Personality profiles of a hierarchy of female high school athletes from various socioeconomic groups

Dona Elaine Hawker

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PERSONALITY PROFILES OF A HIERARCHY OF FEMALE HIGH SCHOOL ATHLETES FROM VARIOUS SOCIOECONOMIC GROUPS

A Thesis
Presented to the
Faculty of the Graduate School
University of the Pacific

In Partial Fulfillment
of the Requirement for the
Master's Degree

by
Dona Elaine Hawker
May 1975
This thesis, written and submitted by

Dona Elaine Hawker

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Dated May 1975
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Chapter 1

THE PROBLEM

Introduction

There is an almost negligible amount of research pertaining to high school girls concerning relationships between the following variables: physical fitness, personal-social adjustment, and attitude toward physical education. It should be of value to physical educators to know whether or not there are significant relationships in this area and, further, whether or not they are affected by socioeconomic level (Young, 1970, p. 593).

Although Young has suggested the possibility of a correlation between personality and the athlete, it was recommended that additional studies be made, specifically dealing with the personality of the female athlete related to socioeconomic levels.

Peterson (1967) also showed relationships between personality and sport as specific sports were selected or rejected by individual athletes because of personality traits already possessed by the individual.

Williams (1968) administered the Cattell 16 Personality Factor Questionnaire and the Edwards Personal Preference Study to thirty national level female fencers. The competitive fencer was generally described as a very much reserved, self-sufficient, autonomous individual with a below average desire for affiliation. She had a strong need to be the very best and was a creative, experimenting and imaginative person. She also tended to be assertive and aggressive. The top level competitor was significantly more dominating than the low level competitor in each
Bird (1966) determined that Canadian women intercollegiate ice hockey players were bright, independent, creative, and self-abasing. Although they were unattached to other people, they were humble and willing to accept blame. They were low in inter-personal needs of affiliation, succorance, and social approval. They were neither domineering nor extraverts as compared to a standardized norm.

Kelly (1970) examined the question of the female personality related to socioeconomic and athletic achievement by administering a personality test to view the female high school athletes and non-participants. She observed that high school athletes measured significantly higher than non-participants on poise, ascendency, self-assurance, specifically on traits of sociability and self-acceptance, dominance, sense of well-being, and socialization. Non-participants scored significantly higher on intellectual interests and femininity traits as compared to the high school female athlete.

As the above studies indicated, an increased emphasis on valid studies are needed to provide physical educators and coaches with a more definite, distinct, and conclusive image of female personalities in the different sports and on different levels of competition.

Statement of the Problem

The general problem was to determine personality differences among a hierarchy of high school female athletes in various socioeconomic groups. The specific problems were:

1. To determine if there were any significant personality
trait differences among three socioeconomic groupings of superior athletes.

2. To determine if there were any significant personality trait differences among three socioeconomic groupings of average athletes.

3. To determine if there were any significant personality trait differences among three socioeconomic groupings of nonathletes.

4. To determine if there were any significant personality trait differences among superior, average, and nonathletes.

Method-Hypothesis

The basic assumption in utilizing the experimental research hypothesis was that the study was manipulated so that one or more dependent variables (in this case, socioeconomic and athletic grouping) were controlled.

To categorize the students into socioeconomic and athletic groupings, questionnaires were given to the students, the teachers, and a final analysis by the Dean of Women was made at each school. The next step was to analyze the independent variable, the various personalities.

On the basis of the review of literature, the experimental hypotheses were stated in the null form:

1. There were no significant personality trait differences among three socioeconomic groupings of superior athletes.

2. There were no significant personality trait differences among three socioeconomic groupings of normal athletes.

3. There were no significant personality trait differences among three socioeconomic groupings of nonathletes.
4. There were no significant personality trait differences among the superior, normal, and nonathletes.

Limitations

The results of this study were not to be generalized to a large segment of people as they were peculiar to the Stockton area or similar cities and/or populations.

It was assumed that numerous other variables can affect personality differences in various socioeconomic groups and athletic groups, such as the influence of the school environment, peers, and home life.

Delimitations

Subjects for the study were eleventh and twelfth grade female students from the Stockton Unified High School District.

The study attempted to determine the interrelationship of personality and two factors, socioeconomic and athletic classification.

The Athletic Motivational Inventory (AMI) was administered to determine the location of personality differences in different athletic and socioeconomic groupings.

Definition of Terms

Definition of terms peculiar to this study were:

nonathlete

was one who had participated only in physical education classes and never had competed on an organized team with a coach, on any level, in any sport.
normal or average athlete
was one who had participated in intramural and interscholastic
activity and had achieved a moderate level of success. As defined
by Webster's Dictionary (1963), moderate means "avoiding extremes,
tending toward the mean or average in amount of quality."

superior athlete
was one who had participated on a regional or national level and
had achieved a high caliber of success as measured by the questionnaire
(appendix, p. 45) given to the student.

socioeconomic level
was the position that an individual or family occupied with
reference to the prevailing average, cultural standards, possessions,
effective income, material possessions, and participation in group
activity of the community. (Gould, 1946)

personality
was "that which permits prediction of individual differences--freed
of intraindividual variation--of response in a defined situation."
(Cattell, 1964)

personality trait
was a specific aspect of an individual's personality, in conjunction
with other traits, that determined an individual's total personality.

personality profile
was the total array of traits compiled to represent an individual.

nationally or regionally ranked
a student that had achieved success in a sport to be recognized at
a regional or national level.
AMI terms:

drive

was the desire to win or be successful; aspired to accomplish difficult tasks; set and maintained high goals for himself in athletics; responded positively to competition; desired to attain athletic excellence.

