, independent, and active. Also, they were inclined to fit the outline given for high achieving women in that they tended to come from small, stable

families, were often either an only child or first born, had fathers with considerable educational and occupational accomplishments, and mothers whose education exceeded general female norms. Since 93 per cent of the mothers were engaged in traditionally feminine occupations, it is unlikely that these medical students were modeling themselves after maternal occupational experiences. 69

Thus, women in these two top professional groups are much the same as other high achieving groups, except perhaps more dominant and more independent.

CHAPTER III

METHODS AND PROCEDURES

The Subjects

It was felt that persons engaging in individual sports would provide a better comparison with physicians and attorneys since they must depend only upon their own skills to achieve their desired goals, as the physicians and attorneys must depend only upon their own abilities. The decision to involve professional athletes was made so that all subjects were earning their living through the practice of their respective skills.

The top money winners from the Ladies Professional Golf Association 1972 tour and women professional tennis players from the Virginia Slims circuit were mailed letters briefly explaining the study and asking for their participation. Postcards addressed to the experimenter were enclosed for them to indicate whether or not they wished to take part. The desired age range was from twenty-five to thirty-five years. However, it was decided to include athletes from twenty-three to forty years of age to provide an adequate sample for this study.
The addresses of those agreeing to participate were then considered as additional criteria in the selection of physicians and lawyers. This was done to involve subjects in the different groups from the same geographical areas in an effort to control for any bias which might be introduced due to that factor. The directories in which these two professional groups are found list their members alphabetically by city and state so that it was possible to go to the corresponding section for each athlete involved and randomly select names of physicians and lawyers specifically. Lawyers were randomly selected from the register of private practicing attorneys found in the Fall 1972 issue of the Women Lawyers Journal. Physicians were drawn from the 1969 Directory of the American Medical Association in a somewhat different manner. Since only 7% of physicians are women, the investigator randomly selected columns under a particular city and state and from those columns selected any women who were within the desired age range of twenty-five to thirty-five years. These procedures were continued until four or five names and addresses were available which corresponded geographically to each of the athletes taking part.

It was found that too few of the lawyers fell into the proper age category and that the addresses for the physicians were in many cases out-of-date, resulting in an inadequate sample of lawyers and physicians. A supplemental
list of potential subjects was obtained by scanning the 1972-73 volume of Who's Who of American Women for physicians or lawyers in the appropriate age bracket.

A total of one hundred eighty-three letters were mailed with forty-one returned undelivered. Of these, thirty-four were sent to golfers, sixteen to tennis players, fifty to attorneys and forty-two to physicians. Sixty persons agreed to participate: nine golfers, four tennis players, twenty-seven attorneys, and twenty physicians. Materials were returned by seven golfers, four tennis players, eighteen attorneys and twelve physicians.

Seven attorneys who took part were over the age limit for this particular study, so the final sample included eleven professional athletes, eleven attorneys, and twelve physicians.

Instruments

The instruments used in this investigation included a personality inventory, a biographical questionnaire and an achievement motivation questionnaire.

The purposes and limitations of this study required the use of an objectively scored personality instrument which would give as complete a profile of subjects as possible in the length of time available for testing purposes. The Cattell 16 Personality Factor Inventory seemed to meet these requirements better than other available
standardized tests; it also has a well-established set of norms which can be used for comparison, scores can be corrected for age differences, and it has been frequently used in other investigations involving women athletes. Form B was chosen since it was possible that some subjects might previously have been exposed to the 16 PF, and in that event it most likely would have been Form A.

The Cattell 16 Personality Factor Inventory

"The 'Sixteen Personality Factor Questionnaire' (16 PF) is an objectively scored test devised by basic research in psychology to give the most complete coverage of personality possible in a brief time."¹ The form of the questionnaire used has 187 items, each with three alternative responses. These items, 10 to 13 for each of the 16 personality dimensions measured, are alternated throughout the instrument so that questions concerned with a particular dimension are not answered consecutively.

The dimensions or characteristics which are considered by Cattell to comprise personality and which are measured by this instrument are described briefly below,

with the low end of the scale presented first for each dimension:2,3

Reserved versus outgoing: the dimension of personality which deals with behavior ranging from critical and aloof to warmhearted and easy-going.

Low intelligence versus high intelligence: the dimension of personality which deals with the inability or the ability to think abstractly.

Lower ego strength versus higher ego strength: the dimension of personality which deals with emotional stability and maturity.

Submissiveness versus dominance: the dimension of personality which deals with behavior ranging from humble and conforming to aggressive and competitive.

Sober versus happy-go-lucky: the dimension of personality which deals with behavior ranging from prudent and taciturn to enthusiastic.

Weaker superego strength versus stronger superego strength: the dimension of personality which deals with behavior ranging from expedient to conscientious and rule-bound.

2 Ibid.

Shy versus venturesome: the dimension of behavior which deals with behavior ranging from timid and restrained to spontaneous and uninhibited.

Tough-minded versus tender-minded: the dimension of behavior which deals with behavior ranging from realistic, self-reliant to clinging, dependent and sensitive.

Trusting versus suspicious: the dimension of behavior which deals with behavior ranging from adaptable, free of jealousy to hard to fool.

Practical versus imaginative: the dimension of personality which deals with behavior ranging from conventional to careless of practical matters.

Artlessness versus shrewdness: the dimension of personality which deals with behavior ranging from forthright to shrewd and calculating.

Untroubled adequacy versus guilt proneness: the dimension of personality which deals with behavior ranging from self-assured to apprehensive.

Conservatism versus radicalism: the dimension of personality which deals with behavior ranging from conservative, respecting established ideas to experimenting and liberal.

Group adherence versus self-sufficiency: the dimension of personality which deals with behavior ranging from following the group to self-sufficiency.
Low integration versus high self-concept control: the dimension of personality which deals with behavior ranging from undisciplined self-concept to controlled and socially precise.

Relaxed versus tense: the dimension of personality which deals with behavior ranging from tranquil to frustrated.

Second-stratum factors which can be measured by the 16 PF are:

Introversion versus extraversion: the dimension of personality which deals with behavior ranging from withdrawn or shy to outgoing and uninhibited.

Adjustment versus anxiety: the dimension of personality which deals with behavior ranging from generally satisfied to vague concern about the future.

Tenderminded emotionality versus tough poise: the dimension of personality which deals with behavior ranging from emotionally sensitive to enterprising, decisive and unperturbable.

Subduedness versus independence: the dimension of personality which deals with behavior ranging from group-dependent and passive to aggressive, independent and incisive.

The selection of primary source traits included in the 16 PF was based not only on the factoring of questionnaire items, but also on as representative a sampling of
behavior ratings as was available in the early 1960's. After nearly ten years of empirical, factor-analytic research, items and dimensions were established. The first edition appeared in 1949 with continuing research resulting in revisions and culminating in the current edition published in 1967-1968.

There are now a variety of forms geared toward differing literacy levels, ages, and in languages. Form B, used in this study, is one of two equivalent forms designed for literate or educated adults.

The reliability or dependability of form B of the 16 PF ranges from .54 on Factor B (Intelligence) to .89 on Factor H (shy versus venturesome). A complete table of dependability coefficients for Form B are given below in Table 1.

TABLE 1
16 PF DEPENDABILITY COEFFICIENTS FOR FORM B

| Source | Trait | A | B | B | C | C | E | G | F | H | G | I | H | I | L | M | N | O | Q1 | Q2 | Q3 | Q4 |
|        |       | .75| .54| .74| .80| .81| .77| .89| .79| .77| .70| .60| .81| .70| .75| .62| .8 |

\(^4\)Ibid., p. xx.

\(^5\)Cattell, Manual for the 16 PF, p. 10.
In order for an item to be included in the 16 PF, it had to maintain a significant validity coefficient against reference factors through ten successive factor analyses on different samples. These analyses have both verified the existence and natural structure of the sixteen factors, and cross-validated the test items in their correlation with the factors on different adult population samples.

The concept validity values, or the correlation of scale scores with the pure factor items they were designed to measure are in Table 2.

**TABLE 2**

DIRECT CONCEPT VALIDITIES OF THE 16 PF SCALES (FORM B)

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**N = 958**

The Achievement Motivation Questionnaire

An achievement motivation questionnaire developed by Richard Lynn of Dublin's Economic and Social Research

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6Ibid.
7Ibid., p. 11.
8Ibid.
9Ibid., p. 12.
Institute was the instrument used to determine achievement motivation levels in the present study. This instrument consists of eight questions to which the subject is to respond either "yes" or "no".

The achievement questionnaire evolved from an original series of sixty-three questions designed to tap achievement attitudes. The original questionnaire was given to a large number of male subjects and the results factor-analyzed to yield the eight questions with the highest loadings for achievement motivation.10

The validity of this scale was determined by comparing scores of groups of high achievers with scores of male university students. While this may seem atypical, it should be pointed out that this scale was designed for use in executive, professional and managerial positions.

Criterion groups were entrepreneurs, college professors and managers from a large marketing company. Junior naval officers from a naval college were also included.

Entrepreneurs, professors and managers all scored significantly higher than the students; there was no significant difference between the naval officers and the students.11 In addition, the entrepreneurs were sig-


11 Ibid.
nificantly higher than the managers and in fact scored highest on the test. This is in keeping with McClelland's view that entrepreneurship is the most favored way of life for the high achiever.

To investigate the possibility that age was also a differentiating factor, a correlation between achievement motivation and age was computed for a sample ranging in age from 25-60 years. The correlation obtained was -.007, which is not significant. This suggests that the questionnaire is suitable for use with subjects of varying ages.

This achievement motivation questionnaire was selected because the investigator was interested in some measure of achievement motivation which would be practical to give to individual subjects in a variety of locations and yet be simple to score. In addition, unlike projective measures of motivation which are based on situations involving males or females in particular roles, these questions are not particularly sex-role oriented although they do appear biased toward the person who is employed rather than the woman who works as a housewife. Also,

12 Ibid.
14 Ibid., p. 531.
projective tests are time-consuming to evaluate and require trained personnel for that evaluation.

The Biographical Questionnaire

The biographical questionnaire was designed with probable responses provided, so that subjects merely had to check the one(s) most appropriate to themselves. It consisted of 11 sections with specific questions relating to background factors which researchers have found to be associated with high achievement or with membership in a particular profession. Additional items were included which the investigator thought might reveal results of interest. The purpose of the questionnaire was to determine whether a composite description for female high achievers could be made based on background information.

The achievement motivation questionnaire discussed earlier was included in the biographical questionnaire under the heading "miscellaneous information" because it was felt that persons might respond to statements differently if they knew the purpose of this particular series of questions.

Women faculty and graduate students at The Ohio State University were asked to complete this questionnaire and to suggest any refinements they felt were relevant. Content and format were evaluated and revised in the light of this input. A modified form of the questionnaire was given to
a different group of faculty and graduate students with the same request for refinements. From this, the third and final form of the biographical questionnaire was devised.

In addition to the standard directions of the tests which were given for each instrument, subjects were instructed to answer questions as quickly as possible, to answer all items except one optional section on religion in the biographical questionnaire, to work straight through the 16 PF without interruption, and to return all materials within one week. In order to reassure the subjects of the anonymity of the results, they were told not to put their name anywhere on either instrument.

Packets consisting of the Cattell 16 PF and the combined biographical and motivational questionnaire as well as instructions and an envelope for returning the materials were sent to those persons who had indicated their willingness to participate.

Handling the Data

As the materials were received from subjects, each set was given a number so that all information on an individual could be kept together. The Cattell 16 PF forms were scored by hand using the scoring stencils and following the procedure described in the Manual.\textsuperscript{15} Next, raw scores were corrected for age differences away from 30 and these

\textsuperscript{15}Cattell, \textit{Manual for the 16 PF}.
corrected scores were then converted to sten scores according to norms based on the general population of women 30 years old.16

A tally sheet was devised corresponding to the biographical questionnaire and responses recorded from each individual's return.

The achievement motivation scale was scored according to the procedure described by Lynn in his presentation of the scale.17

Analytic Procedures

The raw data derived from the 16 PF test were statistically analyzed using a one-way analysis of variance on each of the sixteen primary and four second order factors. The .01 level of significance was established for rejection of null hypotheses.

Raw score means and standard deviations were computed for each group on each factor. These means were then used to determine standard scores (sten) for each group of subjects on each factor. A composite sten score was derived for each factor based on the weighted sample means for that factor.

