CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

SELF-ESTEEM AND SELF-ESTIMATES OF INTELLIGENCE IN MEN AND WOMEN

A thesis submitted in partial satisfaction of the requirements for the degree of Master of Arts in Educational Psychology

by

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ABSTRACT

SELF-ESTEEM AND SELF-ESTIMATES OF INTELLIGENCE IN MEN AND WOMEN

by

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Masters of Arts in Educational Psychology

In this study, the relationship between self-esteem and self-estimates of intelligence was explored. Tests measuring these variables were administered to 30 male and 35 female subjects. Results indicated that (1) male and female subjects did not differ significantly with regard to self-esteem, (2) although equal in intelligence, female subjects projected significantly lower self-estimates of intelligence onto themselves in comparing themselves both to people in general and to men than did the male subjects, and (3) male and female subjects projected fairly equal self-estimates of intelligence onto themselves in comparing themselves with women.
Chapter I

Introduction

It is clear that self-esteem is a central and critical variable influencing human behavior. Many laboratory and field investigations tend to support and extend the importance of self-esteem in personal experience and interpersonal behavior. Although the evidence is often merely an inference derived from the study of other topics, these investigations often conclude that self-esteem is a major contributing variable. Experimental studies indicate that a person with high self-esteem maintains a fairly constant image of his capabilities and of his distinctness as a person (Fitts, 1972). In addition, Bledsoe and Garrison (1962) feel that an individual's perception of himself may well be the central factor influencing his behavior. Brandon (1971) states that since self-esteem is a basic psychological need, the failure to achieve it leads to disastrous consequences. Since a man's self-concept is crucially important to his choice of values and goals, the degree of his self-importance (or lack of it) has a profound impact on every key aspect of his life. Less troubled by fears and ambivalence, less burdened by
self-doubt and minor personality disturbances, the person with high self-esteem apparently moves more directly and realistically toward his personal goals (Fitts, 1972). Kaplan (1975) contends that the "self-esteem motive is universally and characteristically . . . a dominant motive in the individual's motivational system."

Earlier psychologists and sociologists such as William James, G. H. Mead and Charles Cooley provided insights and guidelines for the study of self-esteem. However, they were more concerned with the origin and nature of the self, and not specifically directed toward the investigation of self-esteem. Only recently has it been understood that the self-concept develops out of a social definition of the individual's relationship to the world around him. As others important to his life evaluate the person, so will he come to evaluate himself. Maslow (1968) states that no psychological health is possible unless the essential core of a person is fundamentally accepted, loved and respected by others and by himself.

Hinch (1963) believed that the self concept is the individual's conception of himself as it emerges from social interaction. The self-concept, in turn, guides or influences the behavior of that individual.
The individual's behavior cannot legitimately be studied apart from the social context of the environment in which the person lives. Thus, the development of self-esteem is a process which must be examined within a sociocultural setting (Healey, 1969). However, an extensive search of the literature has revealed that there exists a considerable amount of confusion with regard to the extent to which sociocultural factors influence the self-esteem.

Wylie's (1963) review of the studies on self-esteem which have investigated sex differences and socioeconomic class noted that research up until 1958 was filled with inconsistencies and contradictory results. More recent studies on sex differences in self-esteem have used a wide variety of instruments and have produced an equally varied set of results. Perhaps the most frequent finding is an absence of statistically significant sex differences in self-reported self-esteem (Carlson, 1965; Carpenter and Busse, 1969; Damico, 1975; Friedman, Rogers and Gettys, 1975).

A few studies have found females significantly higher than males (Baum et al., 1970; Bledsoe, 1967; Campbell, 1966) though this result appears to be rare. In some cases, either in the whole sample or in a subsample, males scored higher than females (Durley, 1975; Good and Good, 1975; Fein, O'Neill, Frank and
Velit, 1975). The resolution of these contradictory results depends on further investigation.

Though self-esteem has been related to many other behaviors, most research has focused on its relationship with academic performance. Evidence indicating that a relationship exists between self-esteem and school achievement is substantial (Horowitz, 1939; Reeder, 1955; Bruck, 1975; Lumpkin, 1959; Coopersmith, 1959; Roth, 1959; Vedebeck, 1960; Piers and Harris, 1966; Campbell, 1967; Rosenthal and Jacobson, 1968; Piers, 1969; Bandura, 1969; Bailey, 1971; Black, 1974; Leviton, 1975). However, remarkably little research on self-ratings of intelligence has been conducted, and from a developmental standpoint, the area is essentially unexplored.

The rationale for this study comes from the inadequate research and conflicting results of previous studies. Only a few studies have dealt with the influence of the sex variable on self-esteem. In addition, the lack of research dealing with self-ratings of intelligence provides additional rationale for conducting this study.

The Problem

Statement of the Problem. The purpose of this study is to investigate the relationship between self-esteem and self-estimates of intelligence in men and women.
Hypotheses. The following hypotheses will be tested:

1. There will be no statistically significant difference between the I.Q. Scores of males and females in the sample.

2. Females in the sample will exhibit lower self-concept scores than will the males in the sample.

3. In comparing themselves to people with similar backgrounds and education, females in the sample will have lower self-estimates of intelligence than the males in the sample.

4. There will be no statistically significant difference in self-estimates of intelligence between males and females in the sample in comparing themselves to women with similar backgrounds and education.

5. In comparing themselves to men with similar backgrounds and education, females in the sample will have lower self-estimates of intelligence than the males in the sample.

Assumptions. This study was based on the following assumptions:

1. The Tennessee Self-Concept Scale is a valid and reliable instrument for testing self-esteem.

2. The Lorge-Thorndike Intelligence Test is a valid and reliable instrument for measuring intelligence.
3. The Self-Concept of I.Q. Scale can demonstrate a person's subjective perceptions of his own and others' I.Q.

**Importance of the Study.** The development of positive self-esteem is necessary for an individual's effectiveness as a learner and also for his mental health. Wattenberg and Clifford (1964) stated: "Mental health is dependent on the strength of the ego, the wholesomeness of the self-concept." In relation to learning, Combs and Snygg (1959) have stated that learning can never be separated from the personality of the learner. Since the perceptual field is always organized with respect to the self, differentiations and learning may occur with more or less reference to self; it can never occur unrelated to self.

Apart from the relevance this study has for further understanding in the area of learning, it has great significance for the areas of guidance and counseling. The results of this study may enhance our understanding of women and their relationship to the educational community. Correlations between self-esteem and self-perceived intelligence and ability can provide critical focus for career counseling with women. If men and women see themselves differently, then it is essential that those who are involved in the counseling
and guidance fields be aware of these differences so as to take them into account when dealing with clients.

According to Super (1963), in expressing a vocational preference, a person puts into occupational terminology his ideas of the kind of person he is; in entering into an occupation, he seeks to implement a concept of himself; in getting established in an occupation he achieves self-actualization. The occupation thus makes possible the playing of a role appropriate to the self-concept.

Friedman (1963), using Eriksonian terminology, has similarly noted that the "focus of career development is in a presumably continuously differentiating ego-identity as it is formed from experience." According to Kroll (1970), if career development is a sector of human behavior that has strong ties with man's conception of himself, one might hypothesize that any strengthening of the capacity and motivation for self-understanding would accordingly have applicability for the enhancement of career pursuits. Better yet, if a process common to both the attainment of identity and the development of a career could be identified, any successful attempts at strengthening and developing that process would
have strongly positive effects for the enhancement of the individual's personality and for the realization of his potentialities at work. We suggest that self-evaluation appears to be one such common process.

A real challenge for counselors is to understand not only how each individual is like others but also ways in which he is unique. Raimy (1943) stated that the self-concept is the more or less organized perceptual object resulting from present and past self-observation. It is what a person believes about himself. The self-concept is the map that each person consults in order to understand himself, especially during moments of crisis or choice.