aggressiveness

was a trait in which one believed he must be aggressive to win; released aggression easily; enjoyed confrontation and argument; sometimes willing to use force to get his way; would not allow others to push him around; may work to 'get even' with people whom he perceived as having harmed him.

determination

was willingness to practice long and hard; worked on skills until exhausted; often worked out willingly by himself; persevering, even in the face of great difficulty; patient and unrelenting in his work habits; did not give up quickly on a problem.

guilt-proneness

was a trait in which one accepted responsibility for his actions; accepted blame and criticism even when not deserved; tended to dwell on his mistakes and to punish himself for them; willing to endure much physical and mental pain; would play even when injured.

leadership

was a trait in which one enjoyed the role of leader and would assume it spontaneously; believed others see him as a leader; attempted to control his environment, and to influence or direct other people; expressed opinions forcefully.

self-confidence

was a trait in which one has unfaltering confidence in himself and his capacity to deal with things; confident of his powers and abilities; handled unexpected situations well; made decisions confidently; spoke up for his beliefs to coaches and players.

emotional control

was a trait in which one tended to be emotionally stable and realistic about athletics; was not easily upset; would rarely allow his feelings to show and his performance was not affected by them; not easily depressed or frustrated by bad breaks, calls or mistakes.
mental toughness

was a trait in which one accepted strong criticism without feeling hurt; did not become easily upset when losing or playing badly; could bounce back quickly from adversity; could take rough coaching; did not need excessive encouragement from the coach.

couchability

was a trait in which one respected coaches and the coaching process; receptive to coaches' advice; considered coaching important to become a good athlete; accepted the leadership of the team captain, cooperated with authorities.

conscientiousness

was a trait in which one liked to do things as correctly as possible; tended to be exacting in character, dominated by sense of duty; did not try to "con" his coach or fellow players; would not attempt to bend rules and regulations to suit his own needs; placed the good of the team above his personal well-being.

trust

was a trait in which one accepted people at face value; believed what his coach and teammates said and did not look for ulterior motives behind their words or actions; free of jealous tendencies; tended to get along well with his teammates. (Ogilvie, 1972)
Chapter 2

RELATED LITERATURE

Personality

The personality of an individual must be separated for the purpose of valid personality measurement into distinct traits. The change of behavior in a role-playing situation can be conceptualized as a change of personality. Cattell (1964) defined personality as that which permits prediction of individual differences—freed of intrapersonal variation—of response in a defined situation.

To define this more clearly, the response to any performance was a function of the properties of the personality and the situation. To measure personality, it was considered that there was one typical kind of response to a situation, and people were simply scored on quantitative differences in the magnitude of their response (Cattell, 1964).

Personality and Socioeconomic Status

Sewell (1956) was concerned that other researchers had not rigorously designed their studies so that their results and conclusions warranted the relationship between socioeconomic status and personality adjustment they revealed. Most of the researchers found a low but positive relationship between status and measured personality adjustment. It was evident that the personality test performance of middle-class children was significantly higher than
that of lower-class children. Some of the limitations of other studies were based on comparisons between one of the lower and one of the higher status groups in a community, or between persons in the dominant ethnic group, or perhaps, even between a low status group in one community and a high status group in another community. This test was conducted in a culturally homogeneous social system in a Wisconsin community but with a wide range of status levels. The data revealed that the hypothesis of no relationship was rejected. The correlation between status and personality adjustment was found to be low, but positive and significant. The results of the study suggested that the relationship between the status of the child and his personality may be even greater in communities in which there is less cultural homogeneity and a more complex stratification system.

Gould (1946) studied the relationship between various socioeconomic levels and personality scores, academic scores and achievement scores, in a group of one hundred and twenty-six sixth grade children. The socioeconomic scale was determined by the American Home Questionnaire Scale. The conclusion of the study was that the higher socioeconomic groups had a slightly higher rating on personality and personal adjustment than the average or lower groups.

To understand the effect of socioeconomics on various factors, Kahl (1955) conducted a study comparing indexes of socioeconomic status. He concluded that there were nineteen factors possible to evaluate socioeconomic status. Income was ranked fourth out of nineteen factors on the scale of correlation between indexes and socioeconomic status. Income was preceded by husbands'
occupations, census occupation and friends' occupations. There was a .74 correlation between income and occupations. Income was the best index of socioeconomic status at the extremes, but caution was taken to predict the significance as it approached the group at the middle of the system. Kahl concluded from the battery of indexes that there were two common factors around which the nineteen indexes clustered. The first was compiled of various measures of occupation, including several closely related variables such as education, self-identification, and the interviewer's impressionistic rating of the subject. The second factor was composed of ecological factors plus the status of the parents of the subject and his wife.

**Personality and Athletics**

It was a common belief that certain types of athletes have some identifying behavioral characteristics, and that there were certain personality types that were either attracted to or repelled by different sport activities.

To illustrate this contention, Husman (1955) investigated the effect of aggression on samples of men boxers, wrestlers, cross-country runners, and nonathletes. He concluded that there were a number of distinguishing characteristics as far as aggressive tendencies were concerned. He continued that cross-country runners tended to express aggression more outwardly than boxers, and boxers possessed the least over-all intensity of aggression of the athletes studied.

