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A STUDY OF THE RELATIONSHIP OF ACHIEVEMENT
MOTIVATION TO ATTRIBUTION AND ACTIVITY
CHARACTERISTICS OF MILITARY WIVES.

THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA,
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A STUDY OF THE RELATIONSHIP
OF ACHIEVEMENT MOTIVATION TO ATTRIBUTION
AND ACTIVITY CHARACTERISTICS OF MILITARY WIVES

A Dissertation
Presented to
The Faculty of the School of Education
The College of William and Mary in Virginia

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

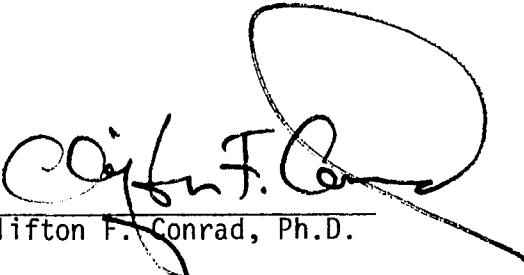
by
Linda Joseph Fineran
May 1979

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BY

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Dedication

Dedicated to my father whose love, understanding and support have been my motivation to achieve.

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Completing the requirements for the Doctor of Education has involved the direction, cooperation, and help of certain key individuals. To them I wish to express my thanks.

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CHAPTER I

INTRODUCTION

General Problem

In recent years, much has been written concerning women and their changing role in society. Modern conveniences, emphasis on smaller families and changing attitudes toward the female role have made available to the modern woman more options for personal fulfillment than previously possible. In relation to this, Low has written;

The stereotype of the female sex role, historically comfortable and emotionally laden, is obsolete. The data available underlines that this role is not good either for the individual or for society, philosophically no longer acceptable from a humanistic and ethical standpoint (1974, p. 110).

In a similar vein, Horner and Walsh have written;

Unfulfilled abilities, interests, and intellectual potential give rise to feelings of frustration, hostility, aggression, bitterness, and confusion (1974, p. 143).

Given that society is becoming increasingly more tolerant of the female with multiple roles, of which wife and mother are options but not exclusive options, it is reasonable to expect that women would increasingly strive to aspiration levels comparable to men. However, research done in the area of achievement motivation has not supported this expectation. The apparent lack of correspondence between results for males and females in motivational research has contributed to a literature which appears to indicate that assessment of achievement motivation (Atkinson, 1964, p. 226)

and achievement responsibility (Crandall et al., 1962) may be of questionable validity for females. Other psychologists (e.g. McClelland, 1966) have argued the need for a separate motivational theory for females (Weiner and Potepan, 1970, p. 150). These views have stimulated much controversy concerning the application of achievement motivation theory to females as well as inciting criticism of previous research.

The military, compared to other careers, has been viewed as placing particular strains and demands upon the non-military spouse as she attempts to achieve self-fulfillment while accomodating her husband's career (Decker, 1977, p. 20). Military wives, therefore, represent a segment of the female populace in which the need for avenues of self-fulfillment is especially important. Military wives are appropriate subjects for achievement research because they are comparatively diverse in their activities and aspirational dispositions and because the group is defined by virtue of their husband's career rather than their own achievements. Few previous achievement studies which used female samples were able to attain this degree of diversity.

Theoretical Framework

Two major theories which have been used recently to analyze aspirational behaviors are achievement motivation theory, as expounded by John W. Atkinson, David McClelland and others, and attributional theory. In general terms, achievement motivation is "a disposition to find gratification in successful competition with standards of excellence through one's own effort (Veroff, et al., 1975, p. 172)." Attribution

theory, or achievement responsibility, attempts to explain how an individual perceives success and failure. Attribution is sometimes termed achievement responsibility because it refers to the perceived causes of one's accomplishments and failures which are thought to be associated with differences in achievement needs. Until recently, the term attribution was synonymous with the more specific concept of locus of control. Locus of control refers to the characteristics of internality and externality. That is, whether the cause or attribution is viewed as internal; i.e., under the control of the individual, or external; i.e., caused by forces outside of the individual and therefore uncontrollable. Although locus of control has been found to be related to a variety of behaviors and psychological constructs, surprisingly low and non-significant relationships have resulted when relating it to achievement motivation.

The failure of the two concepts to relate has prompted some psychologists to look further into the quality of attribution, and the result has been the emergence of another concept or dimension which has been termed stability. Stability refers to the variability of the perceived causes or attributions. A cause is considered to be variable or unstable if it changes from one situation to another. Likewise, a cause is considered to be invariable or stable if it is perceived as permanent or unchanging regardless of the situation. It has been stated by some researchers that the failure to consider the stability dimension of attribution is partially responsible for the inability of earlier studies to produce significant results when relating attribution to achievement motivation. Unfortunately, studies which have considered the stability dimension have excluded locus of control. This study attempts

to consider both locus of control and stability as they relate to achievement motivation. Further, based upon findings of previous achievement motivation and attribution studies concerning the characteristics of activities which are associated with levels of achievement motivation and attribution, this study attempts to relate the activity characteristics of evaluation and monetary rewards to achievement motivation, locus of control and stability.