Lee (1958) echoed the same thought by saying "Our prediction of a person's behavior in a situation is improved as we better understand his self-concept."

Thus, the keys to psychology and counseling are contained in understanding an individual's self-concept. Brandon (1969) states:

There is no value-judgement more important to man - no factor more decisive in his psychological development and motivation - than the estimate he passes on himself . . . . the nature of his self-evaluation has profound effects on a man's thinking processes, emotions, desires, values and
goals. It is the single most significant key to his behavior.

Dobson (1974) stressed that the matter of personal worth is not only the concern of those who lack it. In a real sense, the health of an entire society depends on the ease with which its individual members can gain personal acceptance. Thus, whenever the keys to self-esteem are seemingly out of reach for a large percentage of the people, as in twentieth century America, then widespread "mental illness", neuroticism, hatred, alcoholism, drug abuse, violence, and social disorder will certainly occur. Personal worth is not something human beings are free to take or leave. We must have it, and when it is unattainable, everybody suffers.

Definition of Terms

The first essential step in the study of self-esteem is to clarify the meaning of the term. Coopersmith (1967) refers to self-esteem as the evaluation which the individual makes and customarily uses with regard to himself; it expresses an attitude of approval or disapproval and indicates the extent to which the individual believes himself to be capable, significant, successful and worthy.
Horrocks and Jackson (1972) define an individual's concepts of self as the meaning he attributes to himself both as a person and as a participant in situations involving other persons. Gergen (1971) proposes that self-esteem should be thought of not as a consistent, global self-evaluation but rather as a set of attitudes about the self that produces a different overall self-evaluation depending on the circumstances. Thus, a person might have high self-esteem in a competitive work situation but low self-esteem in a social situation involving informal peer interaction. Coopersmith (1967) implicitly recognized the possibility of differential self-esteem. His self-esteem inventory yields a total self-esteem score and also has subscales for self-esteem in relation to peers, parents and school.

As in previous research, self-esteem and self-concept are used interchangeably in this study.

Organization of the Remainder of the Thesis

The remainder of this thesis is organized in the following manner. Chapter II includes a review of related literature concerning self-esteem as it relates to sex, achievement and self-estimates of intelligence. The method of investigation is described in Chapter III. The results of the study are presented in Chapter IV. In Chapter V, the study is summarized, conclusions are made, and recommendations are proposed.
Chapter II

Review of the Literature

Introduction

A review of the literature was undertaken to investigate related studies regarding:

1. The relationship which exists between self-esteem and sex.

2. The relationship which exists among self-esteem, achievement and self-estimates of intelligence.

Self-Esteem and Its Relationship to Sex

According to Wylie (1961), there exists much confusion in regard to the relationship between sex and self-esteem. Many people argue that society treats women as inferior and incompetent, and that women internalize these social definitions of their worth and tend to develop feelings of inferiority (Rosenberg, 1979). Dobson (1974) states that

... low self-esteem is extremely common among adults today, being particularly prevalent with American women. If I could write a prescription for the women of the world, it would provide each one of them with a healthy dose of self-esteem and personal worth (taken three times a day until the symptoms
disappear). I have no doubt that this is their greatest need.

The empirical evidence in this regard is surprisingly inconsistent with some studies (F. Rosenberg and Simmons, 1975; Bush, Simmons, Hutchinson, and Blyth, 1977-78) showing lower self-esteem among girls, and others (Rosenberg, 1965; Macoby and Jacklin, 1974) showing little sex differences. But there are a number of other aspects of the self-concept which show definite sex differences.

Wilson and Wilson (1976) were able to show that males and females have different sources for their self-esteem. Male self-esteem derives from success experiences in vocations, positions of power and competition. Female self-esteem derives from the achievement of personal goals, body image, existential concerns and family relationships.

Research done by Berger (1968) seems to confirm that the female's self-evaluation stems from different sources than the male's. Females tend to derive at least some part of their self-evaluation from social certainty, while males tend to rely on other sources. When asked what makes them feel "important and useful," for example, boys refer to work and achievement; girls more often refer to acceptance, popularity and praise from others (Douvan and Adelson, 1966).
F. Rosenberg and Simmons (1975) and Simmons and F. Rosenberg (1975) comparing boys' and girls' self-concepts by age, uncovered the following finding: that, although the self-esteem of boys and girls differed only modestly, at adolescence girls showed considerably higher instability of self-concept - their ideas about themselves tended to change more quickly, to vary from day to day. Furthermore, girls showed strikingly higher self-consciousness, expressed in such reactions as feeling nervous about talking in front of others, feeling uneasy if someone watched them work and thinking about other peoples' reactions to them at public gatherings.

In a study done on a similar theme, it was found that self-evaluations are determined largely by evaluations received from others. In two large national samples of self-evaluations of intelligence, white females rated themselves much lower than did white males. The authors suggest that the generally derogatory evaluation of women received from the white male subjects in the study, especially with regard to competence and ability characteristics, may indicate an important contributing factor to the relatively low self-esteem of white females that has been reported in other studies (Turner and Turner, 1974).

By contrast, boys have a greater tendency to look on the bright side of their own abilities. Macoby and
Jacklin (1974) feel that it is not the girls' self-confidence that is unrealistically low, but the boys' self-confidence that is unrealistically high. In other words, it is not so much that girls underestimate their abilities as that boys overestimate theirs. Even with respect to social sensitivity - a presumably feminine trait - young men seem to "hear" comments to the effect that they are insensitive, and their self-ratings of sensitivity are scarcely affected by negative feedback (Eagly and Whitehead, 1972), whereas they do react with improved self-ratings to positive information about their social sensitivity. Young women, however, are responsive to both kinds of information. L. W. Hoffman (1975) concluded that females have less confidence in their ability to perform many tasks and are more likely to seek the help and reassurance of others.

However, a review by Lenney (1977) indicates that, while males usually express more confidence than females, such is not always the case. Lenney delineated three situational variables that influence whether or not sex differences in self-confidence occur:

1. On tasks designated as female appropriate (that is, on which females are expected to do well, such as ones measuring social skills) as opposed to male appropriate, women are likely to express as much, if not more, self-confidence as men.
2. Women are less self-confident than men if given minimal or ambiguous feedback about their abilities or performances, whereas a sex difference is unlikely to occur if explicit feedback is provided. Thus, college women may be less confident than college men about passing the first exam in a course but not necessarily less confident about passing the final exam (that is, after having received feedback from the instructor about their performance on earlier course assignments and exams).

3. The self-confidence of women is lower than that of men if they are aware that their performance may be evaluated with that of others (for example, under competitive conditions or when informed of some standard of performance), but not lower when such social cues are minimized.

Studies that do reveal a difference in self-esteem between males and females demonstrate that such a difference exists at all age levels. Smith (1975) applied Sears' Self-Concept Inventory to 171 upper primary school pupils. Generally the children possessed favorable self-concepts, confirming previous investigations (Coopersmith, 1976).

However, a sex difference appeared in most aspects of the self-concept measured. Boys consistently rated themselves more favorably than girls on seven out of nine
subscales (physical ability, appearance, convergent mental ability, social relations, social virtues, school performance). On the remaining two scales (work habits, happy qualities), the boys were slightly, but not significantly, ahead. It indicates that as early as middle childhood girls were beginning to evaluate themselves less favorably than boys. Loeb and Horst (1978) administered the short form of the Coopersmith Self-Esteem Inventory to 952 4th and 5th grade children (482 males, 470 females) from 41 classes and found that in self-ratings, girls were significantly lower than boys.

