AMBITION IN WOMEN:
AN INVESTIGATION OF ACHIEVEMENT MOTIVATION
AND PSYCHOLOGICAL ADJUSTMENT

A Thesis
by
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AMBITION IN WOMEN:
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INTRODUCTION

Although a great deal of research has been conducted both on achievement motivation and on women's psychological adjustment, there appears to be a relative dearth of information on the relationship between the two. Much of the data which are available does not directly address the two issues. Since both of these areas of research have generated much interest, it is valuable to investigate the relationship between the two.

Achievement Motivation

Much of the development of achievement motivation theory is credited to David McClelland, who was influenced by the work of H. A. Murray (1938). McClelland's work, along with that of early investigators in the field, has been criticized for failing to address the issue of achievement motivation in women (Horner, 1969).

Achievement motivation in women has received much attention since Horner's initial research in the '60's (Horner, 1969, 1972, 1974). According to Horner, women have ambivalent feelings about their motives to achieve. For example, many women both desire success and yet
desire to avoid it, fearing negative consequences of success, such as being socially ostracized or being considered unfeminine. As part of her research, Horner identified male and female students whom she felt were high in "fear of success" (FOS) using a test similar to the standard Thematic Apperception Test (TAT) of achievement motivation but with verbal, rather than pictoral cues. She also added the following story cue: "After first-term finals, John (or Anne) finds himself (herself) at the top of his (her) medical school class" (1969, p. 38). Males completed the "John" and females the "Anne" stories. Each subject was asked to write a story based on the cue. Stories were scored positively for FOS if the subject evidenced negative reactions to the success of someone of his or her own sex. Negative imagery was predominant in female but not in male stories and included stories such as the following:

Anne is an acne faced bookworm. She runs to the bulletin board and finds she's at the top. As usual she smarts off. A chorus of groans is the rest of the class's reply...

In order to see how well high and low FOS subjects performed in competitive situations, subjects were then randomly assigned to conditions of same sex competition, mixed competition, or a non-competitive condition of working alone. Horner found that low FOS females performed better in mixed competition, while high FOS females performed better when working alone. Horner
suggests that the non-competitive situation for high FOS females avoided the negative consequences of competition, particularly competition with men. Thus, Horner felt that she has demonstrated that there is FOS in women.

The Horner studies have been widely critiqued and replicated with many variations. For example, Bustamante and Chang (1979) conducted a modified replication of parts of the original Horner studies using cues based on traditional and non-traditional sex role occupations. Both male and female students were asked to write stories based on cues in which Anne succeeds both in a traditionally female field (nursing school) and in a traditionally male field (medical school). They were then asked to respond to cues in which Anne fails in each condition. Results indicated that women, more often than men, predicted positive consequences of success for Anne in both fields. Male responses generally did not attend to the success or failure condition in the cue. In addition, in comparison with the data of Horner and others (see Tresemer, 1974, review), fewer men and women suggested that Anne's success would lead to negative consequences. Although the authors caution against over generalization, the results suggest a trend toward acceptance of flexible sex roles in women.
After reviewing 61 FOS studies published since Horner's first work, Tresemer (1974) has raised many relevant questions regarding the methodology of both Horner and other FOS studies. Today the research still appears both appealing and controversial. In summary, the study of achievement motivation has expanded in the last two decades to include research on women, including much focus on the FOS hypothesis. At the same time, societal perception of female achievement may also be changing. Horner (1972) points out, however, that there still appear many unanswered questions, such as what factors are involved in the development and arousal of the "psychological barrier" of FOS.

**Achievement Motivation and Psychological Adjustment**

Among the studies which appear to have implications for the relationship between achievement motivation and psychological adjustment in women, the evidence is mixed and intimately linked with the female social role. For example, in a comprehensive study based largely on NIMH reports, Gove and Tudor (1973) provide data indicating that more women than men are mentally ill. They attribute the overrepresentation of women suffering from mental illness to the stressful, less rewarding roles of women in Western societies. They point out that most of the data which indicate that more women than men are mentally ill are based on samples of married men and women. When unmarried men
and unmarried women are compared (never married men compared with never married women, divorced men compared with divorced women, etc.), results are different. Some studies show higher male and some higher female rates of mental illness, depending on the study.