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17Lynn, "An Achievement Motivation Questionnaire."
Data derived from the Achievement Motivation Questionnaire were statistically analyzed, also via one way analysis of variance. The .05 level of significance was established for rejection of the null hypothesis.

The data from the items on the Biographical Information Questionnaire were subjected to a simple frequency count from which percentages were computed.
CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This study was designed to investigate the similarities and/or differences among three groups of high achieving women with regard to personality, achievement motivation and biographical information. Its purposes were to determine whether these women could be distinguished from the general population of women by comparison of their combined 16 PF profiles to norms, and to determine if they could be distinguished from each other on the basis of personal backgrounds, achievement motivation, or 16 PF profiles.

Three groups of women were included; professional athletes, attorneys, physicians. Of the athletes who took part, seven were golfers and four were tennis players; twelve physicians and eleven attorneys were included.

Data and results are grouped for presentation according to the types of information obtained. Personality information is followed by achievement motivation and biographical information.

In those instances where a comparison is made to the "norm" or the general population of women, this is
in reference to norms established on the basis of a sample of 576 women who took Form B of the Cattell 16 PF.

Personality Assessment

The hypothesis that there are no significant differences among means for athletes, attorneys and physicians on the dimensions of the 16 PF was tested by a one-way analysis of variance on each factor at the .01 level of significance. This level was selected since there is some overlapping of scales which could, when all dimensions are analyzed, inflate the probability of one or more Type I errors. A multiple discriminant function analysis would have been preferable, but did not appear feasible with the small number of subjects in each of the groups.

Table 3 contains the means, standard deviations and F ratios for each of the sixteen primary and four second-order factors.

Hypothesis 1

There are no significant differences among the means of female athletes, female attorneys and female physicians on the traits measured by Form B, 1967-68 edition of the Cattell 16 Personality Factor Questionnaire.

Results. — Since only Factors C and G approached significance at the level selected, the null hypothesis was retained.
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<td>1.6021</td>
<td>1.9995</td>
<td>1.6138</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QIII</td>
<td>6.7000</td>
<td>6.9182</td>
<td>6.5500</td>
<td>0.1465</td>
<td></td>
</tr>
<tr>
<td>s</td>
<td>1.7199</td>
<td>1.8595</td>
<td>1.3035</td>
<td></td>
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<tr>
<td>QIV</td>
<td>7.2273</td>
<td>7.8909</td>
<td>7.0417</td>
<td>1.5449</td>
<td></td>
</tr>
<tr>
<td>s</td>
<td>1.3469</td>
<td>1.0005</td>
<td>1.2435</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*F .01 ,2 , 31 ≥ 5.39*
Because no significant differences were shown among the groups of women included in this study, and from inspection of the data, it would seem that this sample is basically a homogeneous one on personality factors. Since these women were selected because they have achieved to a high degree in traditionally male modes of achievement, this might give some support to the theory that a particular combination of personality traits may facilitate high achievement.

The two factors which approached significance were ego strength or emotional stability and conscientiousness. While all three groups were above the population mean for emotional stability, the physicians were quite a bit higher than the other two groups, with athletes appearing just above attorneys. On the scale measuring expediency versus conscientiousness, the athletes were the most conscientious group with the attorneys approaching inclusion in the expedient direction of the scale.

Cattell reports some difficulties with regard to interpreting Factor G (conscientiousness) due to its relation to moral values, which vary with different religions, societies and ages.\(^1\) Thus someone who is quite concerned with humanistic ideals might score toward the expedient end of this scale.

\(^1\)Cattell, Handbook for the 16 PF.
Hypothesis 2

There are no differences between the personality profiles of each of the three groups of women included in this study and the profile for the general population of women.

Results. — Athletes' sten scores fell below the normal range of 4.5 to 6.5 for the general population on Factors A, N, and Q_{II}, and above on Factors B, E, M, Q_{1}, Q_{2}, Q_{3}, Q_{III}, and Q_{IV}, as shown in Figure 1.

Attorneys' sten scores fell below the norm on Factor I, and above on Factors B, E, L, M, Q_{1}, Q_{2}, Q_{3}, Q_{III}, and Q_{IV}, as shown in Figure 2.

Physicians' sten scores fell below the norm on Factors O and Q_{II}, while they were above on Factors B, C, E, M, Q_{1}, Q_{3}, Q_{III}, and Q_{IV}, as shown in Figure 3.

Each sample profile deviated from the general population profile on sten scores for ten of twenty factors; therefore the hypothesis that there were no differences between each group profile and the population profile was not accepted.

Of the fifteen factors listed above, only five differ from composite results which will be discussed next; therefore, only those five will be discussed at this time. The differentiating factor for physicians was untroubled adequacy. For attorneys, tough-mindedness, suspiciousness, and self-sufficiency were the factors involved, while the
PERSONALITY PROFILE FOR ATHLETES

RANGE OF NORMAL SCORES FOR THE GENERAL POPULATION

Figure 1: —Personality Profile for Athletes
PERSONALITY PROFILE FOR ATTORNEYS

Figure 2. Personality Profile for Attorneys
PERSONALITY PROFILE FOR PHYSICIANS

Figure 3. -- Personality Profile for Physicians

RANGE OF NORMAL SCORES FOR THE GENERAL POPULATION

Figure 3. -- Personality Profile for Attorneys
factors which were shown to be slightly different in athletes were those of naivete and self-sufficiency.

Physicians in the sample, therefore, tended to be more self-assured and secure, perhaps at times more insensitive to the approval or disapproval of others than either of the other subject groups or the general population.

Attorneys tended more toward being self-reliant persons who acted on logical evidence and kept to the point, who were more dogmatic and suspicious of interference than the other subject groups or the general population. In addition, attorneys were higher on the self-sufficiency scale than physicians and the general population. This factor, along with the suspicious nature mentioned earlier is indicative of inner tension.²

Athletes in this study were more naive (forthright, unpretentious) than the other sample groups and the general population, being more inclined to be spontaneous and natural and content with what comes. In addition, along with attorneys, athletes also were more self-sufficient than physicians and the norm for the general population, pointing to their being resourceful and preferring to make their own decisions.

²Ibid.
Hypothesis 3

There are no differences between the personality profile of the combined groups of women included in this study and the profile for the general population of women.

Table 4 presents the means, stens and composite sten scores for the dimensions of the 16 PF.

Results. -- The composite profile deviated slightly from the general population profile on ten of twenty factors, as shown in figure 4, therefore the hypothesis that there are no differences was not accepted.

The primary factors on which the sample lay outside the normal range for the general population of women were Factors A, B, C, E, M, Q1, and Q3. The second-order factors were QII, QIII, and QIV. This suggests that the women in this study are more reserved, intelligent, emotionally stable, assertive, imaginative, experimenting, controlled, possess more tough poise, and are more independent than the general population of women. In addition, they are also less anxious than the women on whom the norms were based.

Items on which no overall difference appeared were soberness, expediency, shyness, tough-mindedness, trust, forthrightness, self-assuredness, group dependency, relaxed, and introversion. It should be pointed out, however, that a particular group may have differed on one or more of these latter items, which was discussed earlier.
## TABLE 4

**MEAN, STEN AND COMPOSITE STEN SCORES FOR THE PERSONALITY FACTORS**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Group</th>
<th>Athletes</th>
<th>Attorneys</th>
<th>Physicians</th>
<th>Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>x</td>
<td>Sten</td>
<td>x</td>
<td>Sten</td>
</tr>
<tr>
<td>A</td>
<td></td>
<td>7.0909</td>
<td>3</td>
<td>10.09</td>
<td>5</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>9.4</td>
<td>7</td>
<td>9.3</td>
<td>7</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>17.1</td>
<td>6</td>
<td>16.3</td>
<td>6</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td>12.7</td>
<td>7</td>
<td>14.4</td>
<td>8</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>15.0</td>
<td>6</td>
<td>13.4</td>
<td>5</td>
</tr>
<tr>
<td>G</td>
<td></td>
<td>14.2</td>
<td>6</td>
<td>11.5</td>
<td>5</td>
</tr>
<tr>
<td>H</td>
<td></td>
<td>14.2</td>
<td>6</td>
<td>13.7</td>
<td>6</td>
</tr>
<tr>
<td>I</td>
<td></td>
<td>12.1</td>
<td>5</td>
<td>10.9</td>
<td>4</td>
</tr>
<tr>
<td>L</td>
<td></td>
<td>8.9</td>
<td>6</td>
<td>9.8</td>
<td>7</td>
</tr>
<tr>
<td>M</td>
<td></td>
<td>14.0</td>
<td>7</td>
<td>14.5</td>
<td>7</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>9.4</td>
<td>4</td>
<td>11.45</td>
<td>5</td>
</tr>
<tr>
<td>O</td>
<td></td>
<td>10.1</td>
<td>5</td>
<td>10.1</td>
<td>5</td>
</tr>
<tr>
<td>Q1</td>
<td></td>
<td>9.9</td>
<td>7</td>
<td>12.0</td>
<td>8</td>
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<tr>
<td>Q2</td>
<td></td>
<td>9.7</td>
<td>7</td>
<td>10.3</td>
<td>7</td>
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<tr>
<td>Q3</td>
<td></td>
<td>12.6</td>
<td>7</td>
<td>14.1</td>
<td>7</td>
</tr>
<tr>
<td>Q4</td>
<td></td>
<td>12.4</td>
<td>5</td>
<td>12.8</td>
<td>5</td>
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<td>QI</td>
<td></td>
<td>5.3</td>
<td>5</td>
<td>5.5</td>
<td>6</td>
</tr>
<tr>
<td>QII</td>
<td></td>
<td>4.3</td>
<td>4</td>
<td>4.7</td>
<td>5</td>
</tr>
<tr>
<td>QIII</td>
<td></td>
<td>6.7</td>
<td>7</td>
<td>6.9</td>
<td>7</td>
</tr>
<tr>
<td>QIV</td>
<td></td>
<td>7.2</td>
<td>7</td>
<td>7.9</td>
<td>8</td>
</tr>
</tbody>
</table>

*Stens between 4.5 and 6.5 constitute the "normal" range; stens 4 and below and 7 and above are interpreted as below and above the normal range, respectively.
Figure 4. — Composite Personality Profile

RANGE OF NORMAL SCORES FOR THE GENERAL POPULATION

Figure 4. — Composite Personality Profile
The trait defined as "more reserved" is indicative of a preference for logic, for working alone, rejection of compromise, and for being more exact and methodical in procedures. Recalling that the groups involved are individual sports athletes, attorneys, and physicians, finding them high on this trait is not surprising. They are all activities in which the person basically works alone, and which require that an exact set of procedures be followed. The athlete cannot afford to be any less exact or methodical in her practice than the attorney can be in her practice of law or the physician can be in her efforts to diagnose or treat an illness. The consequences may vary, but they are all essential to the continuing success of the individual.

That above average intelligence is necessary to practice medicine or law is a generally accepted fact. Additionally, at the competitive level represented by athletes in this study, pure physical ability is seldom the deciding factor for victory. The ability to critically analyze a situation, an opponent, or some aspect of their game also contributes to the outcome.

Emotional stability in this instance could also be called higher ego strength. This is found more frequently in individuals who are leaders.\(^3\) Occupationally, this

\(^3\)Ibid., p. 86.
above-average emotional stability is found in those indi-
viduals who have to adjust to difficulties thrown on them
from outside. The medical emergency, the cross-examination
in court or unexpected weather conditions in an athletic
contest all would require this greater-than-average
stability in order to be able to continue to function
effectively.

The appearance of dominance in this set of char-
acteristics is to be expected, for success for any person
in almost any profession requires a higher than average
possession of the assertive, aggressive, competitive ten-
dencies which comprise this trait. It is especially to be
expected among persons in occupations requiring boldness
and courage. Superficially, it would seem that the women
in this study exhibited some degree of boldness and courage
in the selection of their careers. Dominance is con-
sidered one of the personality factors which distinguish
the sexes, which suggests that achieving behavior is one
basis on which society defines masculinity and femininity.

The factor which is generally known as "imaginative"
might be further described as being absorbed in ideas and
theory more than practical needs and interests. Individuals
with higher than average scores on this trait tend to feel
unaccepted in group situations but unconcerned. While

\[4\text{Ibid., p. 86}\]
practical interests might seem to be important to the members of this particular sample, they must still be concerned with the theoretical aspects of their professions. Not only is it important for the women in these professions to be able not to be concerned if they feel there are negative feelings toward them in those professions, but also they had to possess that trait to have made the career selections they did. They had to have some imagination as well as the lack of concern for not being accepted that is included in this factor.