Moving on to adolescence, a study by Bush (1977), studying adolescent perception of sex-roles in 1968 and again in 1975, showed that girls in 1974-1975 still demonstrate lower self-esteem and less high evaluations of their sex roles.

Studying college-age students, Rosenkrantz et al. found that despite historical changes in the legal status of women and despite the changes in permissible behaviors accorded men and women, the sex-role stereotypes continue to be clearly defined and held in agreement by both college men and women. Also, self-concepts of men and women are very similar to the respective stereotypes. In the case of the self-concepts of women this means, presumably, that women also hold negative values of their
worth relative to men (Rosenkrantz et al., 1968). Another study of college students by Hogan (1978) to investigate whether females subjectively perceive themselves as having different amounts of intelligence from males revealed that, compared with male self-perceptions, females attribute higher I.Q.'s to others than they claim for themselves.

Studies of adults show that women show relatively lower self-evaluation than do men, and the former rate themselves more poorly than men do even when they do well (Galtung and Guterman, 1957-58; Aursand, 1960). McKee and Sherriffs (1957, 1964) found that the self-descriptions of women are less favorable than those of men. Further, when either men or women are asked to rate qualities they associate with an ideal male, they rate them higher than qualities they associate with an ideal female (Rosenkrantz et al., 1968). Both men and women, describing people who succeed in academic settings, depict painful and embarrassing things happening to successful women, good things to successful men (Monahan et al., 1974). Both men and women devalue work labeled as done by women over the same work labeled as normally done by men (H. Mischel, 1974). Further support for a lower self-image in females is found in the research of Davis (1962); Gove and Herb (1974); Gove and Tudor (1973); Guin, Veroff and Feld (1960); Offer, Ostrov
and Howard (1972); Rosenberg and Simmons (1972), and Simmons and Rosenberg (1975).

**Self-Esteem and Its Relationship to Achievement and Self-Estimates of Intelligence**

Though self-esteem has been related to many other behaviors, the most research has been done considering its relationship with academic performance. Evidence indicating that a relationship exists between self-esteem and school achievement is substantial.

William James (1890) was perhaps the first to show awareness of the effects of performance on self-concept level. As he wisely pointed out:

> With no attempt there can be no failure, with no failure no humiliation. So our self feeling in the world depends entirely on what we back ourselves to be and to do.

Researchers now know that self-concept not only affects performance, but that it does so at a very early age. Wattenberg and Clifford (1964) found that an unfavorable self-concept is already established in many children before they enter first grade. They studied 128 Kindergarten students in two schools, one serving lower-class, the other middle-class neighborhoods, measuring intelligence, self-concept, ego strength and reading ability of all the students when they were in Kindergarten and then again when these same students
finished second grade. They found that measures of self-concept and ego strength made at the beginning of Kindergarten were more predictive of reading achievement 2½ years later than were measures of intelligence. In other words, self attitudes of the Kindergarten students were a more accurate indication of their potential reading skills than their intelligence scores. This finding was supported by Stenner and Katzenmeyer (1976), who investigated the relationship between self-concept, ability and school achievement using two ability tests, six achievement tests and seven scales of the Self Observation Scales (SOS) with 225 11 year-olds from rural areas in West Virginia. The correlation between the SOS scores and the achievement areas was found to be significantly greater than that between SOS and IQ, thus supporting the notion that self-concept plays an important part in predicting academic achievement.

Similar results have been obtained by other researchers in a wide variety of studies. In a study conducted by Simon and Simon (1975) dealing with a sample of 10 year-olds, the relationship between self-esteem and standardized academic achievement was examined. The Coopersmith Self-Esteem Inventory (Coopersmith, 1967) was used to measure self-esteem and the SRA Achievement Services was used as a measure of academic achievement. Results indicated a significant relationship between
self-esteem and standardized academic achievement for both sexes.

Correlates of self-concept were examined by Renzaglia (1952), who found that a positive general self-concept is significantly related to high academic achievement, and Bruck (1957) found a positive and significant relationship between self-concept and grade point average at all grade levels.

Some large-scale, cross-cultural studies by Smith (1969) provide strong indications of the contribution of self-concept elements to academic performance. From data collected on 37 samples comprising 5,777 9 to 11 year-olds, Smith found that the variables which provided the highest correlations with academic performance pertained to self-attitudes and personal motivation. The use of these self-concept elements enabled Smith to more than double the accuracy of prediction of performance and of "dropping out" of students in his samples.

Purkey (1970) found that youngsters who do well in school are more likely to hold high "academic self-concepts" (think they are good students or that they are smart). A study by Rosenberg (1979) echoes the same theme; in a study of pupils in Baltimore City, Rosenberg found that the higher the pupil's marks, the higher his global self-esteem tended to be. And Bachman's (1970) nationwide study of tenth grade boys found the
correlation of self-concept of school ability to school marks to be $r = .4817$.

Jones and Grieneeks (1970) examined the relationship between measures of self perception and academic achievement in a sample of 877 students at college level. The measures of self perception used were the Self-Expectations Inventory, the "Who am I?" technique and the Self-Concept of Ability Scale. Academic achievement was measured by grade point average and a Scholastic Aptitude Test. The purpose of the study was to establish whether self perception appeared to be the most accurate predictor of academic achievement, and which measure of self perception would be the most valid measure. The results showed a positive relationship between all the measures of self perception and academic achievement. Jones found the self concept of ability measure to be the best predictor of academic achievement, even above measures of IQ and aptitude.

Perhaps the most thorough study of self-concept and its relationship to academic achievement was done in 1964 by Brookover, Thomas and Paterson, using 1,000 12 year-olds. Results showed that:

1. There is a significant positive correlation between self-concept and performance in the academic role; this relationship is substantial even when measured when IQ is controlled.
2. There are specific self-concepts of ability related to specific areas of academic role performance which differ from the general self-concept of ability. These are, in some subjects, significantly better predictors of specific subject achievement than is the general self-concept of ability.

3. Self-concept is significantly and positively correlated with the perceived evaluations that significant others hold of the student. In the second phase of the Brookover et al. monumental longitudinal study, self-concept of ability was seen to be a significant factor in achievement at all age levels. In the third and final phase (Brookover, Erikson and Joiner, 1967) by which time the students were 17 years old, the authors were able to note that:

   The correlation between self-concept of ability and grade point average ranges from 0.48 to 0.63 over the six years. It falls below 0.5 only among boys in the 12th grade . . . . In addition, the higher correlation between perceived evaluations and self-concepts tends to support the theory that perceived evaluations are a necessary and sufficient condition for the growth of a positive self-concept of ability, but a positive self-concept of ability is only a necessary, but not a sufficient condition for achievement. The latter is further supported by
the analysis of the achievement of students with high and low self-concept of ability. This revealed that although a significant proportion of students with high self-concepts of ability achieved at a relatively lower level, practically none of the students with lower (less positive) self-concepts of ability achieved at a high level.

The self-concept is an important variable influencing the performance of both teacher and taught. In Britain, Staines (1958) in his careful observation and research into classroom practice, was able to conclude that not only was the self-concept present in all learning but was also a major outcome of all learning situations, although its presence might pass unnoticed by teachers intent on the inculcation of academic knowledge and skill. Spache (1949) linked difficulties with self-concept and urged teachers and clinicians to devote their efforts to methods which would facilitate maturation of the self-concept.

Bodwin (1957) offered further evidence on the relationship between immature self-concept and certain educational disabilities of children in grades three through six. He found that a positive and significant relationship existed between immature self-concepts and reading disability, with correlation of .72 on the third grade level and .62 on the sixth grade level. He also
found that a positive and significant relationship exists between immature self-concept and arithmetic disability; these correlations were .78 on the third grade level and .68 on the sixth grade level. Correlation between immature self-concept and median achievement test scores was .60.