In an often cited study, Broverman, Broverman, Clarkson, Rosenkrantz, and Vogel (1970) demonstrated that clinical judgments of descriptions of healthy women differed from those of healthy men and healthy adults, reflecting higher social values for stereotypically masculine traits than for stereotypically feminine ones. In interpreting the double standard applied to the mental health of men and women, Broverman et al. indicate that the measure used for women may be based on their ability to adjust to their circumstances. In this "adjustment" theory of health, health is seen as successful adjustment to one's environment. They explain as follows:

Acceptance of an adjustment notion of health, then, places women in the conflictual position of having to decide whether to exhibit those positive characteristics considered desirable for men and adults, and thus have their 'femininity' questioned, that is, be deviant in terms of being a woman; or to behave in the prescribed feminine manner, accept second-class adult status, and possibly live a lie to boot (p. 6).

These findings imply that achievement motivation, which would probably be associated with less stereotypically feminine behavior, could be expected
to embrace more values which the Broverman studies have indicated are seen as stereotypically masculine, such as "very independent" and "very ambitious." Thus achievement motivation would be associated with more favorable psychological health as measured by professional clinical judgments. Yet, as Broverman et. al. recognize, for a female this may produce conflict.

The point has been made many times that the female socialization experience promulgates conformity to traditional sex role orientation. Noting the significance of adolescence in this regard, Stein and Bailey (1973) point out that, at the time females are becoming more acutely pressured by society to conform to sex roles, they are also realizing that academic achievement is not what contributes directly toward fulfillment of the feminine role. The authors note the low status of American society's feminine roles cited in Sherman (1971) and suggest that the frequently heard "I'm just a housewife" or "I don't do anything" are reflective of this low domestic status. While pressure is applied to women to pursue the traditional female role, relatively few rewards accompany it. They further point out that occupational achievement is associated with both rewards and negative feedback. Unlike men, women have no conflict-free position for this type of achievement.

Statistics comparing housewives and employed women on indices of psychological symptoms of distress
indicate some of the stress of the housewife role. Data from a large national health survey indicate a "housewife syndrome" with higher symptom rates reported by housewives (white race) than their working counterparts. The report also indicates that higher symptom rates were associated with lower education and (among white women) with lower income levels (U. S. Department of Health, Education and Welfare, 1970).

Bernard (1971) notes that the occupation of housekeeper is seen by the woman herself, as well as by the labor force, as low status and subservient. In describing the sense of incompetence which modern women often feel despite successful child-rearing, Barnett and Baruch (1978) offer a social explanation. In societies where overpopulation and unemployment are not issues and where children are valued as a source of labor, child-rearing is more highly valued and associated with more reinforcement. Considering both the low prestige level of the housewife role, and the fact that housewives may be less psychologically adjusted, housewives may also have lower achievement motivation.

The observation has often been made that women generally achieve status through their husbands. Lipman-Blumen and Leavitt (1976) have proposed an interesting typology of achievement patterns of male and female adults. A bipolar continuum is suggested with "vicarious" achievement styles at one pole and
"direct" achievement styles at the other. Related to this concept, the authors cite a study of correlates of educational aspirations in married women. In the study, vicarious achievement was associated with traditional sex role stereotypes, as well as with low educational aspiration levels. Among the women in the sample who were college graduates, only 24% of the women describing themselves as direct achievers, as opposed to 60% of those describing themselves as vicarious achievers, identified with standard sex role stereotypes (Blumen, 1970; Lipman-Blumen, 1972).