There is research evidence that persons high in Factor Q1 (experimenting) are better informed, more inclined to experiment with problem situations, less inclined to moralize, and more questioning about views generally.5 The individuals in this sample must be interested or willing to try new methods, new tactics, new procedures, to experiment and analyze and always strive for a better way of doing what they are involved in. They tend to be more interested in science than religion. Although radicalism is another descriptive term for this factor, its use could be somewhat misleading. Rather than implying a tendency toward revolution, it is more a term to describe an experimenting, liberal, analytical nature.

The person who scores high on Factor Q3 is very controlled, with strong will power. It is an important

5Ibid., p. 104.
trait for these women to possess for their professions, as well as having been instrumental in their having attained the positions they now hold. To have practiced or studied long and hard enough to have become a professional athlete, a physician, or an attorney, these women had to be self-disciplined enough to turn down opportunities to do other things, which at times must have been more inviting. And now, it is an on-going condition, for while no one else might know, these women must continue to discipline themselves to put forth their best efforts.

In addition to the control or will power mentioned, these persons also tend to be conscientious, to show socially approved character responses, to be persistent and to show regard for etiquette. This trait is found to be high in persons in whom objectivity, balance, and decisiveness are required.6

The person who scores low on anxiety tends to be one whose life is generally satisfying and who is able to achieve those things that seem to her or him to be important.7 The subjects in this study have demonstrated their ability to achieve what was important to them, and while it isn't possible to validate their satisfaction with life, it is to be expected that they would score low on the anxiety scale.

---

6Ibid., p. 106.

The picture of this sample is further amplified by the inclusion of tough poise. The person who scores high on this trait tends to be an enterprising, decisive, and resilient personality. Thus, the athlete, physician or attorney generally is able to act quickly to capitalize on a particular set of circumstances or to bounce back after some setback or defeat.

Independence is the final factor to be considered from this test, and a high score here is usually indicative of an aggressive, daring, incisive person. This factor, then, is also one which usually differentiates between the sexes. Probably once again these very factors which enhance the participation of these persons in their professions were instrumental in helping them select the areas they did for achievement.

The profiles of these women in sport, law and medicine is congruent with that expected of any achieving person. It portrays someone who has the confidence and emotional maturity to be able to depend mostly on her own talents, who has the ability to think in more abstract and creative ways than does the "average" person as well as the determination to follow through on these ideas, and who has the willingness to forego some pleasures for the sake of other goals.

---

8Ibid., p. 120.
Such a descriptive analysis more nearly falls within the range of norms for men, as demonstrated in figure 5, by the comparison of these women's scores to the male norm. In this comparison, the only traits on which the women differ are that they are more intelligent, more tender-minded, more imaginative, and more experimenting. The differences which were present with respect to female norms but which disappear in the comparison with male norms are that subjects were more reserved, more emotionally stable, more aggressive and more controlled.

Achievement Motivation Assessment

The following analysis was made via a one-way analysis of variance at the one percent level of significance.

Hypothesis 4

There is no significant difference among groups on Lynn's measure of achievement motivation.

Table 5 contains the means and standard deviations for the three subject groups, and the F ratio for the achievement motivation measures.

Results. -- The F ratio was not significant; therefore the hypothesis was retained.

The maximum possible score on this scale is 8.00 with the highest mean scores reported for male groups being 6.82 for entrepreneurs and 6.54 for professors.
COMPOSITE PERSONALITY PROFILE BASED ON MALE NORMS

Figure 5.—Composite Personality Profile Based on Male Norms

RANGE OF NORMAL SCORES FOR THE GENERAL POPULATION
TABLE 5

ACHIEVEMENT MOTIVATION MEANS, STANDARD DEVIATIONS, AND F RATIO

<table>
<thead>
<tr>
<th>Subject Groups</th>
<th>X</th>
<th>s</th>
<th>F*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletes</td>
<td>6.82</td>
<td>1.08</td>
<td></td>
</tr>
<tr>
<td>Attorneys</td>
<td>7.00</td>
<td>1.26</td>
<td>.6874</td>
</tr>
<tr>
<td>Physicians</td>
<td>6.42</td>
<td>1.31</td>
<td></td>
</tr>
</tbody>
</table>

*F.01 2,31 5.39

These means were obtained by Lynn from samples of British males. Figure 6 shows how the scores of the women in this study compare with these two highest groups in Lynn's investigation.

Figure 6.—Comparison of sample achievement motivation scores with selected groups of male subjects.

Lynn, An Achievement Motivation Questionnaire, p. 531.
As the chart indicates, the women in this study score on levels quite similar to the highest criterion groups of British male subjects.

Because of the diverse nature of the groups compared, there was no attempt to draw conclusions other than to point out how high the women did score on this measure and that, as far as this questionnaire can assess, they possess a level of achievement motivation similar to that of British professors and private businessmen.

As expected, each of the three groups was quite high and there was no significant difference among them. What is a slight surprise is the somewhat lower score of physicians. This may be a reflection of their already having achieved the goal they had set, while lawyers and athletes are in a continually competitive situation where it is possible for them to recognize tangible results for continued achievements.

Presentation and Analysis of Responses to Biographical Questionnaire

Biographical data is presented and discussed in terms of frequency of occurrence and percentages.

Marital Status

Subjects reported their marital status. As the data in Table 6 show, there was a considerable difference
between the athletes and the other groups on this factor. All of the athletes were single at the time the question-naire was answered while nearly three-fourths of the attorneys and two-thirds of the physicians were married. One physician classified as single was to be married soon. No one was widowed.

TABLE 6
MARITAL STATUS
Frequency (f) and Percent (%) of Subjects in Each Category

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Single</th>
<th>Married</th>
<th>Divorced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athlete</td>
<td>11</td>
<td>11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Attorney</td>
<td>11</td>
<td>1</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Physician</td>
<td>12</td>
<td>4</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>16</td>
<td>16</td>
<td>2</td>
</tr>
</tbody>
</table>

Possible explanations for the athletes being single include the amount of travel involved in their professions as opposed to the relatively stationary careers of medicine or law. Being on tour throughout a good portion of the year would not be conducive either to forming a permanent relationship or to maintaining a home life.

Additionally, while many of the attorneys and physicians appear to have married in their late twenties,
eight of the athletes are twenty-eight or younger. Thus the age of the athletes would not preclude their marrying at some point in the future, as many in their profession have already done.

Another factor to consider is that training for attorneys and physicians placed them in an environment which was predominantly male. This would certainly have made the availability of possible mates much greater for these two groups than for the athletes, who are in a predominantly female environment, especially during their competitive seasons.

Education

Data on schooling received by respondents is presented in Tables 7 and 8 below.

**TABLE 7**

**TYPE OF SCHOOLS ATTENDED**

Frequency (f) and Percent (%) of Responses in Each Category

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>High School</th>
<th></th>
<th></th>
<th>College</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Public</td>
<td>Private</td>
<td></td>
<td>Public</td>
<td>Private</td>
<td></td>
</tr>
<tr>
<td>Athlete</td>
<td>11</td>
<td>8</td>
<td>73</td>
<td>3</td>
<td>27</td>
<td>3</td>
<td>38</td>
</tr>
<tr>
<td>Attorney</td>
<td>11</td>
<td>7</td>
<td>64</td>
<td>4</td>
<td>36</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Physician</td>
<td>12</td>
<td>9</td>
<td>75</td>
<td>3</td>
<td>25</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>24</td>
<td>71</td>
<td>10</td>
<td>29</td>
<td>31</td>
<td>14</td>
</tr>
</tbody>
</table>
TABLE 8

HIGHEST LEVEL OF EDUCATION ATTAINED

Frequency (f) and Percent (%) of Responses in Each Category

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Graduate or Professional</th>
<th>College Degree</th>
<th>Some College</th>
<th>High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athlete</td>
<td>11</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Attorney</td>
<td>11</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Physician</td>
<td>12</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>23</td>
<td>68</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

As the percentages in Table 7 indicate, the proportion of subjects in each group who attended either public or private schools is almost the same, especially at the secondary level.

Nearly thirty per cent of this sample did attend private schools for their high school education, a privilege generally reserved for upper class families. The quality of education obtained from these schools is frequently higher, and providing this opportunity for their daughters may represent an attempt by the parents to make available as many advantages as possible.

Obviously, however, attending private schools was not a necessity in order for the women in this sample to become high achievers, since over seventy per cent received their high school education in public schools. This may
also be a reflection on the quality of education available today in the public schools.

Table 8 demonstrates the considerable difference between the athletes and the other two groups concerning level of education attained. Naturally, it was necessary for attorneys and physicians to spend a great deal of their time in a formal training situation to attain the skills needed for their professions. Athletes, however, are able to develop their skills much sooner and must enter their profession as early as possible to make the most of their "winning-earning" years.

Income

Approximately forty-seven percent of the total sample reported their incomes were in the $20,000 to $40,000 range (Table 9) which is a considerable amount, especially for women in their late twenties and early thirties. Physicians reported the highest overall level of earnings with ninety-two percent of them earning over $20,000 per year. Athletes and attorneys were much more similar in the breakdown of their salary ranges with forty-five percent of the athletes and thirty-six percent of the attorneys earning over $20,000 for the previous year.

With the current trend toward increasing prize money in women's athletics, in the next year or two the athletes' incomes, as well as number of competitors will likely be quite a bit higher.
TABLE 9
INCOMES FOR 1972

Frequency (f) and Percent (%) of responses in Each Category

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>7-9,000</th>
<th>9-12,000</th>
<th>12-15,000</th>
<th>15-20,000</th>
<th>20-40,000</th>
<th>over 40,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athlete</td>
<td>11</td>
<td>1   9</td>
<td>0   0</td>
<td>2 18</td>
<td>3 27</td>
<td>4 36</td>
<td>1 9</td>
</tr>
<tr>
<td>Attorney</td>
<td>11</td>
<td>0   0</td>
<td>2   18</td>
<td>1   9</td>
<td>4 36</td>
<td>3 27</td>
<td>1 9</td>
</tr>
<tr>
<td>Physician</td>
<td>12</td>
<td>0   0</td>
<td>0   0</td>
<td>1   8</td>
<td>0   0</td>
<td>9 75</td>
<td>2 17</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>1   3</td>
<td>2   6</td>
<td>4 12</td>
<td>7 21</td>
<td>16 47</td>
<td>4 12</td>
</tr>
</tbody>
</table>

Occupational Information

As presented in Table 10, less than half of each group reported that they felt they had "missed" anything as a result of their career choice, and only about one-fourth indicated that it "bothered" them to have missed what they did.

The attorneys appear to have experienced more bias, or at least to have been more aware of it, in their choice of career, and in practice at the present time.

Responses of all subjects to a query about having experienced bias because of their sex and about currently
that there is presently an anti-female bias seems a little
of profession was made more difficult due to the sex of
That less than half of the sample felt that their choice
professions is the bias they feel against their presence.
ated, another primary one determining women from entering certain

while many negative factors could have been con-

<table>
<thead>
<tr>
<th>No Limit to Number of Responses</th>
<th>Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>74</td>
<td>25</td>
<td>44</td>
</tr>
<tr>
<td>44</td>
<td>26</td>
<td>41</td>
</tr>
<tr>
<td>4</td>
<td>25</td>
<td>33</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>11</td>
<td>64</td>
</tr>
<tr>
<td>17</td>
<td>5</td>
<td>36</td>
</tr>
<tr>
<td>55</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Groups</th>
<th>J</th>
<th>%</th>
<th>J</th>
<th>%</th>
<th>J</th>
<th>%</th>
<th>J</th>
<th>%</th>
<th>J</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever Felt Any Bias Due to Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currently Any Bias Due to Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did Sex Make Choice of Profession More Difficult</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does It Bother You</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have You Missed Opportunities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Percent (%)/Frequency (J) of Subjects Reporting Bias

NEGATIVE INFLUENCES ON OCCUPATION

TABLE 10

been aware of it in the past.

Many women presently feel any prejudice although they had
experiencing such bias would indicate that there are several

76
surprising especially in light of the feminist arguments being heard today.

The higher response of the lawyers in this regard may be due to their involvement with law which may have made them more aware of discriminatory practices. Athletes would be expected to report less awareness of bias since their colleagues and competitors are of the same sex. The bias they are aware of is probably related to the differences in prize money available in men's and women's tournaments.