Not only has poor self-concept been linked with learning disabilities, but it has been shown to be present in under-achievers as well. Black (1974), Reader (1955) and Shaw (1961) have all demonstrated that under-achievers tend to have lower self-concepts than do normal achievers. Wash (1956), in a study involving 20 primary schoolboys with IQ's over 120 who were under-achievers and who were matched with 20 other boys who had similar IQ's but who were high achievers, found that bright boys who were low achievers had more negative feelings about themselves than did high achievers. In addition, she noted that low achievers differed reliably from high achievers in: (a) feelings of being criticized, rejected or isolated; (b) acting defensively through compliance, evasion or negativism; and (c) being unable to express themselves appropriately in actions and feelings.

Lumpkin (1959), in studying the relationship of self-concept to reading achievement of fifth-grade children, found significant relationship between the two
variables. Over-achievers revealed significantly more positive self-concepts, high levels of adjustment and saw themselves as liking reading. Under-achievers in reading made significantly lower scores on measures of academic achievement and revealed a negative perception of self. Combs (1964) reported that under-achievers saw themselves as less adequate than others, perceived peers and adults as less acceptable, showed a less effective approach to problem solving and demonstrated less freedom and adequacy of emotional expression; low achievers tended to express more negative self-feelings than high achievers.

There is also evidence suggesting a difference in how male and female under- and over-achievers see themselves. Shaw, Edson and Bell (1960), in studying the self-perception of under- and over-achievers, noted that male subjects in the latter group scored significantly higher than those in the former group, on an adjective checklist. Female achievers, however, actually scored lower than female under-achievers on "Ambition" and "Responsibility." Perhaps such sex differences are a result of the social expectations for males in Western society, especially in terms of academic progress and ambition. Purkey (1970) also discerned a consistent and significant difference between the self-concept and academic achievement which was stronger in boys than in girls. Fink (1962) found a significant relationship
between low self-concept and academic under-achievement, and that this relationship appears stronger in boys than in girls.

A number of investigators have suggested that women differ from men in the needs served by achieving behavior. Both Crandall (1967) and, more recently, Hoffman (1975) have suggested that women's achievement motivation is more bound to affiliation needs. In arguing that women work for love and approval rather than for mastery, Hoffman suggests, because of inadequate encouragement for independence, women feel that safety and effectiveness lie in affective ties.

Because of the fear of rejection they might receive for being successful, women are often reluctant to enter competitive situations. In a study by House (1974), it was found that women working on a task had lower expectations for how well they would do and less confidence about their performance when they competed in a group than when they worked alone. Men, on the other hand, did not reduce their expectancies and confidence when they were working on the task in a competitive situation. Dion (1975) also showed that women suffer greater loss in self-esteem in competition when they are rejected by males rather than by females.

Horner (1972) suggested that if a girl fails she is not living up to her own performance standards, but if
she succeeds, she is not living up to societal expectations of her female role. Horner demonstrated with a story completion test measure that there is "fear of success" among college women. The subjects in her study showed poorer performance in a competitive task than when the same task was performed alone. Horner suggests that this fear exists in women because in anticipating success they also anticipate negative consequences in the form of social rejection or the loss of femininity. Women who feared success tended to have high intellectual ability and a history of high academic success, but aspired to traditional female careers. Those who did not fear success aspired to graduate degrees in scientific areas such as math and science.

It is possible that people might be threatened by competent females with whom they have had personal interaction. A study relevant to this notion found that female high school students in non-coeducational high schools and significantly less fear of success than female high school students in coeducational high schools. Females who had also attended non-coeducational elementary schools manifested the least fear of success. It has been argued that females in non-coeducational schools do not have to suffer the negative reactions resulting from competition with men (Winchell et al., 1974). Also Horner (1972) has shown that teenage girls
deliberately hold back their achievements when placed in competition with males for fear of being rejected socially and of feeling unfeminine should they succeed. This kind of inhibition is not to be confused with a fear of being unable to succeed - these girls were confident enough - but rather it is the prohibition of an otherwise healthy desire to achieve. This finding suggests that in our society girls and women are placed in "double jeopardy" when it comes to pursuing success. Even if a young woman manages to avoid fear of failure and develops a strong achievement orientation, success still may be denied her because it is at odds with the dominant stereotype of women as non-achievers. A similar viewpoint was expressed by House (1974), who tested male and female undergraduates in their ability to solve anagrams. He compared three conditions: alone and competing against a partner of the same or opposite sex. Before they started, the subjects had to record how many words they expected to unscramble within the time limit. Females and males working alone made closely similar estimates, but on entering competition female expectancy dropped below male. This shift might suggest fear of success among the females, except that the lowest estimates of all were made by females competing against females. House preferred to attribute his findings to the social stereotype of the women as noncompetitive.
Research has found that those who fear success view their achieving of it differently from those who do not fear success. People who have a great fear of success are more likely than people with a slight fear of success to explain their success on a task by saying that the task was easy or that they were lucky. People with little fear of success are more likely to attribute success on a task to their ability and their effort. Because women are more likely to fear success than men, they are also more likely to view their experiences of success as a function of external rather than internal factors. In a study by Deaux and Emswiller (1974) college students were asked to evaluate the performance of people on "masculine" and "feminine" tasks. Success of women on feminine tasks was generally attributed to ability. Students in the study also gave higher prestige to success on the masculine tasks and evaluated successful men as more intelligent than successful women. When asked to predict their own performance, male students felt they could do well on both masculine and feminine tasks. Female students did not feel they could do particularly well on masculine tasks. A later study by Deaux and Farris (1977) found that when college students were led to succeed or fail on a cognitive task, females were significantly more likely than males to attribute success to good luck and failure to bad luck.
Males and females were equally likely to perceive themselves as having ability after experiences of success. After experiences of failure, however, males continued to attribute more ability to themselves and to have higher expectations for future performance than females.

Success can actually hinder performance if it is experienced by people with very low self-esteem. Female college students were tested on a task involving motor coordination (Marecek, 1972). It was arranged that all students would succeed. For most of the students, this experience of success led to better performance on later trials of the task. This was not true for students who had weak feelings of self-acceptance and low self-esteem. Students with low self-esteem who experienced success and were led to attribute the success to their personal skill did not improve their performance in later trials. These students were apparently made uncomfortable by the unexpected experience of success and they regulated their future performance so that this success would not continue.

When students with low self-esteem were led to attribute their success on the tasks to luck the results were very different. The students did not appear to experience the same discomfort of unexpected success. They derived some personal satisfaction from the success
because they did not have to take full responsibility for that success as a result of their personal skill. These students did not hold back their performance on the tasks during future trials.

Summary

In summarizing the review of the literature, certain conclusions can be reached with regard to each of the sections presented. The review of the literature dealing with sex differences and self-concept seems to substantiate Wylie's statement that a great deal of confusion exists in this area (Wylie, 1963). However, in studying self-esteem, sex variables definitely need to be taken into account. The stereotyping of men and women into specific sex roles still appears to be influential in the development of their self-concepts.

The research dealing with achievement and self-concept of intelligence clearly illustrates the significance of self-concept on these variables. The studies share the common idea that one's self-concept can affect his achievement and behavior. Further, the existence of low self-esteem can affect both a person's initiative and performance.

According to Dobson (1974),

... a child who feels inferior and intellectually inadequate often does not even make use of the mental power with which he has been endowed. His
lack of confidence produces a disrupting mental influence, and the two go around and around in an endless cycle of defeat.
Chapter III

Method of Investigation

This chapter describes the setting and subject sample used for this study, the measuring instruments, the experimental procedures and the statistical treatment of the data used in computing the results of the study.