Noting this vicarious achievement through husbands and children, Donelson and Gullahorn (1977) suggest the following explanation: While some women receive satisfaction through the domestic role, others do not and are frustrated because of their undeveloped potentials. These frustrated women may seek vicarious achievement through their husbands and children. Donelson and Gullahorn point out that pride in the accomplishments of loved ones is worthy of encouragement, presupposing, however, one's own self-esteem. They warn, though, that it is likely to be damaging to both parties if the gratification is a substitute for personal achievement. They explain as follows:

This damaging vicarious achievement pattern is not so much a consequence of the personal 'neuroticism' of some women, as it is a predictable result of social devaluation
of women and of the competencies involved in the traditional feminine role (p. 181).

Another study with implications for the relationship between achievement motivation and psychological adjustment in women was conducted by Ohlbaum (1971). Using the Personal Orientation Inventory and other instruments, she studied self-actualization, self concepts, and value systems in relation to ideas about the woman's role in a group of highly educated professionals (M.D.'s, L.L.B.'s, and Ph.D.'s), miscellaneous professionals (social workers, journalists, librarians, teachers, etc.), and non-professionals (primarily homemakers). Contrary to prediction, statistically significant differences between professional and non-professional women were found on all three variables. Among other findings, both groups of professionals showed higher self-actualization levels, more positive self-concepts, and women's role attitudes that were liberal and achievement oriented. Non-professionals, on the other hand, embraced the traditional woman's role and expressed personal frustration and dissatisfaction associated with lack of growth and undeveloped abilities. Additionally, between the two professional groups, the miscellaneous professionals appeared to be striving for achievement and fulfillment and to be strongly opposing traditional female values, while highly educated professionals
expressed self-fulfillment, satisfaction with achievement, and positive assimilation of the traditional woman's role.

Most of the above studies would appear to imply less frustration and more fulfillment associated with higher achievement and achievement motivation. However, other studies appear either to suggest a neutral relationship or a negative relationship between achievement motivation and psychological adjustment.

Among studies with negative implications, Wessman, Ricks, and Tyl (1960) conducted a study of mood fluctuations in a group of female Radcliffe students, using a system of self-reports and psychological tests over a period of several days to distinguish relatively elated from relatively depressed individuals. Although a predicted hypothesis (that self esteem would be positively related to a subject's average general hedonic rating) was not supported, some of the authors' observations on the subject appear relevant to the present study. They note, for example, some of the ways the two groups appeared to differ in a measure of self esteem, using Q sort descriptions of self and ideal self. While the "happy girls" tended to value friendliness and consideration for others, the "unhappy girls" tended to be work-oriented. The authors suggest that the happier subjects seemed to identify with the roles of "date" and "wife" while the less happy subjects identified
with the "student" and "scholar" roles. It was suggested that the "unhappy girls" narrowed their ideals (particularly social values), limiting themselves to academic and scholastic achievements. Discrepancies between self and ideal self for the "happy girls" tended to focus on emotional and social qualities, such as poise and self confidence. The "unhappy girls," on the other hand, viewed discrepancies largely in terms of frustrated intellectual ambitions. Although this study was conducted over 20 years ago and prior to the major thrust of the women's liberation movement, it nevertheless appears useful today, particularly in light of the progressive nature of the Radcliffe College population.

Powell and Reznikoff (1976) surveyed Wellesley graduates out of school 10 years and 25 years, studying sex role attitudes, achievement need, and employment patterns in relation to symptoms of psychological distress. The only variable associated with significantly higher symptom scores in this high SES sample was found to be sex role orientation with a contemporary (as opposed to traditional) orientation being associated with higher symptom scores. The younger class was characterized by more women with contemporary sex role orientations, high achievement needs, advanced degrees, and higher salaries. They also reported...
significantly higher symptom scores, as well as a higher incidence of mental patients and ex-patients.

Finally, several studies appear to imply a more neutral relationship between achievement motivation and psychological adjustment. "Quality of Life" studies at the Institute of Social Research (1974) report that in their samples, men and women were found to differ little in satisfaction with their lives. Married couples were found to be more content than unmarried people. Working wives and housewives were found to be approximately equal in satisfaction. College educated housewives were less satisfied with their lives compared with other housewives, although married professional women with college degrees were very satisfied. The studies showed that overall life satisfaction appeared to be "additive" and related to satisfaction in several specific domains.