Concerning the lower incidence reported by physicians, it may be that there actually is less bias present, or that these women are too concerned with the practice of their professions to spend much time analyzing the situation around them.

Subjects were asked to list any periods they were not employed since the completion of their formal education and to give the reasons why. This data is presented in Table 11. Each subject reporting such a period was given a number to permit distinguishing them from one another.

Only four athletes reported not earning a living continuously since the completion of their education, with one out for two years practicing while the other subjects were only out for a few months.

Eight attorneys experienced periods of not being employed ranging from six weeks to six years, while only
six physicians were not employed for periods from one month to two years.

Fewer athletes have been away from their profession than members of the other two groups, for different reasons, and for shorter periods of time. Their absences were other than homemaking-oriented while the attorneys' and physicians' reasons were related to child-bearing and homemaking. Based on the number of subjects in each group who were married, this finding was to be expected.

Additionally, the times spent for practicing by the two athletes is considered part of their training, a break which is unlikely in the physicians' or attorneys' careers.

As indicated in Table 11, the numbers in parentheses following time spent in homemaking or child-bearing periods are the number of children that woman has. Although it cannot be established from available data that all of those children were born during the time listed, it is probable that that is the situation in most cases. If this is true, the arguments against women going into professions such as medicine or law which are based on the amount of time they will lose if and when they do have families, would seem not to have a solid foundation from that standpoint.

---


11 Cartwright, "Women in Medical School."
# TABLE II

## REASONS NOT EMPLOYED SINCE COMPLETION OF EDUCATION

<table>
<thead>
<tr>
<th>Group</th>
<th>Homemaking or Child-Bearing</th>
<th>Travel</th>
<th>Practice</th>
<th>Surgery Injury</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athlete</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>6 mo.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>3 mo.</td>
<td>3 mo.</td>
<td>3 mo.</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td>2 years</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td>2 mo.</td>
<td>2 mo.</td>
</tr>
<tr>
<td>Attorney</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>2 mo.  (1)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>2 yrs. (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>4 mo.  (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>6 mo.</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>a few months</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>3 yrs. (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>2-6 wks. (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>6 yrs. (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>2 yrs. (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>2 yrs. (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>2 yrs. (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>2 mo.</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>10 mo. (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>1 mo.  (2)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The numbers in parentheses indicate the number of children this woman has had.*
None of the physicians took off more than two years, and while there might be a few new techniques or skills they would have to acquire, they would not be so great as indicated in the references listed above which were assuming an absence of at least six years.

Thus, for the particular sample of women in this study, if a woman does leave her career to have a family, she is likely to return to it in less than two years while any other reason involves only a matter of months.

Home Background

Subjects were asked to indicate what their home situation was up to and during high school, with regard to the presence and employment of their parents. Their responses are summarized in Table 12.

Responses showed that in seventy-nine percent of the cases up to high school and sixty-five percent of the cases during high school both parents were present with only the father working—a very traditional situation. During the subjects' years in high school, only two attorneys reported a change with the father no longer present. The other change was that mothers of two physicians became employed.
TABLE 12
PARENTAL PRESENCE AND EMPLOYMENT PATTERNS
Percent (%) and Frequency (f) in Each Category

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>11</td>
<td>11</td>
<td>12</td>
<td>34</td>
<td>11</td>
<td>11</td>
<td>12</td>
<td>34</td>
</tr>
<tr>
<td>Both Parents Present,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father Employed</td>
<td>%</td>
<td>f</td>
<td></td>
<td></td>
<td>%</td>
<td>f</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both Parents Present,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both Employed</td>
<td>%</td>
<td>f</td>
<td></td>
<td></td>
<td>%</td>
<td>f</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother Present Only</td>
<td>%</td>
<td>f</td>
<td></td>
<td></td>
<td>%</td>
<td>f</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Birth Order

Although subjects gave specific information regarding their order of birth, the data indicated a natural breakdown into the categories of either eldest or only child versus being a middle or youngest child as Table 13 shows. The average number of children per family is also given.

Only about eighteen percent of the athletes were first born while nearly two-thirds of both the attorneys and physicians fell into that category. Also, the athlete's families tended to be larger than those of the other two groups.
TABLE 13

POSITION OF SUBJECTS IN FAMILY

Percent (%) and Frequency (f) of Subjects in Each Category

<table>
<thead>
<tr>
<th></th>
<th>Only or Eldest</th>
<th>Middle or Youngest</th>
<th>Mean No. of Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ath.</td>
<td>11</td>
<td>2 18</td>
<td>9 82</td>
</tr>
<tr>
<td>Att.</td>
<td>11</td>
<td>7 64</td>
<td>4 36</td>
</tr>
<tr>
<td>Phys.</td>
<td>12</td>
<td>8 67</td>
<td>4 33</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>17 50</td>
<td>17 50</td>
</tr>
</tbody>
</table>

Birth order is a factor which has previously been shown to be related to presence in certain professions as Cartwright found among women in medicine\(^{11}\) and Very and Prull in law.\(^{12}\) There is no basis for comparison for the women professional athletes.

\(^{11}\)Cartwright, "Women in Medical School."

\(^{12}\)Very and Prull, "Birth Order, ..., and the Choice of Law as a Profession."
The prevalence of first-born or only children in the profession of medicine and law may be partially accounted for by the way they are brought up. The first born are called upon to take more responsibilities around the house, perhaps to look after younger children, and to strive to live up to the expectations of parents. Those expectations tend to be greater for the first born; once that child has reached an acceptable level of achievement, there is less pressure put on younger children to also attain those expectations.

When the second or third child comes along, parents have usually become more lenient or relaxed in their attitude toward that child. Thus, parents might be more willing to allow a younger child to go into professional athletics than they would an eldest or only child. It would also be possible that as a younger child, these women had the advantage of always having older playmates who were better skilled than they were, or who encouraged them to perform better so that neighborhood teams would benefit.
The incidence of athletes from larger families may also have something to do with having had a guaranteed supply of playmates, and as the years went by, more opportunities for competitive experiences with siblings and friends.

Community Size

Subjects were asked to report the approximate size of the community in which they grew up as shown below in Table 14.

<table>
<thead>
<tr>
<th></th>
<th>Farm or Small Town</th>
<th>Medium or Large-Sized City</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Athletes</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>Attorneys</td>
<td>4</td>
<td>36</td>
</tr>
<tr>
<td>Physicians</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>26</td>
</tr>
</tbody>
</table>

The groups were fairly similar with respect to the size of the community the subjects grew up in, with physicians tending to come from larger cities more often than
athletes, who in turn tended to come from larger cities more often than attorneys. Overall, nearly seventy-five percent of the total sample came from medium or large-sized cities.

In only one instance was there an indication that a subject's family was mobile. The other subjects appear to have grown up in one area, although they themselves may have become a part of today's transient society.

That a greater proportion of the sample came from fairly good-sized cities may merely be an indication of the breakdown of the total population between urban and rural areas, or it may point to the greater educational and competitive opportunities available in the larger cities, which the subjects in this sample would have had access to.

Occupation of Parents

Occupations of each parent were named by subjects and subsequently placed in the categories listed in Tables 15 and 16 by the investigator.

Fifty percent of the physicians' fathers were in the professional category as opposed to thirty percent for fathers of attorneys and eighteen percent for fathers of athletes. Obviously, the fathers' occupations for the total sample were centered in the professional, skilled, and managerial categories.
### TABLE 15
CLASSIFICATION OF FATHERS' OCCUPATIONS
Percent (%) and Frequency (f) in Each Category

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Professional</th>
<th>Government</th>
<th>Non-Professional</th>
<th>Skilled Trade</th>
<th>Managerial</th>
<th>Semi-Skilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ath.</td>
<td>11</td>
<td>2 18</td>
<td>0 0</td>
<td>4 45</td>
<td>3 27</td>
<td>1 9</td>
<td></td>
</tr>
<tr>
<td>Att.</td>
<td>10</td>
<td>3 30</td>
<td>0 0</td>
<td>5 50</td>
<td>2 20</td>
<td>0 0</td>
<td></td>
</tr>
<tr>
<td>Phys.</td>
<td>12</td>
<td>6 50</td>
<td>0 0</td>
<td>4 33</td>
<td>1 8</td>
<td>1 8</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>11 33</td>
<td>0 0</td>
<td>14 42</td>
<td>6 18</td>
<td>2 6</td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 16
CLASSIFICATION OF MOTHERS' OCCUPATIONS
Percent (%) and Frequency (f) in Each Category

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Professional</th>
<th>Government</th>
<th>Non-Professional</th>
<th>Housewife</th>
<th>Typical Female Occupation</th>
<th>Managerial</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ath.</td>
<td>11</td>
<td>0 0</td>
<td>0 0</td>
<td>6 55</td>
<td>3 27</td>
<td>1 9</td>
<td>1 9</td>
<td></td>
</tr>
<tr>
<td>Att.</td>
<td>11</td>
<td>2 18</td>
<td>1 9</td>
<td>5 45</td>
<td>2 18</td>
<td>1 9</td>
<td>0 0</td>
<td></td>
</tr>
<tr>
<td>Phys.</td>
<td>12</td>
<td>2 17</td>
<td>0 0</td>
<td>5 42</td>
<td>3 25</td>
<td>1 8</td>
<td>1 8</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>4 12</td>
<td>1 3</td>
<td>16 47</td>
<td>8 24</td>
<td>3 9</td>
<td>2 6</td>
<td></td>
</tr>
</tbody>
</table>
Mothers of subjects tended to fall in the traditional positions of either being a housewife or in typical feminine occupations such as office or clerical work. Thirty percent of the mothers were classified in non-traditional positions, although teachers were included in the professional category along with a missionary and a physician, and one woman in the managerial category was co-manager of the family store with her husband. Although the percentage of women employed in typical female jobs is less than that in Cartwright's study (her findings indicated ninety-three percent), there is still sufficient support for her contention that daughters were not using their mothers as role-models in their choice of careers.13

Family Incomes

Approximate incomes of families during the time subjects were living at home were reported as indicated in Table 17.

The data show that incomes of subjects' families were fairly evenly spread for athletes and attorneys while that of physicians tended heavily to fall into the lower categories (less than $15,000). Thirty percent of the athletes, twenty-seven percent of the attorneys, and eight percent of the physicians reported their parents' incomes

13Cartwright, "Women in Medical School."
were over $40,000. The high percentage of fathers of physicians whose occupations fell into the professional category makes this finding regarding incomes a surprising one.

TABLE 17
APPROXIMATE FAMILY INCOME
Percent (%) and Frequency (f) of Responses in Each Category

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>$5,000-9,000</th>
<th>$9,000-15,000</th>
<th>$15,000-40,000</th>
<th>Over $40,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletes</td>
<td>10</td>
<td>3 30</td>
<td>1 10</td>
<td>3 30</td>
<td>3 30</td>
</tr>
<tr>
<td>Attorneys</td>
<td>11</td>
<td>3 27</td>
<td>2 18</td>
<td>3 27</td>
<td>3 27</td>
</tr>
<tr>
<td>Physicians</td>
<td>12</td>
<td>4 33</td>
<td>5 42</td>
<td>0 0</td>
<td>3 08</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>10 30</td>
<td>8 24</td>
<td>6 18</td>
<td>9 27</td>
</tr>
</tbody>
</table>

Parental Education

Since parents tend to encourage their children to achieve greater heights than they attained for themselves, it was felt that the educational levels reached by the parents should be included. Table 18 presents this data.

Over half the fathers held at least a college degree, with over forty percent holding graduate or professional degrees. About forty-three percent of the mothers at least graduated from college. There was a great deal of consistency
across the groups with regard to education of the fathers with their overall level of attainment being quite high.

**TABLE 18**

**EDUCATION OF PARENTS**

Percent (%) and Frequency (f) in Each Category

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>FATHER</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Graduate-or Professional Degree</td>
<td>College Degree</td>
<td>Some College</td>
<td>High School</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Athlete</td>
<td>11</td>
<td>4</td>
<td>36</td>
<td>1</td>
<td>9</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Attorney</td>
<td>11</td>
<td>5</td>
<td>45</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Physician</td>
<td>12</td>
<td>5</td>
<td>42</td>
<td>3</td>
<td>25</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>14</td>
<td>41</td>
<td>4</td>
<td>12</td>
<td>3</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>MOTHER</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Athlete</td>
<td>1</td>
<td>9</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Attorney</td>
<td>11</td>
<td>2</td>
<td>18</td>
<td>4</td>
<td>36</td>
<td>0</td>
</tr>
<tr>
<td>Physician</td>
<td>12</td>
<td>2</td>
<td>17</td>
<td>4</td>
<td>33</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>5</td>
<td>15</td>
<td>10</td>
<td>20</td>
<td>4</td>
</tr>
</tbody>
</table>

Data on level of education for mothers was not quite as consistent across the groups as was the case for fathers, with the mothers of athletes having generally received less
less education than mothers of the attorneys and physicians. However, the level of educational achievement was high for mothers in all groups.