Booth (1958) used the Minnesota Multiphasic Personality Inventory in a study on athletes and nonathletes, and found significant differences in personality to exist between athletes and nonathletes.
and between participants in individual sports, in team sports, and in team-individual sports. For example, anxiety was scored significantly lower in men varsity athletes than freshmen athletes, freshmen nonathletes, and upper-class nonathletes.

Confer (1960) conducted a study using the Rorschach and the House-Tree-Pierson projective test on twelve assorted contact and noncontact sport athletes of All-American or national champion caliber. Both tests showed that the champions possessed several distinguishing characteristics, from other subjects tested by these methods, which included extreme aggressiveness, freedom from great emotional inhibition, high and generalized anxiety, high level of intellectual aspiration, and feelings of exceptional self-assurance. The author cautioned, though, that this sampling should not be generalized to all champion athletes. Confer (1960, p. 546) contended that

...although there is a growing research literature dealing with the personality traits of various types of athletes, studies have not been done which justify generalization as to specific identifying characteristics of groups.

Kane (1968) compiled a report of the "Personality and Physical Abilities" of individuals and how these abilities related to their personality structure. Measurements were taken using the Cattell 16 PF test and body-type or phenotype assessments. Six groups were established according to sex and level of physical ability; specialist physical education students, both men and women, general students, men and women, and the total of men and women. Personality and physical variables appeared to be similar for physically gifted and general men students, but there were major differences between
physically gifted women and the general women students. The principal
differences found were extraversion and anxiety and were related to
combined physical variables.

Analyses showed that

(a) physically gifted men and women students differ in
personality from the general student population; (b) physically
gifted men and women students do not differ significantly in
total personality; and (c) physically gifted men and women
students do not appear to change their personality over a period
of three years (Kane, 1968, pp. 140-141).

Interrelationship of Socioeconomic Status, Athletic Ability, and
Personality

Ponthieux (1965) conducted a study to find if there was a
"relationship between socioeconomic status and physical fitness
measures." He investigated the relationship between seven aspects
of physical fitness as measured by the American Association for
Health, Physical Education and Recreation Youth Fitness Test and
socioeconomic status. The results did not indicate that one
socioeconomic status group was significantly more physically fit
than any other group in all components of fitness. The findings
indicated, however, that the lower status girls were faster (50
yard dash), better coordinated (softball throw for distance and
accuracy) and had more endurance (600 yard run-walk). The upper-
status girls were stronger in arm and shoulder girdle strength
(pull-ups and abdominal and hip flexer muscles, sit-ups) than the
lower status girls.

Young (1970) investigated socioeconomic levels, physical
fitness, and social adjustment of high school girls. Eleventh grade
girls from three socioeconomic groups were tested to determine
...whether there were any significant differences between socioeconomic groups with reference to personal-social adjustment, attitude toward physical education, and physical fitness (Young, 1970, p. 599).

The tests used were the California Test of Personality, the Wear Attitude Inventory, the American Association for Health, Physical Education and Recreation Youth Fitness Test, and the McCall's Scale for socioeconomic levels.

There was a significant difference at the .01 level between the high and low socioeconomic groups with reference to personal-social adjustment. The same result occurred at the .05 level of reference for personal adjustment and social adjustment. In each case, the high socioeconomic group showed better adjustment scores than the middle group, and the middle group better than the low group. There was a significant positive correlation at the .05 level between physical fitness and personal adjustment and between physical fitness and personal-social adjustment within the middle socioeconomic groups, but not within the high or low groups. There was no significant correlations between physical fitness and social adjustment (Young, 1970, p. 500).

Questionnaires

Biographical Information Blanks, consisting of relatively specific questions concerning an individual's past history, were assessed relative to their value in predicting desired performance and socioeconomic classifications. Each item depended on the particular prediction being attempted (Confer, 1960).

Questionnaires and ratings are commonly employed to secure data on traits of personality, although in many instances inferences are also made concerning underlying motive states (Confer, 1960, p. 543).

Athletic Motivational Inventory

The Athletic Motivational Inventory (AMI) was a standard psychological paper and pencil test designed to determine personality traits of athletes. Ogilvie and Tutko developed the AMI through ten
years experience consulting in the area of athletics (Tutko, 1972). The AMI was derived from the Edwards Personal Preference Schedule, the Illinois Personality and Ability Test, the Minnesota Multiphasic Personality Inventory, the Jackson Personality Research Form (Forms A, AA, B, BB) and the Jackson Differential Personality Test. (Tutko, 1972). The resulting test, the Athletic Motivational Inventory, proved to be an inventory more relevant to athletics since it asked questions of the athlete specific to the athletic environment.

The AMI was a test appropriate for the fully literate person between the ages of seventeen and mature adult age. The instructions were simple and clear and printed on the test booklet. The test was administered in a classroom situation and care was taken to ensure consistent testing environments. Questions were permitted regarding instructions and further explanations of the test.

Approximately twenty-five items were originally constructed for each scale using a multiple choice format with three options for each item and through intercorrelation procedures they were reduced to fifteen items (Tutko, 1972).

The scale reliabilities for each trait were: drive .80, aggressiveness .91, determination .78, guilt proneness .88, leadership .89, self-confidence .89, emotional control .92, mental toughness .93, coachability .89, conscientiousness .92, and trust .90.

The authors stated:

The major goal of the instrument from the outset is not to differentiate, eliminate or discriminate using the test but to use it as a goal whereby the coach and athlete may understand each other as well as the team. If this can even be initiated, the main goal, i.e., having each athlete work up to his potential, may be realized (Tutko, 1972, p. 2).
This test was found to be the most practical to administer and examine the personality of different socioeconomic groups in the sport environment.