Setting and Sample

This study was carried out during the 1980-1981 Spring semester at California State University, Northridge. The subjects in the sample were 30 male and 35 females undergraduates from the subject pool of the psychology department who volunteered to participate in the research.

Instrumentation

In order to control for intelligence, Level H, Form 2 of the Lorge-Thorndike Intelligence Test (Lorge et al., 1954) was administered. The Lorge-Thorndike is a group test designed to measure abstract intelligence, which is defined as the ability to work with ideas and the relationships among ideas. The test is divided into two parts: the Verbal Battery and the Nonverbal Battery.

The Verbal Battery is made up of five subsets each of which uses the verbal medium. Of the different
subsets, one also involves numerical tasks. The subsets are Word Knowledge, Sentence Completion, Verbal Classification, Verbal Analogies, and Arithmetic Reasoning. Experience over years with tasks of these five types has indicated that such tasks provide a good and useful measure of ability to deal with abstractions presented in verbal form.

The Nonverbal Battery is entirely pictorial, diagrammatic, or numerical. The subtests are Figure Analogies, Figure Classification, and Number Series.

Correlations between the Lorge-Thorndike Test and other tests of intelligence have been reported in a number of studies and show a substantial correlation (Knief et al., 1959; Rowe et al., 1963), ranging from \( r = .60 \) to \( r = .77 \) (Pearson \( r \)).

The **Tennessee Self-Concept Scale** (TSCS) (Fitts, 1956) was used as a measure of self-esteem. The TSCS is a standard Likert-type instrument. The norms for this scale were developed from a sample of 626 persons. The standardization sample included individuals from various parts of the country ranging in age from 12 to 68. Fitts indicated that the norms were based on approximately equal numbers of both sexes, Negro and white subjects, representatives of all social, economic and intellectual and educational levels from sixth grade through Ph.D. degree.
In using the Clinical and Research form of the TSCS, subjects are assessed on ten different components of the self concept scales. These components are described in the following sections:

1. **Total Positive Score.** This score reflects the overall level of self-esteem. Individuals possessing high scores describe themselves as persons of value and worth, tend to like themselves, and have confidence in themselves. People with low scores seem to be doubtful about their own worth, see themselves as undesirable, and have little faith or confidence in themselves. Also, individuals with low scores often express anxious, depressed, and unhappy feelings.

2. **Identity.** This score reflects how the individual describes his basic identity -- what he is as he sees himself.

3. **Self Satisfaction.** This score reflects how the individual feels about the self he perceives. In general, this score reflects the level of self satisfaction or self acceptance.

4. **Behavior.** This score measures the individual's perception of his own behavior or the way he functions.

5. **Physical Self.** This score is an indication of how the individual sees his body, his state of health, his physical appearance, and motor skills.
6. Moral-Ethical Self. This score describes the self from a moral-ethical frame of reference -- moral worth, relationship to God, and feelings of being a "good" or "bad" person.

7. Personal Self. This score reflects the individual's sense of personal worth, his evaluation of himself apart from his body, of his relationship to others. It is a measure of his feelings of adequacy as a person.

8. Family Self. This score measures an individual's feelings of adequacy, worth, and value as a family member. It refers to the individual's perception of self in reference to his family.

9. Social Self. This score reflects the person's sense of adequacy and worth in his social interaction with other people in general.

10. Self Criticism Score. This scale is composed of items which are mildly derogatory statements that most people admit as being true for them. Individuals who deny these types of statements are usually being defensive and make a deliberate effort to present a favorable picture of themselves. Low scores on this scale indicate defensiveness and suggest that the other self concept scales (numbers 1 through 9 above) are probably artificially elevated by this defensiveness.
There are reports supporting the reliability of scores on this scale. In his study with psychiatric patients, Congdon (1958) used a shortened form of the scale and still obtained a reliability coefficient of $r = .88$ for the Total Positive Score. Other evidence of reliability is found in the similarity of profile patterns found through repeated measures of the same individuals over long periods of time. Through various types of profile analyses, Fitts demonstrated that the distinctive features of individual profiles are still present for most persons a year or more later.

The TSCS has been tested for validity by determining how the scale differentiates such groups as psychiatric patients and non-patients or delinquents and non-delinquents. A comparison of a large group (369) of psychiatric patients with 626 non-patients showed highly significant (mostly at the $p = .001$ level) differences for almost every score that is utilized on the Scale. Athchison (1958), using the Counseling Form of the Scale, found a number of predicted differences between delinquents and non-delinquents. The Tennessee Self Concept Scale is included in Appendix A.

The Self-Concept of I.Q. Scale was developed to meet the need for a procedure to measure subjects' self-perceptions of intelligence in themselves and in others. The scale consists of a questionnaire to be used
in ascertaining sex and other demographic information and a self-report scale containing three statements on a standard Likert-type instrument. The *Self-Concept of I.Q. Scale* is included in Appendix B.

**Procedure**

Subjects were tested in groups ranging in size from 10 to 30 people. Upon entering the testing room, each subject was asked to fill out the *Self-Concept of IQ Scale*. Anonymity of the subjects was assured by having each subject mark all answer sheets with an F or an M to designate sex, followed by a three-letter code. After all subjects had completed the questionnaire, the examiner administered the TSCS. Self-esteem was measured before intelligence in order to prevent the effect of possible poor achievement on the Lorge-Thorndike from spuriously lowering the score. Finally, the subjects completed the Lorge-Thorndike Intelligence Test. Standard administration and scoring procedures for the three instruments were carefully followed.

**Treatment of the Data**

The data (a score for each subject on each subscale of the TSCS, the Total Positive Score, the Lorge-Thorndike, and coded responses for the three questions on the *Self-Concept of IQ scale*) were entered on file cards. All of the hypotheses were tested through the use of a *t*-test to determine which specific means
differed significantly from each other. This method was suggested by R. A. Fisher and described by Smith (1946). One-tailed and two-tailed tests of significance at the .05 level were performed when appropriate as detailed by Best (1977).
Chapter IV

The Results of the Study

All of the hypotheses were tested through the use of a $t$-test to determine which specific means differed significantly from each other. To test the requirement that the population variances were equal or homogeneous, the $F$ test was computed to test the assumption of homogeneity of variance. The test indicated that the assumption was tenable for all measures utilized in the study.

Data on Hypotheses

Hypothesis One. The first hypothesis was that there would be no statistically significant difference between the IQ scores of the males and females in the sample as tested by the Lorge-Thorndike Intelligence Test. A $t$-test performed on the differences between the means of the two groups accepts the null hypothesis. Mean Score for the Males was 104.37 and Mean Score for the Females was 104.89. The difference between these means was not significant ($t = 0.15, df = 63$) (see Table I).

Hypothesis Two. The second hypothesis tested was that females in the study would exhibit lower self-concept scores than would the males in the study. A
Table I
Means and Standard Deviations of the Scores on the Lorge-Thorndike Intelligence Test Arranged by Sex

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th></th>
<th>Female</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>104.37</td>
<td>SD</td>
<td>104.89</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>15.78</td>
<td></td>
<td>11.41</td>
<td></td>
</tr>
</tbody>
</table>

The t-test performed on the differences between the means of the ten components of self-concept (see Chapter III) did not support this hypothesis. The means and standard deviations of the ten sub-scales of the TSCS are presented in Table II.

Hypothesis Three. The third hypothesis tested was that in comparing themselves to people with similar background and education, females in the sample would have lower self-estimates of intelligence than would the males in the sample. The respective means for the males and the females were 3.73 and 3.43. These mean differences were significant (t = 1.94) at the .05 level (see Table III).