Children tend to surpass their parents in education as a general rule. Perhaps this is because parents are anxious for their children to do at least as well as they did, and the better educated ones are in a position financially to assist the child as far as she wants to go or in whatever direction she selects.

Attitudes Concerning Careers for Women

Subjects were asked to report their recollections of parents' attitudes toward careers for women in general. Those responses were categorized as favoring careers for women, opposing them, or as neutral or not caring. Data are presented in Table 19.

In each of the three samples and for either parent there was a very high percentage of favorable attitudes reported. For the entire sample, approximately eighty-one percent of the fathers and ninety-four percent of the mothers favored careers for women. Negative attitudes were reported by only six percent of the sample.
TABLE 19

PARENTS' ATTITUDES CONCERNING CAREERS
FOR WOMEN IN GENERAL.

Percent (%) and Frequency (f) in Each Category

<table>
<thead>
<tr>
<th>Groups</th>
<th>Father</th>
<th></th>
<th></th>
<th></th>
<th>Mother</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Favored</td>
<td>Neutral</td>
<td>Opposed</td>
<td></td>
<td>Favored</td>
<td>Neutral</td>
<td>Opposed</td>
</tr>
<tr>
<td>Athlete</td>
<td>11</td>
<td>8</td>
<td>73</td>
<td>2</td>
<td>109</td>
<td>110</td>
<td>91</td>
<td>1</td>
</tr>
<tr>
<td>-Attorneys</td>
<td>9*</td>
<td>7</td>
<td>78</td>
<td>1</td>
<td>11</td>
<td>111</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>-Physician</td>
<td>12</td>
<td>1</td>
<td>92</td>
<td>1</td>
<td>8</td>
<td>121</td>
<td>92</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>26</td>
<td>81</td>
<td>4</td>
<td>13</td>
<td>2</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

*Three of the attorneys reported their fathers as either deceased or not present and at times did not respond to questions concerning their fathers.

Parental Encouragement in Choice of Career

In addition to reporting parental attitudes toward careers for women in general, the subjects responded to the parental encouragement or lack of it they received with regard to their specific career choices. This data is presented in Table 20.

Fathers were more similar in their encouragement than mothers, with nearly three-fourths of all subjects reporting their fathers had been encouraging. Mothers present a
similar overall picture but with some variation among groups. Ninety-one percent of the athletes reported their mothers had encouraged them while only fifty percent of the lawyers responded similarly. It should also be noted that for athletes, more mothers favored their career choice than fathers. This relationship did not hold true for either of the other two groups.

**TABLE 20**

**PARENTS' ENCOURAGEMENT OF CHOICE OF CAREER**

Percent (%) and Frequency (f) of Responses in Each Category

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>FATHER</th>
<th>Neutral</th>
<th>Discouraged</th>
<th>MOTHER</th>
<th>Encouraged</th>
<th>Neutral</th>
<th>Discouraged</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Athlete</td>
<td>11</td>
<td>8 12 1 9 2 18</td>
<td>11</td>
<td>10 91 0 1 1 09</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attorney</td>
<td>8</td>
<td>6 75 1 13 1 13</td>
<td>10</td>
<td>5 50 4 40 1 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician</td>
<td>12</td>
<td>9 75 3 25 0 0 12</td>
<td>9 75 3 25 0 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>23 74 5 16 3 10</td>
<td>33</td>
<td>24 73 7 21 2 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Without family support for the idea of careers for women, or for a specific career, it is doubtful an individual would persist in pursuing her goal of a profession. Evidence for this was the presence of only two women in this
sample who were discouraged in their particular selections. There is no way of determining how many women might have equivalent qualifications for being in one of the groups but were discouraged by their families and so never made the attempt or dropped out early.

Family Support in Choice of Career

Designation of the greatest source of support for their career choice was solicited from each subject with the results given in Table 21.

With the exception of physicians, the support was fairly evenly distributed between mothers, fathers, and both parents. One woman in each group named someone in addition to her mother who gave the greatest support, and two athletes did not name anyone although one of them indicated earlier that both parents had been encouraging. Only twelve percent of the total sample reported that neither parent had given the greatest support, with one person from this category married when she decided to attend law school and therefore naming her husband as having provided the greatest support.
TABLE 21
FAMILY SUPPORT IN CHOICE OF CAREER
Frequency (f) and Percent (%) of Responses in Each Category

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Father</th>
<th>Mother</th>
<th>Both</th>
<th>Neither</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ath.</td>
<td>11</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
<td>27</td>
<td>3</td>
<td>27</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9</td>
<td>1</td>
<td>9</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27</td>
<td>10</td>
<td>4</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>7</td>
<td>21</td>
<td>9</td>
<td>26</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12</td>
<td>17</td>
<td>17</td>
<td>7</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*These family members were named in addition to the mother as the persons giving the most support but were not included in percentages.*

Activities With Parents

Subjects were requested to identify activities they had taken part in with their parents. There was no limit on the number of activities they were to name, and most selected several. The data are presented below in Table 22 with the percentages representing the portion of that group who participated in a particular activity with that parent.

Some differences among groups did appear with eighty-two percent of the athletes remembering accompanying their fathers in competitive activities as compared to only thirty-three percent of attorneys and physicians who reported activities in that category.
TABLE 22

ACTIVITIES WITH PARENTS*

Percent (%) and Frequency (f) of Subjects Reporting in Each Activity

<table>
<thead>
<tr>
<th>FATHER</th>
<th>MOTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>N 11</td>
<td>Ath. 11</td>
</tr>
<tr>
<td>9</td>
<td>Att. 11</td>
</tr>
<tr>
<td>11</td>
<td>Phys. 12</td>
</tr>
<tr>
<td>31</td>
<td>Total 34</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>FATHER</th>
<th></th>
<th>MOTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f  %</td>
<td>f  %</td>
<td>f  %</td>
</tr>
<tr>
<td>Recreational</td>
<td>4 36</td>
<td>6 67</td>
<td>18 58</td>
</tr>
<tr>
<td>Competitive</td>
<td>9 82</td>
<td>3 33</td>
<td>4 33</td>
</tr>
<tr>
<td>Cultural</td>
<td>4 36</td>
<td>5 56</td>
<td>9 75</td>
</tr>
<tr>
<td>Tinkering</td>
<td>4 36</td>
<td>2 22</td>
<td>7 58</td>
</tr>
<tr>
<td>Other</td>
<td>4 36</td>
<td>2 22</td>
<td>3 28</td>
</tr>
</tbody>
</table>

*No limit to number of responses given.

Activities which physicians and attorneys reported with greatest frequency were going to theatres or plays or engaging in some recreational pursuit. Additionally, fifty-eight percent of the physicians reported being involved in tinkering or workshop type experiences with their fathers.

Similar relationships were reported with regard to activities done with mothers, only the frequencies were generally less. The main exception to this was the higher frequencies reported in cultural pursuits. The other
activities which were listed with mothers were almost exclusively homemaking oriented: cooking, cleaning, sewing, etc.

The difference between the athletes and the other two groups on participation in competitive or cultural activities reflected an emphasis by the parents in the direction these women eventually took. It is also interesting to notice that in those categories where one parent was high, so was the other one, although percentages may have been quite different. The greater number of athletes who reported being involved in competitive activities was probably basically a reflection of parental interest in sports. Since the athletes tended to be from larger families, it is also possible that participation in sports activities was a much more practical pursuit than cultural activities in the estimation of parents.

One other difference which was considerable was the number of physicians who were involved in tinkering or workshop activities such as repairing appliances or building things. This may have contributed to the physicians's ability to critically analyze a problem to determine what was needed to make something operable, although it is difficult to speculate why physicians reported a higher incidence in this activity than the athletes or attorneys.

The indication that these women were included in workshop projects or competitive experiences, activities
frequently reserved for sons in our society, allows for further speculation that the subjects were not treated as "typical" daughters.

On this question it should be pointed out that these data are based on the subjects' abilities to recall situations as they actually were. The mind easily recalls the experiences it wishes and represses others which may not be as pleasurable or as important to the person. This could explain why so many athletes responded to participating with their father in competitive activities while physicians recall tinkering types of activities. It is possible that the representation is an accurate portrayal of how things were, but there is also the possibility that situations may have been recalled in a slightly distorted fashion, the way the subject wishes they had been.

Parents' Sport Involvement

Subjects were asked to select from a group of descriptive statements those which typified each parent with regard to sport participation and involvement. These statements were then used to classify the parents as active participants, casual participants, or not interested in sports as the data in Table 23 indicate.

None of the athletes indicated their fathers were disinterested in sports while thirty percent of the attorneys and forty-two percent of the physicians did report
a lack of interest. Similarly, mothers of athletes were much more likely to be described as active participants than mothers of non-athletes, although eighteen percent of the athletes' mothers were reported as not interested in sports.

TABLE 23
PARENTS' SPORT INVOLVEMENT
Percent (%) and Frequency (f) in Each Category

<table>
<thead>
<tr>
<th></th>
<th>FATHER</th>
<th></th>
<th></th>
<th>MOTHER</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Active Participant</td>
<td>Casual Participant</td>
<td>Not Interested</td>
<td>Active Participant</td>
<td>Casual Participant</td>
<td>Not Interested</td>
</tr>
<tr>
<td>Ath.</td>
<td>N: 11</td>
<td>f: 8, %: 73</td>
<td>f: 3, %: 27</td>
<td>f: 0, %: 0</td>
<td>f: 11, %: 64</td>
<td>f: 2, %: 18</td>
</tr>
<tr>
<td>Att.</td>
<td>N: 10</td>
<td>f: 6, %: 60</td>
<td>f: 1, %: 10</td>
<td>f: 3, %: 30</td>
<td>f: 11, %: 36</td>
<td>f: 3, %: 27</td>
</tr>
<tr>
<td>Phys.</td>
<td>N: 12</td>
<td>f: 6, %: 50</td>
<td>f: 1, %: 8</td>
<td>f: 5, %: 42</td>
<td>f: 12, %: 25</td>
<td>f: 3, %: 25</td>
</tr>
<tr>
<td>Total</td>
<td>N: 33</td>
<td>f: 20, %: 61</td>
<td>f: 5, %: 15</td>
<td>f: 8, %: 24</td>
<td>f: 34, %: 42</td>
<td>f: 8, %: 24</td>
</tr>
</tbody>
</table>

It was felt that since the parents of these women were probably very competitive themselves, this would show up in regular sports participation. The percent of active participants was not very great, especially for mothers of attorneys and physicians, but rather than conclude that these
parents were not competitive, it was assumed that they may have been competitive in other ways.

Parents' Encouragement of Independence

Again, a set of statements were provided for the subjects to indicate the one which best described their mothers and fathers in the parents fostering of independence. Table 24 below presents the data under the classifications of encouraged or discouraged.

**TABLE 24**

**PARENTS' ENCOURAGEMENT OF INDEPENDENCE AS A CHILD**

Percent (%) and Frequency (f) in Each Category

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Encouraged</th>
<th>Neither</th>
<th>Discouraged</th>
<th>N</th>
<th>Encouraged</th>
<th>Neither</th>
<th>Discouraged</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>f % f % f %</td>
<td></td>
<td></td>
<td></td>
<td>f % f % f %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ath.</td>
<td>11</td>
<td>8 73 2 18 1 9</td>
<td></td>
<td></td>
<td>11</td>
<td>9 82 1 9 1 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Att.</td>
<td>9</td>
<td>7 78 1 11 1 11</td>
<td></td>
<td></td>
<td>11</td>
<td>8 73 0 0 3 27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phys.</td>
<td>12</td>
<td>9 75 1 8 2 17</td>
<td></td>
<td></td>
<td>12</td>
<td>10 83 0 0 2 17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>24 75 4 12 4 13</td>
<td></td>
<td></td>
<td>34</td>
<td>27 79 1 3 1 18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Both parents in each of the three groups were similar in their reported attempts to develop independence in the subjects with seventy-five percent of the fathers and
seventy-nine percent of the mothers in this category. Inspection of the original questionnaire revealed that only one athlete and one physician reported both parents strongly discouraged independence in them. In the other instances where one parent was attempting to discourage this trait, the other parent was counterbalancing in attempting to encourage it.