In an investigation of 162 senior college women concerning the relationship of sex role attitudes and psychological well-being, Gump (1972) explored ego strength, hedonic rating (happiness) and achievement plans. Data were interpreted to indicate that, while most subjects embraced traditional feminine values (husbands and families), they also pursued goals related to achievement and self realization. Data indicate that other directed (traditional) and self directed (less traditional) women did not differ in
hedonic level or in establishing serious relationships with men.

While the final ramifications of the women's liberation movement are yet unresolved, it appears certain that both individual and societal dynamics are undergoing widespread re-organization. Marecek (1978) writes as follows:

Women's roles are currently undergoing rapid change. The ultimate goal of the movement for change is more freedom, satisfaction, and personal fulfillment for women and men. But, the process of change may produce conflict and uncertainty for those involved in it (p. 255).

It is therefore difficult to predict future trends and behavior based on past studies and specialized subjects—even in recent years. At the present time, however, given these limitations, a closer look at the variables of achievement motivation and psychological health appears indicated.

In the present study, implications for the relationship between achievement motivation and psychological adjustment appear to be the following: In our society, although the male role is valued, the female role is often demeaned and associated with low prestige. Low status positions, which would be expected to embrace lower achievement motivation, also appear to imply poorer psychological adjustment. Higher achievement in females, on the other hand, appears to be linked with valued masculine qualities,
as well as with better psychological adjustment. Thus, higher achievement motivation would appear to be associated with better psychological adjustment.

Measurement of Achievement Motivation

In much of the research on achievement motivation, the standard measure has been the Thematic Apperception Test (TAT). There are, however, numerous other instruments which include both questionnaire and projective techniques. In a review of 22 such instruments purported to measure the need for achievement (nAch), Fineman (1977) emphasized the lack of convergent validity of the instruments. He noted the low correlations in comparisons of the TAT, questionnaire measures, and other projective techniques. He expressed agreement with a McClelland (1958, p. 38) accusation that questionnaire measures are not likely to be measuring anything that the TAT is measuring. Fineman further suggested that even the various questionnaire measures appear to be tapping different things. Referring to the amount of disagreement among the instruments, he states: "The operationalization of nAch therefore seems considerably confused" (p. 7). He suggests the problems lie in the psychometric adequacy of the instruments and the issue of whether nAch should be viewed as a conscious or unconscious variable.
Further critiquing the TAT, Fineman (1977) notes that it has a median internal consistency coefficient of 0.32, and concludes as follows:

...we can have little confidence that the TAT is measuring any unitary psychological construct, let alone nAch. This would preclude it correlating systematically with other nAch measures regardless of their own psychometric properties (p. 8).

In reviewing much of the TAT research, Fineman indicates that performance validity is poor. He suggests, however, that construct validity can be inferred indirectly from research on various aspects of nAch theory.

In a critique of the 21 other instruments purporting to measure the achievement motive, Fineman (1977) cites research indicating weaknesses or lack of data concerning most of the other projective measures. In the remaining instruments, all of which are questionnaire type measures, only the nAch scale of the Personality Research Form and a short form of the Mehrabian Achievement Scale (MAS) demonstrated adequate validity, internal consistency and stability. For the present study, a revised version of the MAS was selected since an objective measure was preferred, and the MAS required significantly less administration time than the PRF. (For additional information on the MAS, see Mehrabian, Note 1.)
Measurement of Psychological Adjustment

One approach to the measurement of psychological health (particularly in a normal population) is to focus on qualities which are considered adaptive and desirable rather than pathological. E. L. Shostrom (1976) in consultation with Maslow, has produced such an instrument.

The Personal Orientation Inventory (POI) is considered a measure of qualities associated with Maslow's conception of the self-actualized person, as well as with theories of other humanistic writers such as Rogers, Pearls, and Riesman. The POI scales which were selected for this study included the two major scales, Time Competence (Tc) and Inner Directed (I); and three subscales, Spontaneity (S), Self-Regard (Sr), and Self Acceptance (Sa).