The AMI has been utilized in two doctorates and three master's theses, and has compiled more than 15,000 samples, mostly men. The AMI was utilized to measure possible future behavior and was not used to justify the permanent personality of an individual. For example, the trait self-confidence as compared to guilt-proneness fluctuated with daily successes and failures (Ogilvie, 1972).

Distinct properties of the test should not be categorized to test the validity of the test. Future predictions of behavior did not require the knowledge of one trait, but rather the life situations of the individual and the total array of traits. For example, by raising the predictive validity of one trait, coachability, the scale could easily contaminate other traits such as leadership which has an association with several specific behaviors, one being self-confidence (Ogilvie, 1972).

Study of the possible uses of the AMI suggested by the authors were:

1. A provision of a better understanding of an individual's behavior tendencies. This information can be used to predict behaviors and to eliminate situations that will produce undesirable behaviors.

2. Coach-player interactions can be better effected by producing situations which will eliminate undesirable consequences.

3. From the above two statements, it can be asserted that player manipulation may be improved to the extent of maximizing training and competitive performance and participation. This would lead to a rise in the efficiency of the training system or program.

4. If a relationship between personality and physical
performance exists, one could differentiate, for selective purposes, between players of equal skill.

5. Repeated testing of players gives an indication of change in athletes. The coach can then readjust his player control procedures to the changes (Tutko, 1972, p. 166).

Summary of Chapter 2

Topics discussed in chapter two were the definitions and discussion of personality and athletic ability and socioeconomic status and athletic ability. The majority of studies revealed that there was a relationship between socioeconomic status, athletic groupings, and personality. The studies completed by Young (1970), Confer (1960) and Booth (1958) suggested a high consistency for the higher socioeconomic and high athletic groups in personal and social adjustment.
Chapter 3

PROCEDURES AND METHODS

Population

The population of the study consisted of 184 eleventh and twelfth grade girls from the Stockton Unified School District.

Sampling Technique

To insure a random sampling, the names of all eleventh and twelfth grade girls enrolled in physical education classes at Franklin, Edison and Stagg high schools were placed in a container and selected at random. The number of names drawn exceeded the number necessary for the study in order to provide a sufficient number of various subjects for the categories: the high socioeconomic status category was divided into three athletic groups; the medium socioeconomic status group was divided into three athletic groups; and the low socioeconomic status group was divided into three athletic groups. The three athletic groups were: 1) nonathletic, if the subject has participated only in high school physical education, 2) average - athletic achievement of a moderate success level of extracurricular activities was achieved, and 3) superior - the athlete was nationally or regionally ranked (appendix 3, p. 41) (appendix 1, p. 39).

Questionnaires

A questionnaire was given to the subjects to determine the
socioeconomic and athletic competency level (appendix 1, p. 39).
A questionnaire was also given to the respective teachers to further substantiate socioeconomic and athletic competency level. (appendix 2, p. 40) Two questionnaires were developed to provide the researcher with basic information concerning the subjects' names, ages, year in school, and income levels (appendix 1, Student Questionnaire). This insured more consistent and proper categorizing of the students. According to the questionnaire, low incomes stopped at $4,000 while the middle income began at $8,000. The middle income stopped at $16,000 and the high income level started at $12,000 (appendix 1, p. 39). There was a break of $4,000 to $8,000 between the low and average income areas. Between the average and high income there was a break of $16,000 to $20,000. The break between each socioeconomic category insured the elimination of border-line income subjects. The income groupings were based on the national average income provided by the U.S. Department of Commerce, Bureau of the Census (Lerner, 1970) (Figure 1) and the San Joaquin County average income presented by the Sales Management and Marketing Magazine (Albert, 1971) (Figure 3). A final check of the average was furnished by the Stockton Chamber of Commerce (Figure 2).

If there were any questions related to categorical grouping, the following procedure was utilized. The student's socioeconomic status was analyzed further by an interview and a subjective evaluation made by the Dean of Women at each school. Finally, if a subject was questionable as to which category she represented, an administrative record check was undertaken dealing with student's income history. The cases analyzed were basically clear cut. Moreover,
there were sufficient subjects in each area so that questionnable students were not required, thus negating further inquiries into the subject's histories.

Statistical Analysis

One way analysis of variance, (ANOVA) was used to determine if any significant differences existed among three athletic groups designated as superior athletes, average athletes and nonathletes for socioeconomic status: low socioeconomic group, average socioeconomic group and high socioeconomic group (appendix 3, p. 41).

ANOVA compared population means by selecting independent random samples from the population and tested the equality of the sample means (Weber, 1970). The independent variable in these groups was the difference in personality traits possible for the groups, and ANOVA determined significant difference among the three groups from different socioeconomic and athletic groups on each trait. When a significant F ratio was found through the application of ANOVA, a t test was used to determine the specific between group differences.

Summary of Chapter 3

Topics discussed in this chapter were the characteristics of the population of the study and the selection procedures used. The area of development and administration of the questionnaires to determine socioeconomic and athletic levels were evaluated. The analysis and levels of validity were then presented for the Athletic Motivational Inventory which determined personality traits in this study. Finally, the basic statistical analyses used in the
study were reviewed.
Chapter 4

RESULTS, CONCLUSIONS

Results

When the superior athletes of high, average and low income were analyzed, ANOVA found significant differences on the trait of leadership with a F ratio of 4.2727. Post hoc tests revealed that the specific location of that difference was between the superior athlete of high income and the superior athlete of average income (p < .05). There was a difference displayed (p > .07), which approached significance, between the superior athlete of high income and the superior athlete of low income. No significance was found between the superior athlete of average income groups and the superior athlete of low income (Table 1).