Early independence training of the child has been declared to be important to the development of achievement motivation.\textsuperscript{14} Considering the high level of achievement motivation present in this sample of women, the reported frequency of encouragement of independence was to be expected.

Parents' Direction of Play

Subjects responded to statements concerning the type of play activities each parent had promoted in her as a child. This data is reported in Table 25, p. 101.

Overall, seventy-nine percent of the mothers and seventy-five percent of the fathers of the subjects in this study encouraged sport and/or intellectual pursuits.

Additionally, there was quite a bit of emphasis on being the best at something. This was especially true for attorneys who reported seventy-three percent of their fathers and forty-five percent of their mothers promoted

\textsuperscript{14}McClelland, "Some Social Consequences of Achievement Motivation."
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>11</td>
<td>11</td>
<td>12</td>
<td>34</td>
<td>11</td>
<td>11</td>
<td>12</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td></td>
<td>% f</td>
<td>% f</td>
<td>% f</td>
<td>% f</td>
<td>% f</td>
<td>% f</td>
<td>% f</td>
<td>% f</td>
<td>% f</td>
</tr>
<tr>
<td>Little Girls Activities</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Little Emphasis on Winning</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>1</td>
<td>18</td>
<td>2</td>
<td>9</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Emphasis on Being the &quot;Best&quot;</td>
<td>27</td>
<td>3</td>
<td>73</td>
<td>8</td>
<td>25</td>
<td>3</td>
<td>41</td>
<td>14</td>
<td>36</td>
</tr>
<tr>
<td>Permitted Sport/Intellectual Pursuits</td>
<td>27</td>
<td>3</td>
<td>27</td>
<td>3</td>
<td>17</td>
<td>2</td>
<td>24</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>Encouraged Sport/Intellectual Pursuits</td>
<td>73</td>
<td>8</td>
<td>64</td>
<td>7</td>
<td>83</td>
<td>10</td>
<td>74</td>
<td>25</td>
<td>73</td>
</tr>
<tr>
<td>Concerned About Being &quot;Tomboy&quot;</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>64</td>
</tr>
</tbody>
</table>

*No limit to number of responses given.*
this approach. With the exception of thirty-six percent of the mothers of attorneys and twenty-seven percent of the mothers of physicians, there was no pressure toward "little girl" type activities like playing dolls or keeping house. Only six percent of the fathers were reported as being concerned about their daughters being tomboys, with none of the athletes reporting in this category. However, mothers were quite different with mothers of sixty-four percent of the athletes represented as being concerned as compared to mothers of twenty-seven percent of the attorneys and of seventeen percent of the physicians. Thus, athletes' responses indicate their mothers did not encourage their playing house or with dolls, yet many were concerned about their daughters' being "tomboys."

One of the factors which seems logically to be a positive influence from childhood toward becoming a high achiever is the encouragement subjects received to participate in sport and/or intellectual pursuits. Also reported was the encouragement to be "the best" at something, which does not generally characterize parental directions for daughters. Subjects reported very little emphasis placed on "little girl" activities by their parents, which may partially explain this sample's departure from the traditional female occupations. It is generally considered that games like playing house teach girls through role-playing what will be expected of them as adults. If these women
were encouraged to pursue other activities as children, as responses indicated, then they would not be expected to have followed the traditional role for women.

Because athletes have maintained an active participation in sports throughout their lives, which could promote a "tomboy" image, it is to be expected that their mothers expressed more concern over that image than did mothers of the other subjects.

Playmates

Table 26 below gives subjects responses to what kinds of playmates they had up to the sixth grade.

<table>
<thead>
<tr>
<th>TABLE 26</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEX OF PLAYMATES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Mostly Boys</th>
<th>Mostly Girls</th>
<th>About Even</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athlete</td>
<td>N=11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Athlete</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attorney</td>
<td>N=11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Physician</td>
<td>N=12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Total</td>
<td>N=34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
</tbody>
</table>

Slightly over half of each group reported their playmates were fairly evenly divided between boys and girls. Of the remaining subjects, there was a slight tendency for
athletes to have played mainly with boys and for physicians to have played mainly with girls. Only one subject reported not having playmates as a child.

The tendency of more athletes to have played mostly with boys is probably due to their interest and ability in sports. A few subjects did report that the distribution of playmates depended on factors like having gone to an all girls' school or having been the only girl in a neighborhood of boys.

Childhood Activities

A typical variety of activities were presented to subjects with a request that they indicate those they had taken part in. Results are given in Table 27. Subjects were to include as many of the activities as were applicable.

All of the athletes reported being involved in sports while all of the attorneys were concerned with reading. Approximately eighty-three percent of the physicians also indicated an involvement in reading as compared to sixty-seven percent who participated in sports.

Forty-two percent of the physicians reported learning to cook and learning to sew during this period as contrasted to much less frequent responses in those categories by attorneys and athletes.

Across all three groups a strong incidence of involvement in thinking games was reported with sixty-eight percent of the total sample including that activity.
TABLE 27

ACTIVITIES AS A CHILD*  
(THROUGH 6TH GRADE)

Frequency (f) and Percent (%) of Responses in Each Category

<table>
<thead>
<tr>
<th>Activity</th>
<th>Ath. N=11</th>
<th>Att. N=11</th>
<th>Phys. N=12</th>
<th>Total</th>
<th>f</th>
<th>%</th>
<th>f</th>
<th>%</th>
<th>f</th>
<th>%</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>4</td>
<td>11</td>
<td>100</td>
<td></td>
<td>10</td>
<td>83</td>
<td>26</td>
<td>76</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning to Cook</td>
<td>2</td>
<td>2</td>
<td>100</td>
<td></td>
<td>5</td>
<td>42</td>
<td>9</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning to Sew</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td></td>
<td>5</td>
<td>42</td>
<td>8</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thinking Games</td>
<td>8</td>
<td>9</td>
<td>82</td>
<td></td>
<td>6</td>
<td>50</td>
<td>23</td>
<td>68</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sports</td>
<td>11</td>
<td>3</td>
<td>27</td>
<td></td>
<td>8</td>
<td>67</td>
<td>22</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outdoor Activities</td>
<td>5</td>
<td>1</td>
<td>27</td>
<td></td>
<td>7</td>
<td>58</td>
<td>15</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*No limit to number of responses

It is quite probable that interests were already somewhat formed in childhood, which would explain the differences in Table 27 concerning reading and involvement in sports. It is also possible that current interests and concerns may have influenced memories about "how things were," but more than likely these results are just an indication that interests had already begun to develop quite strongly along the lines future endeavors would take.

The overall preference or interest in thinking games is an indication of development of an analytical thinking process beneficial to high achievers.
Rejection as a Child

Subjects had already reported whether they had experienced any bias centered around their career choices, but were also asked if, as children, they had ever been rejected because they were too good at something. Results are given below in Table 2B.

**TABLE 2B**

REJECTION BECAUSE OF ABILITY*

Frequency (f) and Percent (%) of Responses in Each Category

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Other Girls</th>
<th>Boys</th>
<th>Both Boys and Girls</th>
<th>Adults</th>
<th>Not Rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Athlete</td>
<td>11</td>
<td>4</td>
<td>36</td>
<td>7</td>
<td>64</td>
<td>3</td>
</tr>
<tr>
<td>Attorney</td>
<td>11</td>
<td>6</td>
<td>73</td>
<td>5</td>
<td>45</td>
<td>4</td>
</tr>
<tr>
<td>Physician</td>
<td>12</td>
<td>4</td>
<td>33</td>
<td>5</td>
<td>42</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>14</td>
<td>41</td>
<td>17</td>
<td>50</td>
<td>11</td>
</tr>
</tbody>
</table>

*No limit to number of responses given.

Fewer physicians reported that they had been rejected than either of the other two groups with fifty-eight percent not having been rejected at all. The greatest number of attorneys (seventy-three percent) reported rejection by other girls while that reported most frequently by athletes was by boys (sixty-four percent).

Only nine percent of the total sample indicated having been rejected by adults while forty-one percent
of the total sample reported not having been rejected at all.

The slightly greater incidence of athletes rejected by boys is probably directly related to their skill or ability to beat the boys in games. The greater incidence of attorneys rejected by other girls is probably related to their academic ability and that they would have been competing mainly with girls in intellectual matters.

Toys

Subjects reported the kinds of toys they had received as children according to particular groupings. This data is given in Table 29 while Table 30 presents a summary of which kinds of toys were their favorites. A few subjects named more than one item or category as their favorite.

All three groups reported a high incidence of sport and recreational equipment with all of the physicians indicating that they had been given toys related to recreational pursuits.

Only forty-five percent of the athletes recalled being given toys associated with traditionally female roles such as dolls, nurse kits, cooking utensils or play housekeeping equipment. This is contrasted with eighty-two percent of the attorneys and seventy-five percent of the physicians responding to this category.
TABLE 29

TOYS FROM PARENTS*

<table>
<thead>
<tr>
<th>Description</th>
<th>Ath. %</th>
<th>Ath. f</th>
<th>Att. %</th>
<th>Att. f</th>
<th>Phys. %</th>
<th>Phys. f</th>
<th>Total %</th>
<th>Total f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sports Equipment</td>
<td>100</td>
<td>11</td>
<td>82</td>
<td>9</td>
<td>75</td>
<td>9</td>
<td>85</td>
<td>29</td>
</tr>
<tr>
<td>Recreational Equipment</td>
<td>73</td>
<td>8</td>
<td>64</td>
<td>7</td>
<td>100</td>
<td>12</td>
<td>79</td>
<td>29</td>
</tr>
<tr>
<td>Scientific Toys</td>
<td>45</td>
<td>5</td>
<td>64</td>
<td>7</td>
<td>58</td>
<td>7</td>
<td>56</td>
<td>19</td>
</tr>
<tr>
<td>Traditional Male Role</td>
<td>36</td>
<td>4</td>
<td>27</td>
<td>3</td>
<td>42</td>
<td>5</td>
<td>35</td>
<td>12</td>
</tr>
<tr>
<td>Traditional Female Role</td>
<td>45</td>
<td>5</td>
<td>82</td>
<td>9</td>
<td>75</td>
<td>9</td>
<td>68</td>
<td>23</td>
</tr>
<tr>
<td>Games and Puzzles</td>
<td>100</td>
<td>11</td>
<td>93</td>
<td>10</td>
<td>100</td>
<td>12</td>
<td>97</td>
<td>33</td>
</tr>
<tr>
<td>Stuffed Animals, Riding Toys</td>
<td>45</td>
<td>5</td>
<td>64</td>
<td>7</td>
<td>88</td>
<td>10</td>
<td>65</td>
<td>22</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>1a</td>
<td>18</td>
<td>2b</td>
<td>8</td>
<td>1c</td>
<td>12</td>
<td>4</td>
</tr>
</tbody>
</table>

*No limit to number of responses

aHorse
bArtist materials
cMusical instrument

TABLE 30

TYPES OF TOYS ENJOYED MOST*

<table>
<thead>
<tr>
<th>N</th>
<th>Sports Related</th>
<th>Thinking</th>
<th>Books</th>
<th>Med. Kit</th>
<th>Female Toys, Dolls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Ath.</td>
<td>10</td>
<td>100</td>
<td>10</td>
<td>50</td>
<td>5</td>
</tr>
<tr>
<td>Att.</td>
<td>10</td>
<td>30</td>
<td>3</td>
<td>60</td>
<td>6</td>
</tr>
<tr>
<td>Phys.</td>
<td>10</td>
<td>90</td>
<td>9</td>
<td>50</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>73</td>
<td>22</td>
<td>53</td>
<td>16</td>
</tr>
</tbody>
</table>

*No limit to number of responses.
The category having the greatest responses was that for thinking games and puzzles with about ninety-seven percent of the sample having received toys of this type. The smallest response was for toys associated with traditionally male roles, such as doctor kits, tool sets, policemen's uniforms or other similar items. Only thirty-five percent of the entire sample reported receiving items in this category.