Statement of the Problem

In an age which has been characterized by much upheaval for women, there still appears on the horizon no conflict-free niche in which a woman can expend her energies and, in turn, be reasonably assured of personal fulfillment. Should she consider high achievement motivation a strength to be nurtured and prized as a vehicle to success and fulfillment? Or should it be considered a weakness to be denied and sublimated as an exacerbation in the already frustrating woman's role?
While a large body of literature addresses related issues, the issue of achievement motivation and psychological adjustment in women appears to warrant more direct investigation. Data on this relationship would be useful, not only to counselors and therapists, but to individual women who desire to assume a more active posture in their own psychological adjustment. Whether or not they were in a position to implement personal achievement motives in a meaningful manner, the knowledge of its possible relationship with psychological adjustment might at the very least provide useful insight into some of the frustrations which women face.

Based on the above literature review, it is expected that significant differences will be demonstrated in measures of psychological adjustment in women as a function of higher and lower measures of achievement needs. It is hypothesized that differences, as measured by the MAS and the POI, will be in the following directions:

Subjects scoring higher on the MAS will also score more favorably on the two major scales of the POI, Tc and I; and on the three subscales used in the study, S, Sr, and Sa.
METHODS

Measurement of Achievement Motivation

The MAS is a 38-item inventory which purports to measure individual differences in achieving tendency. It consists of 19 negatively worded and 19 positively worded statements. Subjects indicate strength of agreement or disagreement with statements using a nine point scale ranging from "very strong agreement" (+4) to "very strong disagreement" (-4). Responses to the positively worded items are then algebraically summed. The same is done with negatively worded items. The total of the negative items is then subtracted from the sum of the positive items to yield an overall score.

The instrument used in this study was a revision of the 1968 version referred to by Fineman (1977). The revised version did not require separate male and female scales as did the earlier version. Mehrabian (1978) reports a Kuder-Richardson (1937) formula (20) reliability coefficient of .91. He further suggests that convergent validity is satisfactory since the Mehrabian scale correlated .74 with a Jackson (1967) achievement scale.
Measurement of Psychological Adjustment

The POI is a 150 item self-report inventory purporting to measure qualities associated with self-actualization. There are two major scales, the Time Competence (Tc) scale which measures the degree to which an individual lives primarily in present reality although with a meaningful continuity between the past and the future. The Time Competent individual lives more in the here and now, free of both guilt and regrets, and unhampered by unrealistic goals and plans.

The second major scale is the Inner Directed (I) scale which measures an individual's tendency to be guided by internal values rather than external influences. This scale is conceptualized in terms of other/inner orientation with a balanced, although strong internal motivation, considered preferable.

There are 10 POI subscales which measure components of self-actualization. For the present study, the two major scales referred to above were used, as well as three subscales. The subscales included the Spontaneity (S) subscale, measuring freedom to express oneself spontaneously or to be oneself; the Self-Regard (Sr) subscale, measuring self worth affirmations which are based on one's strengths; and the Self Acceptance (Sa) subscale, measuring acceptance of oneself despite weaknesses.
Bloxom (1972) notes that the content validity of
the POI is good. He labels the test retest reliability
coefficients (ranging from .55 to .85) as "moderate" to
"good" and sees the normative data as biased in favor
of college populations. In citing specific studies, he
notes that the I scale shows a "considerable degree of
validity as a measure of feelings, values, and atti-
tudes appropriate to self-actualization" (p. 292). He
cautions, however, that individuals scoring high on
this scale may not necessarily be reaching their full
potential.

Subjects

Subjects were 57 female students attending either
a six-week or a four-week summer session at a coeduca-
tional, rural state university in western North
Carolina. Most of the students were enrolled in the
university or other schools during the regular school
year. Subjects were predominately single and ranged in
age from 17 to 29 years old with a mean age of 21.

Procedure

Subjects were recruited in undergraduate
psychology courses and asked to participate in a study
of "the relationship between some various aspects of
personality." All subjects were volunteers and
received extra credit for participating in the study.
After indicating their willingness to participate,
subjects were given packets to take home, complete, and return at specified times.