A comparison of the superior athletes also revealed significant differences on the trait of coachability with a ratio of 3.7113. Post hoc tests showed significance between the superior athlete of high income and the superior athlete of average income (p < .05) (Table 2).

Further results approached significance (p > .06) on variable coachability between the superior athlete of high income and the superior athlete of low income (Table 2).

When the socioeconomic groups within the normal athlete were compared, significant differences were found on the trait of
self-confidence. (p ≥ .05) Post hoc tests revealed there was a significant difference between the normal athlete of high income and the normal athlete of average income (Table 3).

Table 1

One Way Analysis of Variance for the AMI Personality Trait of Leadership for Three Groups of Superior Athletes of Various Incomes

<table>
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<tr>
<td>total</td>
<td>13.400</td>
</tr>
</tbody>
</table>

Between DF = 2

Within DF = 67

\[ N = 70 \quad F = 4.2727^* \]

*For significance at the .05 level, the F ratio must be equal to or greater than 3.0.

**For significance at the .05 level, the t ratio must be equal to or greater than 1.65.

\textsuperscript{a} Superior athlete high income.

\textsuperscript{b} Superior athlete average income.

\textsuperscript{c} Superior athlete low income.

Finally, there was a significant difference for the trait coachability. The difference was found between the nonathlete of average income and the nonathlete of low income (p ≥ .05) (Table 4).

When the total sample of superior, average, and nonathletes were compared, a significant difference was found for the trait leadership. Post hoc tests revealed that the specific difference was located between the superior and nonathletes (p ≥ .01) (Table 5).
A significant difference was found for the trait guilt-proneness among the three athletic groups (high, normal, non-athletic). Post hoc tests revealed that the specific difference was located between the superior athletic group and the average athletic group (p > .05) (Table 6).

Table 2

One Way Analysis of Variance for the AMI Personality Trait of Coachability for Three Groups of Superior Athletes of Various Incomes

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>One</th>
<th>Two</th>
<th>Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>one</td>
<td>16.450</td>
<td>3.442</td>
<td>.000</td>
<td>2.723**</td>
<td>1.874**</td>
</tr>
<tr>
<td>two</td>
<td>13.758</td>
<td>4.065</td>
<td>.000</td>
<td>.000</td>
<td>.641</td>
</tr>
<tr>
<td>three</td>
<td>14.290</td>
<td>4.026</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>total</td>
<td>14.240</td>
<td>4.079</td>
<td>N = 20</td>
<td>19</td>
<td>31</td>
</tr>
</tbody>
</table>

Between DF = 2
Within DF = 67
N = 70
F = 3.7113*

*For significance at the .05 level, the F ratio must be equal to or greater than 3.0.

**For significance at the .05 level, the t ratio must be equal to or greater than 1.65.

aSuperior athlete high income.
bSuperior athlete average income.
cSuperior athlete low income.

There were no significant differences found among the group on any of the other traits.

Conclusions

Within the limitations of this study and with specific
reference to personality traits of eleventh and twelfth grade girls in the Stockton High School District as measured by the AMI, the following conclusions were made.

Table 3

One Way Analysis of Variance for the AMI Personality Trait of Self-Confidence for Three Groups of Superior Athletes of Various Incomes

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>One&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Two&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Three&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>one&lt;sup&gt;a&lt;/sup&gt;</td>
<td>11.308</td>
<td>3.048</td>
<td>.000</td>
<td>2.390**</td>
<td>.603</td>
</tr>
<tr>
<td>two&lt;sup&gt;b&lt;/sup&gt;</td>
<td>8.333</td>
<td>2.944</td>
<td>.000</td>
<td>.000</td>
<td>2.042**</td>
</tr>
<tr>
<td>three&lt;sup&gt;c&lt;/sup&gt;</td>
<td>10.524</td>
<td>4.542</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>total</td>
<td>9.721</td>
<td>3.511</td>
<td>N = 13</td>
<td>27</td>
<td>21</td>
</tr>
</tbody>
</table>

Between DF = 2          Within DF = 58

N = 61            F = 3.6159*

*For significance at the .05 level, the F ratio must be equal to or greater than 3.16.

**For significance at the .05 level, the t ratio must be equal to or greater than 1.678.

<sup>a</sup>Superior athlete high income.

<sup>b</sup>Superior athlete average income.

<sup>c</sup>Superior athlete low income.

1. The null hypothesis stating that there were no significant personality trait differences among three socioeconomic groupings of superior athletes was rejected.

   a) the superior female high school athletes of high income were significantly more coachable than superior female athletes of average incomes.
b) the superior female athletes of high incomes were more coachable than superior female athletes of low incomes.

c) the superior female athletes of high incomes displayed significantly more leadership than the superior female athlete of average income.

d) the superior female athletes of high income displayed more leadership than the superior female athlete of low income.

Table 4

One Way Analysis of Variance for the AMI Personality Trait of Coachability for Three Groups of Nonathletes of Various Incomes

<table>
<thead>
<tr>
<th>Variable 9</th>
<th>Coachability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>Mean</td>
</tr>
<tr>
<td>one a</td>
<td>14.250</td>
</tr>
<tr>
<td>two b</td>
<td>11.476</td>
</tr>
<tr>
<td>three c</td>
<td>14.688</td>
</tr>
<tr>
<td>total</td>
<td>13.283</td>
</tr>
</tbody>
</table>

Between DF = 2  Within DF = 50

N = 53  F = 3.3388*

*For significance at the .05 level, the F ratio must be equal to or greater than 3.19.