Sports related equipment was by far the category preferred by athletes and physicians, although only thirty percent of the attorneys named that type of toy. Approximately fifty-three percent of the total sample also indicated a preference for thinking games.

The types of toys listed were the most common ones and probably have been given to almost every child in this country. It is hard to imagine the child who has not had a bicycle, a wagon, or some kind of doll and doll house, yet several subjects did not recall having had them. This would seem to indicate that some type of selective memory process has taken place. Or perhaps a doll which was not wanted was put aside and forgotten in childhood and so there is no memory of it now in adulthood.

Emphasis in Table 30 for each group shows again the direction that subjects' interest was taking even as a child. The congruity between favorite toys, career interest, and overall types of toys given by the parents is yet another indication of encouragement or support in the direction
these women have taken.

School Activities

Subjects were asked to indicate the types of competitive experiences they took part in either in school related events or extra-school events. Tables 31 and 32 present this data.

TABLE 31

SCHOOL RELATED COMPETITIVE EXPERIENCES*

<table>
<thead>
<tr>
<th></th>
<th>Ath.</th>
<th>Att.</th>
<th>Phys.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Debate Team</td>
<td>9</td>
<td>1</td>
<td>36</td>
<td>4</td>
</tr>
<tr>
<td>Science Fair</td>
<td>0</td>
<td>0</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>Team Sports (Interschool)</td>
<td>82</td>
<td>9</td>
<td>27</td>
<td>3</td>
</tr>
<tr>
<td>Team Sports (Intramural)</td>
<td>73</td>
<td>8</td>
<td>36</td>
<td>4</td>
</tr>
<tr>
<td>Individual Sports (Interschool)</td>
<td>91</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Individual Sports (Intramural)</td>
<td>55</td>
<td>6</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Music Contests</td>
<td>18</td>
<td>2</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>Literary Contests</td>
<td>27</td>
<td>3</td>
<td>82</td>
<td>9</td>
</tr>
<tr>
<td>Other (Drama, School Government)</td>
<td>9</td>
<td>1</td>
<td>27</td>
<td>3</td>
</tr>
</tbody>
</table>
TABLE 32

COMPETITIVE EXPERIENCES OUTSIDE OF SCHOOL*

<table>
<thead>
<tr>
<th></th>
<th>Ath.</th>
<th>Att.</th>
<th>Phys.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>f</td>
<td>% f</td>
<td>% f</td>
</tr>
<tr>
<td>Swimming</td>
<td>27</td>
<td>3</td>
<td>45</td>
<td>5</td>
</tr>
<tr>
<td>Track and Field</td>
<td>27</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Golf</td>
<td>45</td>
<td>5</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>Tennis</td>
<td>36</td>
<td>4</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Softball</td>
<td>18</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Volleyball</td>
<td>18</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other (Camp Activities)</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>1</td>
</tr>
</tbody>
</table>

*No limit to number of responses given.

By the time subjects reached high school age, their interests were showing a definite direction, especially among the athletes, some of whom began competing as professionals shortly after graduation from high school. Attorneys' skills are very closely related to those developed and polished in debate or drama competitions, therefore, it was expected that women who are attorneys were involved in those activities, even if they were not consciously preparing for a career in law at the time. Since the opportunities in high school are not really related to practicing medicine effectively, it was also expected that
the experiences of physicians during that time period were in a variety of areas.

One surprising finding is the amount of sports competition physicians engaged in outside of school activities, especially in relation to the athletes. It may be that athletes were more deeply involved in school related competition and therefore did not have as much time to devote to those experiences outside the school setting as they would if the school opportunities were not there.

Religion

Although questions in this section were optional, all subjects chose to respond. They were asked to report if they had been brought up as a member of an organized church, to classify it on a continuum from fundamental to liberal and to indicate their present church attendance. Table 33 contains the data on subjects church membership while growing up and Table 34 presents the data concerning church attendance now related to the nature of the church subjects were in as youths.

Table 33 shows forty-two percent of the physicians were not raised as church members as compared to eighteen percent of the attorneys and athletes. Of those who did report a church affiliation, the majority classified themselves as Protestants.
on an irregular basis.

*Two physicists not brought up in the church now attend, one

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Phys.</th>
<th>Att.</th>
<th>Ath.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>27</td>
<td>9</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Not at all</strong></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Regularly</strong></td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>9</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 33**

Percent (%) and frequency of responses in each category

PRESENT CHURCH ATTENDENCE

**TABLE 34**

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Phys.</th>
<th>Att.</th>
<th>Ath.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>34</td>
<td>34</td>
<td>34</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td><strong>Not a member</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Jewish</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Catholic</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Protestant</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**CHURCH MEMBERSHIP AS A YOUTH

**TABLE 35**
Although the frequencies in Table 34 show only a slight difference for groups according to current church attendance, the percentages show a slight tendency for athletes to attend more regularly now than physicians or attorneys. The samples are too small and the difference too slight to reach any conclusions, however.

Based on the type of church subjects were brought up in, those from a fundamental background were more likely to attend church regularly now, although percentages of subjects who reported they did go to church on a regular basis did not approach forty percent for any group.

Seventy-four percent of the subjects who were brought up in some organized church attend rarely or not at all now.

The small proportion of these women who still attend church is probably indicative of how many of the subjects were brought up with a strict religious background, which has been shown to be a negative influence for achieving women.15

Failure to attend church now may be due to professional involvement on those days when services are held, or it may be an indication of lack of interest and involvement in matters concerning religion.

15J. Williams, "Sex-Role Conflict and Academic Achievement..."
Summary of Results

From the information gathered in this study it would seem that there is a "personality type" typical of the high achieving woman, which differs from that of women at large. This sample also was high on a measure of achievement motivation and exhibits a high degree of similarity among groups on biographical information.

Biographical items differentiating the groups from each other were birth order, types of activities subjects were interested in as children and youth and parental direction of play.

A general picture emerges from the biographical results of an upper middle class family which is traditional in its pattern of parental presence, occupation, and stability. Parents began to encourage independence and develop positive attitudes toward careers for women during the subjects' early years and then provided strong support in later years on matters concerning choice of career.

The overall similarity of biographical information points toward the importance of the family in developing high achieving individuals.
The purpose of this study was to determine whether a general description of high achieving women could be ascertained based on personal backgrounds, achievement motivation, or personality measures from the 16 PF and to determine if they could be distinguished from the general population of women by comparison of the 16 PF profiles to norms. The Cattell 16 PF test of personality, a biographical information questionnaire, and an achievement motivation questionnaire were administered to the following groups who were selected from various geographic regions across the country: eleven professional golf and tennis players, eleven attorneys, and twelve physicians. Ages ranged from twenty-three to forty.

Summary of Personality Assessment

1. It was hypothesized that no significant differences existed among the groups in personality structure. This hypothesis was accepted because no significant differences were found at the .01 level among the groups on any of the twenty factors or dimensions of personality measured.
2. It was hypothesized that there were no differences in personality profiles between each of the three groups and the profile of the general population of women. Differences did exist on factors A-, B+, C+, E+, I-, L+, M+, N-, O-, Q₁+, Q₂+, Q₃+, Q₄I-, Q₄II+, Q₄III+, and Q₄IV+.

The following personality characteristics differentiated the professional athletes' group from the norms for the general population of women: more reserved (A-), more intelligent (B+), more imaginative (E+), more assertive and competitive (M+), more forthright (N-), more self-sufficient (Q₁+), more experimenting (Q₂+), more controlled (Q₃+), less anxious (Q₄I-), more tough poise (Q₄II+), and more independent (Q₄IV+).

The attorneys were differentiated from population norms on the following personality factors: more intelligent (B+), more imaginative (E+), more tough-minded (I-), more suspicious (L+), more assertive and competitive (M+), more self-sufficient (Q₁+), more experimenting and analytical (Q₂+), more controlled (Q₃+), more tough poise (Q₄II+), and more independent (Q₄IV+).

The following personality characteristics differentiated the physicians from the population norms: more intelligent (B+), more emotional stability (C+), more assertive (E+), more imaginative (M+), more apprehensive (O-), more experimenting (Q₁+), more controlled (Q₃+), less
3. It was also hypothesized that no differences existed between the personality profile of the combined groups and the profile of the general population of women. The sample differed on the following factors: more reserved (A⁻), more intelligent (B⁺), more emotionally stable (C⁺), more assertive (E⁺), more imaginative (M⁺), more experimenting (Q₁⁺), more controlled (Q₃⁺), less anxious (Qₓ⁻), more tough poise (QₓᵢⅢ⁺), more independent (QₓᵢⅣ⁺).

When personality profiles for this sample were compared with the general population norms for males, many of the differences disappeared. Those which remained included more intelligent, imaginative, and experimenting. One new difference occurred, that of being tender-minded.

Summary of Achievement Motivation Questionnaire Data

It was hypothesized that no significant difference existed among groups on a measure of achievement motivation. This hypothesis was accepted.

Summary of Biographical Questionnaire Data

It was hypothesized that the sample groups would be characterized by differences in present educational and occupational conditions, general family background,
parental influence, childhood and high school activities, and religion.

The athletes, attorneys, and physicians tended to be similar in the following areas or on the following characteristics: presence of parents and their employment pattern, educational level of parents, occupational level of parents, community size, types of schools attended, parental encouragement of independence, parental favoring of careers for women, parental support for choice of career, sex of playmates, religion, and parental direction of play.

Differences did exist which did seem to characterize the groups. The physicians and attorneys were similar to each other and different from the athletes in the following areas: birth order, amount of education, marital status, periods of unemployment, parental interest or involvement in sports, activities with parents.

Other findings indicate that athletes and physicians were similar in their feelings concerning bias against them in their careers.

Parents of athletes and attorneys were similar in their incomes.

Athletes were different from attorneys with regard to competitive experiences in high school, while physicians had experiences in common with both of them.

Athletes were different from attorneys in their preference of sporting equipment to books. Physicians expressed
interest in both.

Conclusions

1. Women professional athletes, attorneys, and physicians have personality patterns different from Cattell's general population on certain factors.

2. Women professional athletes, attorneys, and physicians have personality patterns which are not significantly different from each other.

3. Women professional athletes, attorneys, and physicians have personality patterns more similar to the general population of men than to the general population of women.

4. Women professional athletes, attorneys, and physicians have similar levels of achievement motivation.

5. Women professional athletes, attorneys, and physicians basically come from similar backgrounds. They are from upper or upper middle class traditional families, have well-educated parents, come from fairly large communities and attended public schools at the secondary level. Their parents approved of careers for women and supported the career choices made by the subjects. They were encouraged to pursue intellectual and/or sports interests. Their parents encouraged independence in them as children and did not bring them up in a strict religious atmosphere.

6. Attorneys and physicians are more likely than athletes to be first-born or only children, to be married,
to have parents who were not particularly interested in sports' participation and who took them to cultural events like plays or shows.

7. Athletes are younger children in the family who come from families with an interest in sports.

8. Periods of unemployment, if any, for women athletes, attorneys and physicians, are short in duration and usually occur to accommodate the birth of children. The length of time involved did not seem to be sufficient to be detrimental to subjects returning to their careers.

9. Toy preferences in childhood and competitive experiences during school years are closely related to career interests, especially for athletes and attorneys, with these groups generally preferring sports and books respectively as children. In high school the athletes' competitive experiences centered around sports while attorneys were engaging in verbal or dramatic contests.

Recommendations for Further Study

As a result of this study, the investigator recommends consideration of the following concerns for further research:

1. It is suggested that the investigation of the personality and biographical characteristics of the woman in typically female occupations be undertaken which would
include housewives, secretaries, nurses and other related fields.

2. It is suggested that the investigation of the personality and biographical characteristics of high achieving women in areas other than medicine or law be undertaken to determine if there is a consistent profile for the high achieving woman.

3. It is suggested that this study be replicated comparing younger women attorneys and physicians who have entered their professions in the last five to ten years with those who entered a generation earlier.

4. It is suggested that an expanded, more refined version of the biographical information questionnaire be administered to larger specialized samples to determine if relationships found in this study would remain constant.

Detailed biographical information provides an important means for studying relationships between sports groups and others, and may be as great a factor in defining populations as personality characteristics.
APPENDIX A

Correspondence

1. Letter of contact
2. Reply post card
3. Letter containing directions for questionnaires
I am beginning research for the Ph.D. at The Ohio State University. For this study I am seeking information concerning commonalities among high achieving women with the hope of developing a profile of this outstanding type of person. Specific data I'm looking for include personality as assessed by a standardized test, biographical information and scores on a scale designed to measure achievement motivation. The instruments, or "tests", to be used are in the form of questionnaires with multiple-choice type responses. The total time commitment on the part of one who participates in my study would range from 1 to 1½ hours. Questionnaires will be mailed to participants to complete at their earliest convenience and return. There is to be no contact other than through the mails and the identity of participants will be confidential.