Hypothesis Four. The fourth hypothesis tested was that there would be no statistically significant
Table II
Means and Standard Deviations of the Scores
on the Ten Subscales of the TSCS
Arranged by Sex

<table>
<thead>
<tr>
<th>TSCS Subscales</th>
<th>Male</th>
<th>Female</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Total Positive Score</td>
<td>354.47</td>
<td>32.99</td>
<td>353.54</td>
</tr>
<tr>
<td>Identify</td>
<td>125.77</td>
<td>11.03</td>
<td>130.00</td>
</tr>
<tr>
<td>Self Satisfaction</td>
<td>114.7</td>
<td>11.4</td>
<td>113.63</td>
</tr>
<tr>
<td>Behavior</td>
<td>114.00</td>
<td>11.4</td>
<td>113.63</td>
</tr>
<tr>
<td>Physical Self</td>
<td>72.60</td>
<td>7.74</td>
<td>69.54</td>
</tr>
<tr>
<td>Moral-Ethical Self</td>
<td>72.80</td>
<td>6.63</td>
<td>71.91</td>
</tr>
<tr>
<td>Personal Self</td>
<td>70.10</td>
<td>7.70</td>
<td>68.09</td>
</tr>
<tr>
<td>Family Self</td>
<td>70.33</td>
<td>8.31</td>
<td>72.11</td>
</tr>
<tr>
<td>Social Self</td>
<td>68.63</td>
<td>9.40</td>
<td>71.37</td>
</tr>
<tr>
<td>Self Criticism</td>
<td>34.40</td>
<td>5.22</td>
<td>35.03</td>
</tr>
</tbody>
</table>

N: Males = 30 Females = 35 DF = 63

difference in self-estimates of intelligence between males and females in the sample in comparing themselves to women with similar background and education. A t-test performed on the difference between the means of the two groups accepts the null hypothesis. Mean Score for the
Table III
Means and Standard Deviations of the Scores of Self-Estimate of Intelligence in Relation To People with Similar Backgrounds and Education

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Estimate of I.Q. Compared to People</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>*T .05</td>
<td>N: Males = 30</td>
<td>Females = 35</td>
<td>DF = 63</td>
</tr>
</tbody>
</table>

Males was 3.80 and Mean Score for the Females was 3.63. The difference between these means was not significant ($t = 0.98, df = 63$) (see Table IV).

Table IV
Means and Standard Deviations of the Scores of Self-estimate of Intelligence in Relation to Women with Similar Backgrounds and Education

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Estimate of I.Q. Compared to Women</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
</tbody>
</table>

N: Males = 30 Females = 35 DF = 63
Hypothesis Five. The fifth hypothesis tested was that females would have lower self-estimates of intelligence than would the males in the sample when comparing themselves to men with similar backgrounds and education. The respective means for the males and females were 3.77 and 3.46. These mean differences were significant ($t = 1.94$) at the .05 level (see Table V).

**Table V**

Means and Standard Deviations of the Scores of Self-estimate of Intelligence in Relation to Men with Similar Backgrounds and Education

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.77</td>
<td>3.46</td>
</tr>
<tr>
<td>SD</td>
<td>0.68</td>
<td>0.61</td>
</tr>
<tr>
<td>T</td>
<td></td>
<td>1.94*</td>
</tr>
</tbody>
</table>

*Self Estimate of I.Q. Compared to Men*

$\star T .05 \ N: \text{Males } = 30 \ \text{Females } = 35 \ \text{DF } = 63$

**Discussion of the Results**

In the present study, it was hypothesized that the females in the sample would exhibit lower self-esteem. In addition, it was hypothesized that they would project lower self-estimates of intelligence in comparing themselves with people and men with similar backgrounds and education than would males in the sample. It was further hypothesized that the males and females in the
sample would have similar estimates of intelligence in comparing themselves to women with similar backgrounds and education. These hypotheses were partially confirmed. A detailed discussion of the results are as follows:

1. An IQ test given to control for intelligence showed that males and females in the study did not differ significantly in intelligence. Thus, while men and women may report differing estimates of intelligence, they score the same on a standard measure of intelligence.

2. None of the ten measures of self-concept assessed in this study was affected by the sex variable. As explained in Chapter III, the Total Positive Score is designated as the most important score of the TSCS since it is an overall measure of self-esteem. Nevertheless, with regard to the second hypothesis, the Total Positive Score did not differ significantly between the males and the females as was predicted. There was also no significant difference between the mean scores of any of the nine other subscales of self-esteem measured. This apparent failure to find any significant sex differences in self-esteem can perhaps be accounted for by the following findings:

A. Most measures of self-esteem have relied on verbal self-reports of subjects' general opinions about
themselves. Several criticisms have been leveled at this approach:

1) It has been argued that self-report data might reflect an individual's interest in presenting himself in a certain way as much as level of self-esteem (Ziller et al., 1969).

2) It has been suggested that level of self-esteem can vary from situation to situation, so that measures of global attitudes overlook important situational differences (Gergen, 1971). Wylie (1963) has also questioned the validity of studying the self-concept as an overall or global evaluative attitude.

3) Another possibility is that there is in fact no difference in self-esteem between men and women.

B. The question also arises whether the relationship between sex and self-esteem might be contaminated by a response-bias often called social desirability (Crown and Marlow, 1964). This term is used to refer to the possible tendency of certain individuals or groups to reply to questions in a way which they feel is socially desirable or acceptable rather than in a manner that expresses their actual ideas or opinions. Based on these findings, it may be that women in this study did not report a true estimate of self-esteem but rather responded in what they felt was a socially acceptable manner.
3. Although the level of self-esteem exhibited by the male and female subjects did not differ significantly, there were significant differences in their self-estimates of intelligence. In relation to the hypotheses concerning both people in general and men with similar backgrounds and education, the females in the sample rated themselves significantly lower than did the males in the sample. However, in relation to women with similar backgrounds and education, the self-estimates of intelligence in the males and females in the sample did not differ significantly. The "people" category supports a strong tendency of women to compare themselves differently depending on the comparison population (e.g., "men" or "people" versus "women"). Similar results were obtained by Hogan (1978), although he failed to control for intelligence. Similarly, Wolff and Wasden (1969) showed that adult female self-estimates of intelligence do not correlate highly with actual I.Q. measures, but these results were complicated by a restricted range of subjects.

What might account for these findings? They may be related to the fact that the prevalent image of women found throughout history has, with few exceptions, been that femininity and individual achievements, which reflect intellectual competence, are desirable but mutually exclusive goals. The aggressive and, by
implication, masculine qualities inherent in a capacity for mastering intellectual problems are considered fundamentally incompatible with femininity. It has taken researchers a long time to become aware of the extent to which this image of women has actually been internalized, thus acquiring the capacity to exert psychological pressures on women's behavior of which they are frequently unaware.

This viewpoint was stated at the turn of the century by Thomas (1907), who said,

If women today have not fulfilled all the expectations which the theory of equality of achievement on condition of equal opportunity would seem to justify, it must be borne in mind, first, that a complete equality of opportunity still does not exist, and secondly, that it is impossible, on the part of women, to do away with one or two generations with shackles, which have a tradition of centuries. There is not only a reluctance on the part of men to admit women to their intellectual world, but a reluctance—or, rather a real inability on their part to enter. Modesty is so ingrained and habitual, and to do anything freely is so foreign to woman, that even free thought is almost of the nature of an immodesty to her.
This same viewpoint was echoed almost seventy years later by Klein (1971), who states,

The characteristic feminine conflict of our time is that between the divergent claims put forward by the domestic sphere on the one side, and the business sphere on the other. Woman's business functions require such qualities as efficiency, courage, determination, intelligence, sense of reality, responsibility, independence; in the professional sphere she is expected to act in a fair and "businesslike" manner, to be straightforward and unsentimental. Apart from this, and in a different setting, there still exists the whole set of attitudes which came down to us practically unchanged from our forefathers. In addition to the characteristics just mentioned—and partly in conflict with them—a woman is expected to be pretty, sensitive, adaptable, unassertive, good-humored, domesticated, yielding and soft and, if possible, not too intelligent.