**For significance at the .05 level, the t ratio must be equal to or greater than 1.678.

a Nonathletes high income.

b Nonathletes average income.

c Nonathletes low income.

2. The null hypothesis stating that there were no significant personality trait differences among three socioeconomic groupings
of normal athletes was rejected.

a) the normal female athletes of high income displayed significantly more self-confidence than the average female athletes of average incomes.

Table 5
One Way Analysis of Variance for the AMI Personality Trait of Leadership for Three Groups of Athletes

<table>
<thead>
<tr>
<th>Variable</th>
<th>Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>Meana</td>
</tr>
<tr>
<td>onea</td>
<td>13.400</td>
</tr>
<tr>
<td>twob</td>
<td>11.689</td>
</tr>
<tr>
<td>threc</td>
<td>11.226</td>
</tr>
<tr>
<td>total</td>
<td>12.552</td>
</tr>
</tbody>
</table>

Between DF = 2  
Within DF = 181

N = 184  
F = 6.5051*

*For significance at the .01 level, the F ratio must be equal to or greater than 3.0.

**For significance at the .01 level, the t ratio must be equal to or greater than 1.65.

a) superior  
b) normal  
c) nonathlete

3. The null hypothesis stating that there were no significant personality trait differences among three socioeconomic groupings of nonathletes was rejected.

a) the nonathletic females with average incomes were significantly more coachable than nonathletic females of low incomes.

4. The null hypothesis stating that there were no significant
personality trait differences among the superior, normal, and nonathletes was rejected.

a) the superior athletes, regardless of socioeconomic grouping, displayed significantly more leadership than the non-athletes, regardless of socioeconomic classification.

b) the superior athletes, regardless of socioeconomic groups, were significantly more guilt-prone than the normal athletic groups, regardless of socioeconomics.

Table 6
One Way Analysis of Variance for the AMI Personality Trait of Guilt-Proneness for Three Groups of Athletes

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>One</th>
<th>Two</th>
<th>Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>one a</td>
<td>14.041</td>
<td>3.237</td>
<td>.000</td>
<td>2.464**</td>
<td>1.136</td>
</tr>
<tr>
<td>two</td>
<td>12.758</td>
<td>3.509</td>
<td>.000</td>
<td>.000</td>
<td>1.022</td>
</tr>
<tr>
<td>three</td>
<td>13.415</td>
<td>3.764</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>total</td>
<td>13.609</td>
<td>3.456</td>
<td>N = 49</td>
<td>67</td>
<td>68</td>
</tr>
</tbody>
</table>

Between DF = 2

N = 184  \( F = 3.1422** \)

*For significance at the .05 level, the F ratio must be equal to or greater than 3.0.

**For significance at the .05 level, the t ratio must be equal to or greater than 1.65.

a Superior
b Normal
c Nonathlete
Chapter 5

SUMMARY, DISCUSSION, RECOMMENDATION

Summary

The population of the study consisted of 184 eleventh and twelfth grade superior, normal and nonathletes from the Stockton Unified School District. The Athletic Motivational Inventory (AMI) was utilized to determine the personality profiles of the various athletic groups (superior, normal, and nonathletes).

To categorize the students into socioeconomic and athletic groupings, questionnaires were given to the students and teachers.

One way analysis of variance was used to determine if any personality difference existed among the superior athletes of high, average, and low income, the average athlete of high, average, and low income, and the nonathlete of high, average, and low income.

Specific between group differences were determined by the t test if a significant F ratio was found.

Young has suggested the possibility of a correlation between personality and the athlete. It was recommended that more studies be completed dealing in the area and specifically with the personality of the female athlete.

Discussion

Based on the results and conclusions of the study, it was found that the superior female high school athletes of high income
were more coachable than the superior female athletes of average income. In addition, the superior female athletes of high incomes were more coachable than the superior female athletes of low incomes. Finally, the superior female athletes of high incomes displayed significantly more leadership than the superior female athlete of average or low income.

The above four conclusions from the study dealing with the superior athlete provided basis for the rejection of the first null hypothesis of the study; there were no significant personality trait differences among three socioeconomic groupings of superior athletes.

Young (1970) discussed the social and personal adjustment of high school girls by socioeconomic level. The author felt other studies pertaining to physical activity and socioeconomics would "be of value to physical educators to know whether or not there are significant relationships in this area and, further, whether or not they are affected by socioeconomic level" (Young, 1970, p. 593). The results of this study pertaining to the superior athlete of displaying more leadership than the superior athlete of average or low income strengthened Young's findings that the high socioeconomic groups displayed better adjustment scores. This is suggested since the higher socioeconomic groups scored significantly higher on the trait leadership, and it can be considered as a component of adjustment. The conclusions also added additional scores and findings to an area of study that has only minutely been developed; the problem of the female athletic personality profile and its relationship to socioeconomic groups.

Based on the results, the average female athletes of high
income displayed more self-confidence than the average female athletes of average income.

This resulted in the rejection of the null hypothesis: there were no significant personality trait differences among three socioeconomic groupings of average athletes.

Kelly (1970) examined the female personality and its relationship to socioeconomic and athletic achievement. She found that high school athletes of higher income measured significantly higher in personality than athletes of lower income or nonparticipants on self-assurance and poise.

This relates to the conclusions found that the average athlete of high income displayed more self-confidence than the average athlete of average income, assuming poise and self-assurance relate to self-confidence.