All items in the packets were self administered and included the following: 1) Demographic Data Sheet (Appendix A); 2) MAS, revised edition; 3) POI test booklet with enclosed answer sheet. Directions on the outside of the packet (Appendix B) listed the contents and instructed participants to complete the data sheet, and then the questionnaires according to the directions for each. Subjects were encouraged to answer all items on all questionnaires and not to discuss their answers with anyone.

Design

A between subjects design was used, with high and low MAS scores as the independent variables, and scores on five POI scales as the dependent variables.
RESULTS

Of 61 packets returned by females, three were discarded due to subjects' graduate or advanced training level, and one was discarded due to the respondent's apparent failure to understand MAS directions.

MAS scores ranged from -11 to 113 with a mean score of 49.74 (SD = 32.39). This mean was almost four points higher than the mean score of 46 (SD = 36) for females obtained in a validation study reported by Mehrabian (Mehrabian, Note 1). In the present study, scores on the MAS ranged from -11 to 35 for the 19 low scorers and from 67 to 113 for the 19 high scorers. In order to identify highest and lowest achievement motivation groups, all scores were rank ordered and divided into thirds with the middle third discarded. A series of t-tests was conducted using the means of the raw scores of each of the five POI scales comparing the high (n = 19) and low (n = 19) achievement motivation groups.

Comparisons between the two achievement motivation groups revealed no significant differences in scores on the two major POI scales: Tc, t (36) = -1.45, p < .10;
and $I, t(36) = -1.50, p < .10$. The mean Tc score for the low motivation group was 15.37 (SD = 3.17). For the high motivation group, the mean Tc score was 16.84 (SD = 3.08). The mean I score for the low motivation group was 81.42 (SD = 11.31). For the high motivation group, the mean score was 86.32 (SD = 8.63).

Comparisons between the two achievement motivation groups revealed no significant differences between scores on any of the subscales of the POI (See Table 1). Results were as follows: S subscale, $t(36) = -1.14, p > .10$; Sr subscale, $t(26.86) = -2.13, p < .05$; and Sa subscale, $t(36) = -.05, p > .10$. In order to minimize error rate resulting from multiple $t$-tests and overlapping items in the POI, stringent alpha levels were adopted. For the above series of comparisons, the .0085 level (one-tailed) was set.

In order to see if there was a significant difference between the mean ages of the high and low achievement motivation groups, a comparison was made using a $t$-test. The mean age for the low motivation group was 20.16 (SD = 1.34) and was 21.32 (SD = 1.95) for the high motivation group, $t(36) = -2.13, p < .05$. For this test, the alpha level was .017 (two-tailed).
## TABLE 1
COMPARISONS OF HIGH AND LOW ACHIEVEMENT MOTIVATION GROUPS
BASED ON AGE AND RAW SCORES OF SELECTED POI SCALES

<table>
<thead>
<tr>
<th>Age/POI Subscale</th>
<th>Low Achievement Motivation Group N=19</th>
<th>High Achievement Motivation Group N=19</th>
<th>t-Value</th>
<th>p-Value</th>
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<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
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<td>Age</td>
<td>20.16</td>
<td>1.34</td>
<td>21.32</td>
<td>1.95</td>
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<tr>
<td>Time Competence</td>
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<td>3.17</td>
<td>16.84</td>
<td>3.08</td>
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<tr>
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<td>11.31</td>
<td>86.32</td>
<td>8.63</td>
</tr>
<tr>
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<td>12.53</td>
<td>2.09</td>
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<td>13.42</td>
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<td>Self Acceptance</td>
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<td>3.16</td>
<td>14.79</td>
<td>2.82</td>
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*Two-tailed test; all others one-tailed*
DISCUSSION

Results did not support the major hypothesis of this study which was that subjects scoring higher on the measure of achievement motivation would also score more favorably on the two major scales of the POI, Tc and I, as well as on the subscales used in the study, S, Sr, and Sa. Although not significant, all results were in the predicted directions. They appear somewhat consistent with those of Wessman et al. (1960) and Powell and Reznikoff (1976).