The results of the present study show that, at least in terms of these subjects, females are just as intelligent as males. The point to be emphasized is that the psychological differences of sex seem to be largely due, not to difference in type of mental activity, but to differences in the social influences brought to bear on
the developing individual from early infancy to adult years. The question of the future development of the intellectual life of women is one of social necessities and ideals, rather than of the inborn psychological characteristics of sex. (Thompson, 1903).

The results of other studies seem to confirm this opinion (Frieze et al., 1975; Vaughter et al., 1974). Findings indicate that women are less likely than men to view themselves as skilled. Even when they do succeed on tasks that require skill, they are reluctant to accept personal responsibility for their achievements. Horner (1968) contends that for women success may be associated with negative consequences. An alternative explanation (which does not rely on the postulation of a motive) for women's hesitancy to attribute success to their own ability emphasizes the prevalence of a societal norm that dictates modesty among women.

Thus, despite the fact that we have a culture and an educational system that ostensibly encourage and prepare men and women identically for careers, the data indicate that internal and social barriers really limit the opportunities to men, as women still tend to evaluate themselves in ways consistent with the stereotype which views intellectual achievement as a quality basically inconsistent with femininity.
Chapter V

Summary, Conclusions and Recommendations

The summary and conclusions of this study are reported in this chapter, along with implications and recommendations for future research.

Summary

The Problem. The purpose of this study was to investigate the relationship between self-esteem and self-estimates of intelligence in men and women.

Design. This study was carried out at California State University, Northridge and involved students from the subject pool of the psychology department. The sample of 30 males and 35 females were tested by use of:

1. The Tennessee Self-Concept Scale (TSCS)
2. The Lorge-Thorndike Intelligence Test
3. The Self-Concept of I.Q. Scale

The statistical treatment described below was subsequently applied to the data. The scores on the ten subscales of the TSCS, the Lorge-Thorndike, and the three questions on the Self-Concept of I.Q. Scale were separately subjected to a t-test to determine which specific means differed significantly from each other.
An F-test was also computed to test homogeneity of variance.

The five hypotheses which were tested are as follows:

1. There will be no statistically significant differences between the I.Q. scores of males and females in the sample.

2. Females in the sample will exhibit lower self-concept scores than will the males in the sample.

3. In comparing themselves to people with similar background and education, females in the sample will have lower self-estimates of intelligence than the males in the sample.

4. There will be no statistically significant difference in self-estimates of intelligence between males and females in the sample in comparing themselves to women with similar backgrounds and education.

5. In comparing themselves to men with similar backgrounds and education, females in the sample will have lower self-estimates of intelligence than the males in the sample.

Results. The results of this study as they pertained to the five hypotheses were as follows:

1. Hypothesis One. The results of this study confirmed the null hypothesis. There was no significant
difference in intelligence between the males and females in the sample.

2. **Hypothesis Two.** The results of this study failed to confirm this hypothesis. None of the measures of self-concept was found to differ significantly between the males and females in the sample.

3. **Hypothesis Three.** Confirmation of this hypothesis was found. The self-estimates of intelligence of the females in the sample were significantly lower than those of the males.

4. **Hypothesis Four.** The results of this study confirmed the null hypothesis. There was no significant difference in self-estimates of intelligence between the males and females in the sample.

5. **Hypothesis Five.** Confirmation of this hypothesis was found. The self-estimates of intelligence of the females in the sample were significantly lower than those of males.

**Conclusions**

1. Male and female subjects did not differ significantly with regard to their overall level of self-esteem.

2. Although equal in intelligence, female subjects projected significantly lower self-estimates of intelligence onto themselves in comparing themselves both
to people in general and to men than did the male subjects.


Implications

The results of this study demonstrate that although the factor of sex may not be important in terms of influence on an individual's global self-esteem, sex does appear to exert an influence on how individuals perceive their intelligence in relation to others. The reason for females tending to underrate themselves is not theoretically clear but is quite important from a practical standpoint. If Combs' (1952) view that one's self-perceptions limit intellectual functioning is valid, it would be profitable to explore ways of generating higher, more realistic self-evaluations of intelligence in females.

Teachers and counselors need to be aware that females perceive themselves differently from males in relation to intelligence. Teachers should take into account that females may be afraid or unwilling to interact in the classroom for fear of appearing less intelligent than the males. Self-perceived intelligence and ability can provide critical focus for career counseling with women. How women think about their
intellectual ability may provide insight into why women do not hold as many high positions in many areas as do men or do not seek responsible jobs.

**Recommendations for Future Research**

The following recommendations for future research are suggested:

1. Studies should be conducted which could determine to what extent the findings of this study apply for different age levels, i.e., young girls and adolescents as compared with the adults of this study.

2. This study should be replicated in other settings. It might be hypothesized, for example, that individuals who are working at a full-time job, as opposed to the students in this study, might possess different self-estimates of intelligence.

3. Variables other than sex in relation to self-estimates of intelligence need to be explored. Socio-economic status and ethnicity as well as age could provide further insight into this problem.
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Ziller, R. C., Hagey, J., Smith, M. C., and Long, B. H.
APPENDIX A
TENNESSEE SELF-CONCEPT SCALE

1. I have a healthy body .......................................................... 1
3. I am an attractive person ...................................................... 3
5. I consider myself a sloppy person ......................................... 5
19. I am a decent sort of person ................................................ 19
21. I am an honest person ......................................................... 21
23. I am a bad person .............................................................. 23
37. I am a cheerful person ......................................................... 37
39. I am calm and easy going person .......................................... 39
41. I am a nobody ................................................................. 41
55. I have a family that would always help me in any kind of trouble .................................................................................. 55
57. I am a member of a happy family .......................................... 57
59. My friends have no confidence in me ...................................... 59
73. I am a friendly person ......................................................... 73
75. I am popular with men ........................................................ 75
77. I am not interested in what other people do .............................. 77
91. I do not always tell the truth ................................................. 91
93. I get angry sometimes ........................................................ 93

Responses— Completely Mostly Partly Mostly Completely
to false false false true true
1 2 3 4 5
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
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<tr>
<td>6</td>
<td>6</td>
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<td>20</td>
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<tr>
<td>92</td>
<td>92</td>
</tr>
<tr>
<td>94</td>
<td>94</td>
</tr>
</tbody>
</table>

**APPENDIX A**

2. I like to look nice and neat all the time.

4. I am full of aches and pains.

6. I am a sick person.

20. I am a religious person.

22. I am a moral failure.

24. I am a morally weak person.

38. I have a lot of self-control.

40. I am a hateful person.

42. I am losing my mind.

56. I am an important person to my friends and family.

58. I am not loved by my family.

60. I feel that my family doesn't trust me.

74. I am popular with women.

76. I am mad at the whole world.

78. I am hard to be friendly with.

92. Once in a while I think of things too bad to talk about.

94. Sometimes, when I am not feeling well, I am cross.
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>I am neither too fat nor too thin.</td>
</tr>
<tr>
<td>9</td>
<td>I like my looks just the way they are.</td>
</tr>
<tr>
<td>11</td>
<td>I would like to change some parts of my body.</td>
</tr>
<tr>
<td>25</td>
<td>I am satisfied with my moral behavior.</td>
</tr>
<tr>
<td>27</td>
<td>I am satisfied with my relationship to God.</td>
</tr>
<tr>
<td>29</td>
<td>I ought to go to church more.</td>
</tr>
<tr>
<td>43</td>
<td>I am satisfied to be just what I am.</td>
</tr>
<tr>
<td>45</td>
<td>I am just as nice as I should be.</td>
</tr>
<tr>
<td>47</td>
<td>I despise myself.</td>
</tr>
<tr>
<td>61</td>
<td>I am satisfied with my family relationships.</td>
</tr>
<tr>
<td>63</td>
<td>I understand my family as well as I should.</td>
</tr>
<tr>
<td>65</td>
<td>I should trust my family more.</td>
</tr>
<tr>
<td>79</td>
<td>I am as sociable as I want to be.</td>
</tr>
<tr>
<td>81</td>
<td>I try to please others, but I don't overdo it.</td>
</tr>
<tr>
<td>83</td>
<td>I am no good at all from a social standpoint.</td>
</tr>
<tr>
<td>95</td>
<td>I do not like everyone I know.</td>
</tr>
<tr>
<td>97</td>
<td>Once in a while, I laugh at a dirty joke.</td>
</tr>
</tbody>
</table>