Further conclusions found the nonathletic females with average incomes significantly more coachable than nonathletic females of low incomes.

Young (1970) investigated socioeconomic levels, physical fitness, and social adjustment of high school girls. She found a significant difference between higher and lower socioeconomic groups with reference to personal-social adjustment. This relates to the conclusions that non-athletes of average income were found to be more coachable than the nonathletes of low incomes, assuming that the trait, coachability, relates to personal-social adjustment.

Finally, conclusions were constructed that found the superior athletes, regardless of socioeconomic grouping, displayed more leadership than the nonathletes. Also, the superior athletes,
regardless of socioeconomic groups, were more guilt-prone than the average athletic groups. These conclusions led to the rejection of the fourth null hypothesis: there were no significant personality trait differences among the superior, average, and nonathletes.

The results that the superior athletes displayed more qualities of leadership and guilt-proneness was in accordance with Williams' conclusions in his investigation of the personality traits of the champion female fencer. Williams' results revealed that the top level competitor was significantly more dominating than the low level competitor. Assuming that leadership, coachability and self-confidence are dominating traits, a relationship was found between Williams' and the author's conclusions concerning the possession by the superior athletes of significantly more dominating traits than the average or nonathletes.

Possibilities exist that there were other contributing factors that the researcher was not able to control, such as racial or geographic influences. Groups of female athletes could be attracted to or excluded from athletic events because of racial or ethnic origin (Edwards, 1970). Also, certain geographic areas place various amounts of emphasis on specific athletic activities and could attract or reject participants on that basis (Hart, 1970).

Recommendations

As a result, the following recommendations for future research are suggested:

1. Studies be conducted to determine whether significant personality traits (coachability, self-confidence, guilt-proneness, and leadership) are predictors of athletic participation and
success.

2. Longitudinal studies be conducted to determine favorable effects of prolonged participation in organized athletic activity. Also, studies could be conducted to determine the effect of participation in athletics on personality traits among ethnic groups.

3. Studies be conducted to determine the influence of age, educational level, or participation in a particular sport on the personality profiles of the athlete.
REFERENCES
REFERENCES


Ogilvie, B. The unanswered question: competition, its effect upon femininity. paper presented to the olympic development committee, Santa Barbara, California: June 30, 1967.


Tutko, T. and Ogilvie, B. unpublished paper and lecture, findings from the AMI, Stockton, 1972.


APPENDIXES
APPENDIX ONE
QUESTIONNAIRE FOR STUDENTS

<table>
<thead>
<tr>
<th>Name ____________________________</th>
<th>Ethnic Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age _____________________________</td>
<td>Am. Indian ___ Oriental ___</td>
</tr>
<tr>
<td>Year in School ___________________</td>
<td>Chicano ___ Caucasian ___</td>
</tr>
<tr>
<td>Name of High School _______________</td>
<td>Black ___ Other ___</td>
</tr>
<tr>
<td>Name of Your Physical Education Teacher ____________________</td>
<td>Filipino ___</td>
</tr>
</tbody>
</table>

************************************************************

Income

I. Is your family’s income between: (choose one)

____ a) 0-$4,000
____ b) $4,000-$16,000
17,000 c) $20,000-above Mathematical Error

Physical Activity

II. Choose one:

a) Have you ever competed on an organized team with a coach, on any level?
   Yes ___ No ___ If “yes”, what sport(s)? _____

b) Have you ever participated on an intramural or interscholastic level with moderate ability?
   Yes ___ No ___ If “yes”, what sport(s)? _____

c) If you have participated on an intramural or interscholastic level, do you feel you have achieved a high level of success?
   Yes ___ No ___

d) Have you ever participated in a regional or national sport?
   Yes ___ No ___ If “yes”, what sport(s)? _____
APPENDIX TWO

QUESTIONNAIRE FOR TEACHER

Teacher's Name ____________________________________________

Name of Student __________________________________________

Age of Student ____________________________________________

Year in School ____________________________________________

Name of School ____________________________________________

###################################################################

Income

I. Do you feel ____________'s family income is in:

(Choose one)

_____ a) low income bracket (0-$4,000)

_____ b) medium income bracket ($8,000-$16,000)

_____ c) high income bracket ($20,000-above)

Physical Activity

II. Choose one:

a) Has this student ever competed on an organized team with
   a coach, on any level?
   Yes ________ No ________ If "yes", what sport(s)? ________

b) Has this student ever participated on an intramural or
   interscholastic level with moderate ability?
   Yes ________ No ________ If "yes", what sport(s)? ________

c) If this student has participated on an intramural or
   interscholastic level, do you feel she has achieved a
   high level of success?
   Yes ________ No ________

d) Has this student ever participated in a regional or
   national sport?
   Yes ________ No ________ If "yes", what sport(s)? ________
### Categories of Study

#### Athletic Grouping

<table>
<thead>
<tr>
<th>Socioeconomic Grouping</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1</td>
<td>N = 20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td>N = 19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-3</td>
<td>N = 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-1</td>
<td>N = 13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-2</td>
<td>N = 27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-3</td>
<td>N = 21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-1</td>
<td>N = 16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-2</td>
<td>N = 21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-3</td>
<td>N = 16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key:**
- **Socioeconomic grouping:**
  - 1 = high
  - 2 = average
  - 3 = low
- **Athletic grouping:**
  - 1 = superior
  - 2 = normal, average
  - 3 = nonathletic
### APPENDIX FOUR