One explanation for these results centers on the framework of psychological adjustment. If the focus is on fulfillment and positive mental health, as has been the approach in this study, the concept of self-actualization would appear to be a reasonable reference point for measuring adjustment. One of the qualities characteristic of the self-actualizing individual is high achievement. He/she is pictured as functioning more fully, developing talents, and utilizing potential (Shostrom, 1974). A critical assumption of such a concept is that sufficient motivation is necessary for high levels of achievement to be implemented. Since this study does not support a significant relationship

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between achievement motivation and self-actualization, there is the possibility that such a relationship does not exist. If this is the case, the concept of self-actualization may need to be re-defined. There is also a related possibility that the POI does not measure the aspects of self-actualization which are related to achievement motivation. In either case, this investigation fails to support an assumption of self-actualization as characteristic of high achievement motivation in female undergraduates, as measured by the MAS.

A second explanation for the findings in this study focuses on the way one chooses to view and to measure achievement motivation. It is possible, for example, that achievement motivation may need to be narrowly defined, rather than generally addressed, as has been the approach of this study. There are many different instruments based on several different models of achievement motivation theory. Perhaps the MAS is not the appropriate instrument with which to relate achievement motivation and self-actualization. As previously noted, the various instruments appear to be measuring different things. There are also many approaches to the measurement of achievement and achievement motivation. For example, LeMay and Damm (1968) used the standard of grade point average to distinguish underachievers from academically successful
students, finding that underachievers scored significantly lower on six POI scales. Had a different instrument or a different criterion been used for measuring achievement motivation in the present study, it is possible that results would have been entirely different, as future research may demonstrate.

In order to see if class standing had an effect on MAS and POI performance as data in the POI manual (Shostrom, 1974) seem to suggest, a second series of t-tests was conducted (see Table 2.) In this series of analyses, the entire sample was used. Students who had completed at least the junior year (n = 37) were compared with those who had not (n = 20). The two groups were compared on the basis of age, MAS scores, and scores on each of the five POI scales. Ages of the two groups were not significantly different. The mean age for the lower levels was 20.2 (SD = 2.76) and 21.51 (SD = 1.28) for the upper grade levels, t (23.51) = -2.01, p < .10.

MAS scores did not significantly differ as a function of class standing. Mean scores for the lower class levels was 44.7 (SD = 39.32), while mean scores for the upper class levels was 52.46 (SD = 28.18), t (55) = -.86, p > .10.

Scores on the two major POI scales were not significantly different for the two grade levels. On the Tc scale, the mean score for the lower grade levels
TABLE 2

COMPARISONS OF HIGH AND LOW GRADE LEVELS BASED ON MAS AND RAW SCORES OF SELECTED PERSONAL ORIENTATION INVENTORY SUBSCALE

<table>
<thead>
<tr>
<th>Age/POI Subscale</th>
<th>Not Yet Completed Junior Year N=20</th>
<th>Completed at Least Junior Year N=37</th>
<th>t-Value</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Age</td>
<td>20.20</td>
<td>2.76</td>
<td>21.51</td>
<td>1.28</td>
</tr>
<tr>
<td>MAS Score</td>
<td>44.70</td>
<td>39.32</td>
<td>52.46</td>
<td>28.18</td>
</tr>
<tr>
<td>Time Competence</td>
<td>15.60</td>
<td>3.17</td>
<td>16.19</td>
<td>2.74</td>
</tr>
<tr>
<td>Inner Directed</td>
<td>79.80</td>
<td>12.18</td>
<td>85.78</td>
<td>8.43</td>
</tr>
<tr>
<td>Spontaneity</td>
<td>11.20</td>
<td>2.17</td>
<td>12.89</td>
<td>2.47</td>
</tr>
<tr>
<td>Self Regard</td>
<td>11.90</td>
<td>3.21</td>
<td>13.32</td>
<td>1.44</td>
</tr>
<tr>
<td>Self Acceptance</td>
<td>13.40</td>
<td>2.62</td>
<td>15.51</td>
<td>2.76</td>
</tr>
</tbody>
</table>

All tests two-tailed

*P < .014
was 15.6 (SD = 3.17) and 16.19 (SD = 2.74) for the upper levels, \( t(55) = .73, p > .10 \). On the I scale, the mean score was 79.8 (SD = 12.18) for the lower grade levels and was 85.78 (SD = 8.43) for the upper grade levels, \( t(55) = -2.18, p < .05 \).