Responses -

<table>
<thead>
<tr>
<th></th>
<th>Completely false</th>
<th>Mostly false</th>
<th>Partly false and partly true</th>
<th>Mostly true</th>
<th>Completely true</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX A

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>I am neither too tall nor too short.</td>
</tr>
<tr>
<td>10</td>
<td>I don't feel as well as I should.</td>
</tr>
<tr>
<td>12</td>
<td>I should have more sex appeal.</td>
</tr>
<tr>
<td>26</td>
<td>I am as religious as I want to be.</td>
</tr>
<tr>
<td>28</td>
<td>I wish I could be more trustworthy.</td>
</tr>
<tr>
<td>30</td>
<td>I shouldn't tell so many lies.</td>
</tr>
<tr>
<td>44</td>
<td>I am as smart as I want to be.</td>
</tr>
<tr>
<td>46</td>
<td>I am not the person I would like to be.</td>
</tr>
<tr>
<td>48</td>
<td>I wish I didn't give up as easily as I do.</td>
</tr>
<tr>
<td>62</td>
<td>I treat my parents as well as I should (Use past tense if parents are not living).</td>
</tr>
<tr>
<td>64</td>
<td>I am too sensitive to things my family say.</td>
</tr>
<tr>
<td>66</td>
<td>I should love my family more.</td>
</tr>
<tr>
<td>80</td>
<td>I am satisfied with the way I treat other people.</td>
</tr>
<tr>
<td>82</td>
<td>I should be more polite to others.</td>
</tr>
<tr>
<td>84</td>
<td>I ought to get along better with other people.</td>
</tr>
<tr>
<td>96</td>
<td>I gossip a little at times.</td>
</tr>
<tr>
<td>98</td>
<td>At times I feel like swearing.</td>
</tr>
</tbody>
</table>

**Responses**  
- Completely false  
- Mostly false  
- Partly false and partly true  
- Mostly true  
- Completely true
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>I take good care of myself physically.</td>
</tr>
<tr>
<td>15</td>
<td>I try to be careful about my appearance.</td>
</tr>
<tr>
<td>17</td>
<td>I often act like I am &quot;all thumbs&quot;.</td>
</tr>
<tr>
<td>31</td>
<td>I am true to my religion in my everyday life.</td>
</tr>
<tr>
<td>33</td>
<td>I try to change when I know I'm doing things that are wrong.</td>
</tr>
<tr>
<td>35</td>
<td>I sometimes do very bad things.</td>
</tr>
<tr>
<td>49</td>
<td>I can always take care of myself in any situation.</td>
</tr>
<tr>
<td>51</td>
<td>I take the blame for things without getting mad.</td>
</tr>
<tr>
<td>53</td>
<td>I do things without thinking about them first.</td>
</tr>
<tr>
<td>67</td>
<td>I try to play fair with my friends and family.</td>
</tr>
<tr>
<td>69</td>
<td>I take a real interest in my family.</td>
</tr>
<tr>
<td>71</td>
<td>I give in to my parents. (Use past tense if parents are not living).</td>
</tr>
<tr>
<td>85</td>
<td>I try to understand the other fellow's point of view.</td>
</tr>
<tr>
<td>87</td>
<td>I get along well with other people.</td>
</tr>
<tr>
<td>89</td>
<td>I do not forgive others easily.</td>
</tr>
<tr>
<td>99</td>
<td>I would rather win than lose in a game.</td>
</tr>
</tbody>
</table>

Responses - Completely false  Mostly false  Partly false and partly true  Mostly true  Completely true

1  2  3  4  5
APPENDIX A

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.</td>
<td>I feel good most of the time</td>
</tr>
<tr>
<td>16.</td>
<td>I do poorly in sports and games</td>
</tr>
<tr>
<td>18.</td>
<td>I am a poor sleeper</td>
</tr>
<tr>
<td>32.</td>
<td>I do what is right most of the time</td>
</tr>
<tr>
<td>34.</td>
<td>I sometimes use unfair means to get ahead</td>
</tr>
<tr>
<td>36.</td>
<td>I have trouble doing the things that are right</td>
</tr>
<tr>
<td>50.</td>
<td>I solve my problems quite easily</td>
</tr>
<tr>
<td>52.</td>
<td>I change my mind a lot</td>
</tr>
<tr>
<td>54.</td>
<td>I try to run away from my problems</td>
</tr>
<tr>
<td>68.</td>
<td>I do my share of work at home</td>
</tr>
<tr>
<td>70.</td>
<td>I quarrel with my family</td>
</tr>
<tr>
<td>72.</td>
<td>I do not act like my family thinks I should</td>
</tr>
<tr>
<td>86.</td>
<td>I see good points in all the people I meet</td>
</tr>
<tr>
<td>88.</td>
<td>I do not feel at ease with other people</td>
</tr>
<tr>
<td>90.</td>
<td>I find it hard to talk with strangers</td>
</tr>
<tr>
<td>100.</td>
<td>Once in a while I put off until tomorrow what I ought to do today</td>
</tr>
</tbody>
</table>

Responses—

- Completely false: 1
- Mostly false: 2
- Partly false and partly true: 3
- Mostly true: 4
- Completely true: 5
APPENDIX B

The Self-Concept of I.Q. Scale

1. □ Male □ Female
2. Age: ______________________
3. Marital Status: □ Single □ Married (Years Married: ___)
   □ Divorced/Separated □ Widowed
4. Number of dependent children: _______ Their ages: _______ _______ _______
5. Number of other dependents: ______________________
6. Highest Degree held: ______________________
7. Estimate of Grade School performance (please circle one):
   F  D-  D+  C-  C  C+  B-  B  B+  A-  A  A+
8. Estimate of High School performance (please circle one):
   F  D-  D+  C-  C  C+  B-  B  B+  A-  A  A+
9. Estimate of College performance (please circle one):
   F  D-  D+  C-  C  C+  B-  B  B+  A-  A  A+
10. Parents' Education (please circle highest grade completed by each)
    Father: Under-7 7 8 9 10 11 12 FR SO JR SR G1 G2 G3 G4
    Mother: Under-7 7 8 9 10 11 12 FR SO JR SR G1 G2 G3 G4

For each of the following questions, kindly mark an "X" in the box next to the most appropriate answer.

In comparison to people with similar backgrounds and education, would you estimate your I.Q. to be:
   a. among the highest
     b. above average
     c. average
     d. below average
     e. among the lowest

In comparison to women with similar backgrounds and education, would you estimate your I.Q. to be:
   a. among the highest
     b. above average
     c. average
     d. below average
     e. among the lowest

In comparison to men with similar background and education, would you estimate your I.Q. to be:
   a. among the highest
     b. above average
     c. average
     d. below average
     e. among the lowest