#### INCOME, EXPENDITURES, AND WEALTH

**No. 491. Money Income—Percent Distribution of Families and Unrelated Individuals, by Income Level, by Race and Region: 1968**

[As of March 1968. Based on Current Population Survey; see text, p. 1. For definitions, see text, p. 3. For details concerning methodology, see source. For composition of regions, see fig. 1, p. 111]

<table>
<thead>
<tr>
<th>ITEM</th>
<th>All races</th>
<th>United States</th>
<th>North and West</th>
<th>South</th>
<th>All races</th>
<th>White</th>
<th>Negro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>1,000</td>
<td>50,310</td>
<td>45,073</td>
<td>4,648</td>
<td>194</td>
<td>2,330</td>
<td>12,863</td>
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<tr>
<td>Percent</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Under $1,000</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$1,000-$1,999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$2,000-$2,999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$3,000-$3,999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$5,000-$5,999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$6,000-$6,999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$7,000-$7,999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$8,000-$8,999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$9,000-$9,999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$10,000 and over</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty with income less than $3,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For definition of median, see preface.

Source: Dept. of Commerce, Bureau of the Census; Current Population Reports, Series P-60, No. 66, and unpublished data.

---

**No. 487. Money Income—Percent Distribution of Families and Unrelated Individuals, by Income Level and Race, in Constant (1968) Dollars: 1950 to 1968**

[Prior to 1960, excludes Alaska and Hawaii. See headnote, table 486]

<table>
<thead>
<tr>
<th>ITEM AND INCOME LEVEL</th>
<th>WHITE</th>
<th>WHITE</th>
<th>WHITE</th>
<th>WHITE</th>
<th>WHITE</th>
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<th>WHITE</th>
<th>WHITE</th>
<th>WHITE</th>
<th>WHITE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $3,000</td>
<td>23.4</td>
<td>23.4</td>
<td>23.4</td>
<td>23.4</td>
<td>23.4</td>
<td>23.4</td>
<td>23.4</td>
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<td>23.4</td>
<td>23.4</td>
<td>23.4</td>
<td>23.4</td>
<td>23.4</td>
</tr>
<tr>
<td>$3,000-$3,999</td>
<td>20.4</td>
<td>20.4</td>
<td>20.4</td>
<td>20.4</td>
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<td>20.4</td>
<td>20.4</td>
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<td>20.4</td>
<td>20.4</td>
<td>20.4</td>
<td>20.4</td>
<td>20.4</td>
</tr>
<tr>
<td>$6,000-$6,999</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
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<td>19.4</td>
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<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
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</tr>
<tr>
<td>$8,000-$8,999</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
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<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
</tr>
<tr>
<td>$9,000-$9,999</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
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<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
</tr>
<tr>
<td>$10,000 and over</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
<td>19.4</td>
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<tr>
<td>Median income</td>
<td></td>
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<tr>
<td>Ratio, Negro and other races to white</td>
<td></td>
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</tbody>
</table>

- Represents zero. X Not applicable. 1 See footnote 1, table 486.

## California

### Counties and Cities

<table>
<thead>
<tr>
<th>County</th>
<th>Cities</th>
<th>Population</th>
<th>Total Sales</th>
<th>Retail Sales</th>
<th>Auto Sales</th>
<th>Drop ($)</th>
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</thead>
<tbody>
<tr>
<td>San Diego</td>
<td>241</td>
<td>1,370,101</td>
<td>4,750,642</td>
<td>706,105</td>
<td>14,004</td>
<td>2,232</td>
</tr>
<tr>
<td>Orange</td>
<td>209</td>
<td>2,008,907</td>
<td>3,890,032</td>
<td>567,103</td>
<td>11,534</td>
<td>1,752</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>2,246</td>
<td>4,922,800</td>
<td>9,342,112</td>
<td>1,604,000</td>
<td>33,056</td>
<td>5,390</td>
</tr>
<tr>
<td>Riverside</td>
<td>1,073</td>
<td>2,207,100</td>
<td>3,829,900</td>
<td>554,000</td>
<td>11,000</td>
<td>1,567</td>
</tr>
<tr>
<td>San Bernardino</td>
<td>345</td>
<td>1,188,900</td>
<td>2,224,600</td>
<td>334,000</td>
<td>6,530</td>
<td>1,001</td>
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</tr>
</tbody>
</table>
### SAN JOAQUIN VALLEY – SELECTED BUSINESS STATISTICS

#### General Business Activity
<table>
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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>San Joaquin Valley Index</td>
<td>125.9</td>
<td>127.3</td>
<td>129.5</td>
<td>13.1</td>
</tr>
<tr>
<td>Adjusted for population trend</td>
<td>120.8</td>
<td>122.0</td>
<td>124.0</td>
<td>11.8</td>
</tr>
</tbody>
</table>

#### Finance

- **Bank debits index—4 counties**
  - July 1970: 161.3\(^\uparrow\)
  - % Change: 12.1

#### Trade

- **Department store sales index—3 counties**
  - July 1970: 129.4\(^\uparrow\)
  - % Change: 9.8

#### Employment and Industry

- **Total employment index—6 counties**
  - July 1970: 104.2\(^\uparrow\)
  - % Change: 1.9

#### Manufacturing man-hours index—4 counties

- **Wage and salary workers in manufacturing**
  - July 1970: 109.9p
  - % Change: 7.7

- **Manufacturing workers' earnings and hours**
  - July 1970: 5.40p
  - % Change: 7.1

- **Petroleum production index—San Joaquin Valley**
  - July 1970: 387.5p
  - % Change: 3.1