However, higher grade levels scored significantly higher on two of the POI subscales. The S subscale mean scores for the lower grade levels was 11.20 (SD = 2.17) and 12.89 (SD = 2.47) for the higher grade levels. These scores were significantly different, \( t(55) = -2.57, p < .014 \). Thus, women in higher grade levels scored significantly higher on this measure of freedom to be oneself or to express oneself spontaneously.

Likewise, on the Sa subscale, the higher grade levels scored significantly higher than the lower grade levels. The mean score for the lower grade levels was 13.4 (SD = 2.62) compared with a mean score of 15.51 (SD = 2.76) for the upper grade levels, \( t(55) = -2.81, p < .014 \). This means that the women in higher grade levels scored significantly higher on this measure of acceptance of oneself despite weaknesses.

Scores for the Sr subscale were not significantly different for the two groups, \( t(23.18) = -1.89, p < .10 \). The alpha level adopted for this series of analyses was .014 (two-tailed).
The findings that the upper grade levels scored more favorably on the S and Sa scales are interesting. These findings indicate that subjects who had completed at least the junior year appeared more self-actualized than those who had not. Components of self-actualization which the S scale purports to measure are freedom to express oneself spontaneously or to be oneself. The Sa scale purports to measure acceptance of oneself in spite of weaknesses. Although ages alone did not prove to be significantly different in the two grade levels in this sample, age appears to be an underlying influence in this study. Although age differences were not significant, higher age was associated with higher achievement motivation. Likewise, higher age was associated with higher grade levels, although differences again were not significant. Higher grade level subjects also scored significantly higher on the two POI subscales, as noted above. One explanation for these differences in performance by grade levels centers on the nature of the sample used in the study. A summer school sample, such as the one used in this study, would be expected to perform differently from a sample tested during the regular school year. Samples taken from summer school classes are typically more heterogeneous than samples taken from regular term classes. Subjects in higher and lower grade levels may be in summer school for different reasons. The lower
grade levels, for example, may represent more students who are in summer school due to unsatisfactory work during the regular term. Upper grade levels, on the other hand, may represent more students who have already satisfactorily completed the lower grade levels and are in summer school for the purpose of completing elective requirements or graduating early. Thus, given the atypical summer school population, higher ages and grade levels may include more students who are inclined toward both higher achievement motivation and more favorable measures of self-actualization.

A POI scale which might be interesting to include in future studies would be the Feeling Reactivity (Fr) scale which purports to measure sensitivity to one's own feelings and needs. The Fr scale was not included in this study because it was originally felt that the scale might simply reflect a subject's "me" or humanistic concerns. However, a broader use of this scale might be to interpret it in terms similar to those designated in the Fand Inventory (Fand, 1955) which was used in some of the studies cited above (Gump, 1972; Powell and Reznikoff, 1976). In the Fand Inventory, Self- and Other-orientation is linked to traditional and contemporary orientations respectively. The assumption of this inventory is that Other-oriented women will embrace more traditional female values such as families, while Self-oriented women will be more
interested in achievement and developing their own potential. The Fand Inventory appears similar to the Fr scale in that both measures focus on orientation to oneself. The possible usefulness of the Fr scale, when interpreted in this framework, may be worth considering in the future.

Although the results of this study were inconclusive, it may be useful to address other issues related to achievement motivation, such as attribution theory, aspiration level, and locus of control. Creative investigation of these and other issues in the future may provide useful insight for women as to the hazards and rewards of developing their talents to the fullest.
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VITA

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