In keeping with the criteria established for this study, you are a "high achieving" woman. This letter is to ask your participation in my investigation; your cooperation is extremely important to the successful completion of this research. Please return the enclosed postcard indicating your willingness or unwillingness to participate. If any correction of address needs to be made, please indicate that on the card.

Thank you for your consideration of this matter.

Sincerely,

Marcia Morgan

Enclosure
CHECK ONE:

☐ I will participate in your study on high achieving women.

☐ I will not participate in your study on high achieving women.

__________________________
Signature

Address correction:

AGE: under 35____ 35-40____ over 40 ____
Hello!

Thank you for agreeing to participate in my study of high achieving women.

Enclosed are the materials which are to be used for this project.

In order to insure your anonymity, please do not fill in your name anywhere. The only identifying information I need is your occupation. Directions are given with the questionnaire entitled "16 PF." This form should take about an hour to complete. Once you have begun, you should not stop until all questions have been answered.

For the biographical questionnaire you are asked to check whatever response is applicable. In some instances, there may be several answers which are appropriate. Feel free to write in any additional comments you may have. Item 12 of this questionnaire is optional. If you believe there are any factors not included which may have influenced your being a high achieving woman, please record them on the last page.

Once these two items are completed, place all materials in the envelope provided and return them as soon as possible, hopefully within one week.

Thank you again for your cooperation in this investigation.

Sincerely,

Marcia Morgan
APPENDIX B

Biographical Information Questionnaire
BIOGRAPHICAL INFORMATION QUESTIONNAIRE

Directions: Please respond to each series of blanks as completely as possible. If you feel inadequate responses are provided on any item, write in your own responses in any available space.

1. Age: years ______ single _______ months ______ married ______ divorced ______
   number of children ______

2. Occupation: ____________________________

3. Education: check the highest level of education you have attained
   ______ Graduate or professional degree
   ______ College or university degree
   ______ Some college education (1 year or more)
   ______ Secondary school graduate
   ______ Other (write in) ____________________________

   Indicate the number of years spent in each situation
   Example: Mary Jones was in a public co-educational school as a day student for grades 1 through 4. At that time she entered a private, non-coeducational, boarding school.

<table>
<thead>
<tr>
<th>Public</th>
<th>Private</th>
<th>Coed</th>
<th>Boarding</th>
<th>Day</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Elementary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior High</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior High</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   Region (state) where you attended high school: __________
   College or university attended: __________ State: ________
4. Income:
   A. What is your approximate earned annual income?
      ___ Under $5000 ___ $9000-$12,000 ___ $20,000-
      ___ $7000-$9000 ___ $12,000-$15,000 ___ $40,000-
      ___ $15,000-$20,000 ___ Over $40,000
   B. Do you have a supplementary income (government grant, sponsoring company, stocks, etc.)?
      ___ Yes ___ No

5. Occupation:
   A. Do you feel there are some things you may have "missed" in life as the result of being involved in your profession? ________ If so, what kind of things?__________________________________________
      Does it "bother" you that you missed these things?____
   B. Do you feel that your choice of profession was made any more difficult because you are a woman?
      ___ Yes ___ No
   C. Do you currently feel any bias against yourself because of your sex?
      ___ Yes ___ No
   D. Have you ever felt that there was any bias against you because of your sex?
      ___ Yes ___ No
   E. Please list all periods, since completion of formal education, when you were not gainfully employed and indicate the nature of your activities (i.e., study, homemaking, travel, volunteer activities, etc.)

<table>
<thead>
<tr>
<th>Years</th>
<th>From</th>
<th>To</th>
<th>Type of Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. Home Background: Please answer the following questions about your home situation as it was the majority of the time when you were living at home.

A. Which of the following was true of your home?
   - Both father and mother present, both employed
   - Both parents present, both employed
   - Father present only
   - Mother present only
   - Neither parent present, relative or guardian in charge

B. How many brothers and sisters did you have?
   - Brothers
   - Sisters

C. How many brothers were older than you?

D. How many sisters were older than you?

E. Which best describes the area in which you spent the majority of your life through high school?
   - Rural (farm community)
   - Small town (up to 25,000)
   - Medium-sized city (25,000-100,000)
   - Large-sized city (100,000 or more)

F. What was your father's occupation(s)?

G. What was your mother's occupation(s)?

H. What was your family's approximate annual income?
   - Under $5000
   - $5000-$7000
   - $7000-$9000
   - $9000-$12,000
   - $12,000-$15,000
   - $15,000-$20,000
   - Over $20,000
   - Over $40,000

7. Parents (persons with whom you lived during majority of your school age years):

A. Check the choice which best represents your parent's educational background.
   - Father
   - Mother
   - Graduate or professional training
   - College or university degree
   - Some college education (1 year or more)
   - Secondary school graduate
   - Other (write in)
B. What were your parent's attitudes concerning careers for women?

<table>
<thead>
<tr>
<th>Father</th>
<th>Mother</th>
</tr>
</thead>
<tbody>
<tr>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Strongly favored</td>
<td></td>
</tr>
<tr>
<td>Mildly favored</td>
<td></td>
</tr>
<tr>
<td>Didn't care</td>
<td></td>
</tr>
<tr>
<td>Mildly opposed</td>
<td></td>
</tr>
<tr>
<td>Strongly opposed</td>
<td></td>
</tr>
</tbody>
</table>

C. Did your parents encourage your choice of career?

<table>
<thead>
<tr>
<th>Father</th>
<th>Mother</th>
</tr>
</thead>
<tbody>
<tr>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Neither encouraged or discouraged</td>
<td></td>
</tr>
</tbody>
</table>

What family member gave you the greatest support?

D. Did you accompany your parents in any of the following activities?

---

<table>
<thead>
<tr>
<th>Father</th>
<th>Mother</th>
</tr>
</thead>
<tbody>
<tr>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Recreational (i.e., hunting, fishing, hiking, camping, skiing)</td>
<td></td>
</tr>
<tr>
<td>Competitive sports (i.e., tennis, golf, archery)</td>
<td></td>
</tr>
<tr>
<td>Theatres, movies, plays</td>
<td></td>
</tr>
<tr>
<td>Tinkering (i.e., repairing appliances, workshop projects)</td>
<td></td>
</tr>
<tr>
<td>Other (describe briefly)</td>
<td></td>
</tr>
</tbody>
</table>

---

E. Which best describes your parent's interest and/or involvement in sport? (more than one choice may apply)

<table>
<thead>
<tr>
<th>Father</th>
<th>Mother</th>
</tr>
</thead>
<tbody>
<tr>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Actively participated regularly in some sport until age became a factor</td>
<td></td>
</tr>
<tr>
<td>Actively participated occasionally until age became a factor</td>
<td></td>
</tr>
<tr>
<td>Participated seldom; if ever</td>
<td></td>
</tr>
<tr>
<td>Seemed to enjoy being a participant rather than a spectator</td>
<td></td>
</tr>
<tr>
<td>Often attended sports events; maintained an active interest in local teams; a &quot;fan&quot;</td>
<td></td>
</tr>
<tr>
<td>Not very interested in sports</td>
<td></td>
</tr>
</tbody>
</table>
F. Which best describes your parent's encouragement of your independence as a child?

Father  Mother

Encouraged independent thinking, even when they disagreed with what you were doing

Encouraged you to go your own way as long as they agreed with what you were doing

Didn't encourage or discourage

Encouraged you to depend on them to make your decisions

Actively tried to impose their will on you

8. Childhood (through the 6th grade):

A. Were your playmates mostly:  ____ boys  ____ girls
   ____ about even  ____ no playmates

B. Was this influenced by environment (all girls school, only girl on the block)?
   ____ Yes  ____ No

C. Types of activities you participated in frequently (may be more than one answer)

   ____ Reading
   ____ Learning to cook
   ____ Learning to sew
   ____ Thinking games (i.e., puzzles, number games, science kits, erector sets)
   ____ Sports (i.e., baseball, volleyball, tennis)
   ____ Outdoor activities (i.e., camping, fishing, hiking)

Were there some activities you enjoyed more than others?  ____ Yes  ____ No
If yes, which ones?

D. Which best describes your parents' direction of your childhood play? (may be more than one answer)

Father  Mother

Encouraged "little girl" activities; dolls, playing house

Put little emphasis on competition or winning
Put a lot of emphasis on being the best
Permitted participation in sports
and/or intellectual pursuits
Encouraged participation in sports
and/or intellectual pursuits
Was concerned about your being a "tomboy"

E. Were you ever rejected because, as a girl, you were "too good" at something?

____ Yes    ____ No

If yes, by whom?    ____ Other girls
                    ____ Boys
                    ____ Adults

9. School activities:
   A. Check any of the following activities you participated in while in school.

   ____ Debate team
   ____ Science Fair competition
   ____ Team sports (interschool competition)
   ____ Team sports (intramural competition)
   ____ Individual sports (interschool competition)
   ____ Individual sports (intramural competition)
   ____ Music contests
   ____ Literary contests
   ____ Other (describe)

   B. Check any of the following activities you participated in outside of school.

   ____ Age-group swimming
   ____ Age-group track and field
   ____ Junior golf
   ____ Junior tennis
   ____ Softball (community organization teams, church league
   ____ Volleyball (community organization teams, church league
   ____ Other (describe)

10. Toys:
   A. What kind of toys did your parents give you as a child?

   ____ Sports equipment (i.e., balls, bats, tennis racquet, skiis, etc.)
Active recreational equipment (i.e., bicycle, camping equipment, boating-fishing equipment, etc.)
Scientific toys (i.e., chemistry sets, microscope sets, construction sets, etc.)
Toys associated with traditionally male roles (i.e., doctor kits, tool kits, policeman-fireman outfits, military-related toys)
Toys associated with traditionally female roles (i.e., nurse kits, dolls and doll house, cooking utensils, housekeeping equipment, etc.)
Games and puzzles (i.e., board games, card games, puzzles of various kinds)
Stuffed animals, riding toys (i.e., hobby horse, wagon, etc.)
Other (describe) ________________________________

B. What kind of toys did you enjoy most? __________________

11. Personal Characteristics:
   A. Do you find it easy to relax completely when you are on a holiday? ______ Yes ______ No
   B. Do you feel annoyed when people are not punctual for appointments? ______ ______
   C. Do you dislike seeing things wasted? ______ ______
   D. Do you like getting drunk? ______ ______
   E. Do you find it easy to forget about your work outside normal working hours? ______ ______
   F. Would you rather work with a congenial but incompetent partner rather than a difficult but highly competent one? ______ ______
   G. Does inefficiency make you angry? ______ ______
   H. Have you always worked hard in order to be among the best in your own line? ______ ______

12. Religion (optional):
   A. Were you brought up as an active member of a church? ______ Yes ______ No
      If yes, in what category? ______ Jewish ______ Protestant
                        ______ Catholic ______ Other
B. On the continuum below, place a checkmark along the line to indicate where you think that specific church would be classified from fundamentalist to liberal.

fundamentalist--strict adherence to liberal interpretation and absolute inerrancy of the scriptures
liberal--not bound by orthodoxy or tradition

C. Do you attend church now?  
___ Never  
___ On special holidays  
___ Sometimes  
___ Regularly
BIBLIOGRAPHY

BOOKS


ARTICLES


Hendry, L. B. "Assessment of Personality Traits in the Coach-Swimmer Relationship, and a Preliminary Examination of the Father Figure Stereotype," Research Quarterly, XXXIX (October, 1968), 543-551.


Ogilvie, Bruce C. "Psychological Consistencies Within the Personality of High-Level Competitors," Journal of the American Medical Association, CCV (1968), 780-786.


Slusher, Howard S. "Personality and Intelligence Characteristics of Selected High School Athletes and Non-athletes," Research Quarterly, XXXV (December, 1964), 539-545.


Williams, Jean M.; Hoepner, Barbara J.; Moody, Dorothy L.; and Ogilvie, Bruce C. "Personality Traits of Champion Level Fencers," Research Quarterly, XLI (October, 1970), 446-453.


UNPUBLISHED MATERIALS