Statement of the Problem

Presently our society is faced with many difficult questions concerning the resolution of inequities in the rights of the individual. One such controversial area has been the rights of women. Somewhat parallel to this issue is the view of some psychologists that women, unlike men, are not achievers or that they achieve only out of a need for social approval (McClelland et al., 1953, p. 179). Some psychologists feel that even more important than barriers which exist in society are the psychological barriers which exist within the women themselves and prevent them from aspiring to achieve at levels comparable to their male counterparts (Horner & Walsh, 1974, pp. 138-44). It was not the intent of this study to refute current controversies concerning women nor to identify the barriers which have served to perpetuate these views. Rather, the purpose was to analyze objectively the aspirational dispositions of a specific group of women, in this case, military wives. Perhaps the fact that this particular segment of the female population is virtually ignored in achievement research reflects the values in our society which

dictate that a woman must choose between her family and her personal aspirations. Because of the demands which result in a military career, particularly upon the non-military spouse, the problems are serious for the military wife who seeks self-fulfillment. This research proposed to analyze the relationships between achievement motivation, attributional factors, and activity characteristics of a group of military wives and to study significant associations in an area which rarely involves samples of females. It was therefore expected that the need for achievement would be related not only to the perceived causes for success and failure but also to particular characteristics of the activity which is perceived as most self-fulfilling.

Definition of Terms

Some of the terms used in this study may be unfamiliar to the reader and some terms may be used in unconventional ways. Therefore, a number of terms which are used throughout this report will be defined and clarified in this section.

Achievement motivation. A disposition to find gratification in successful competition with standards of excellence through one's own effort (Veroff, et al., 1975, p. 172); also termed "need to achieve" or the "motive to achieve success" (M_S).

Achievement responsibility. Same as attribution.

Activity characteristics. In the study, one's activity was determined by one's response to the question, "What one

activity, group or job in which you participate outside of your home affords you the most satisfaction, self-fulfillment or sense of accomplishment?" The characteristics of the activity which were studied were: 1) the degree to which performance in the activity is objectively evaluated (evaluation) and 2) the type of monetary compensation involved (monetary rewards).

Aspiration. Lewin's definition was adopted in which the level of aspiration is defined as the setting of a performance goal. It necessitates a comparison among a number of possible alternatives differing in probability of success level and final selection of one of these alternatives as the subjective goal (Weiner, 1972, p. 207).

Attribution. The processes by which an individual interprets events as being caused by a particular part of a relatively stable environment (Kelley, 1967, p. 193). In this report, it refers to the ascription of success or failure to one of four causes: ability, effort, task difficulty, or luck.

Evaluation. Measurement of performance based upon a standard of excellence or some other predetermined criteria by one other than the performer. In this report it specifically relates to the activity chosen as most self-fulfilling to the respondent.

Expectancy. Expectancy was defined as a cognitive anticipation, usually aroused by cues in a situation that performance of some act will be followed by a particular consequence. The

strength of an expectancy can be represented as the subjective probability of the consequence, given the act (Atkinson, 1966, p. 12).

Externality. When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him (Strickland, 1977, p. 221). In this study, externality was determined through the pattern of responses on the Rotter I-E scale.

Internality. When a reinforcement is perceived by the subject as following some action of his own and being contingent upon his own behavior or his relatively permanent characteristics (Strickland, 1972, p. 221). In this study, internality was determined through the pattern of responses on the Rotter I-E scale.

Locus of control. Belief in predominantly external or internal control over the consequences of one's behavior; it operates both as a belief directed toward one specific situation and as a generalized expectancy covering many diverse situations (Phares, 1976, p. 172). Within the control dimension, ability and effort are classified as internal determinants of actions (or as Heider states, personal forces) and task difficulty and luck are classified as external determinants of success and

and failure (Weiner, 1972, p. 356). In this study, it was measured by the Rotter I-E scale.

Monetary rewards. An activity was classified as monetarily rewarded if there is a salary or monetary compensation exchanged for services.

Motive. A disposition to strive for a certain kind of satisfaction, as a capacity for satisfaction in the attainment of a certain class of incentives (Atkinson, 1966, p. 12).

Negative outcome. When an action results in failure or perceived failure.

Positive outcome. When an action results in success or perceived success.

Resultant achievement motivation. The resultant tendency to approach or avoid an achievement-oriented activity (T_a); a function of the strength of the tendency to approach the task plus the strength of the tendency to avoid the task such that:

$$T_a = T_s + (-T_{af}) \text{ or } T_a = (M_s \times P_s \times I_s) + [M_{af} \times P_f \times (-I_f)]$$
 (Weiner, 1972, p. 201).

Stability. Applied to causal attributes, stability is the quality of being variable or fixed. The causal attributes of ability and task difficulty are conceptualized as "stable" because they are relatively invariant or unchanging over time. Conversely, the causal attributes of effort and luck are assumed to be "unstable" or variable from one task to another (Weiner, 1972, p. 356).

This study has attempted to analyze the psychological construct of achievement motivation by studying its relationship to attribution, through both the locus of control and stability dimensions, and the characteristics of the activity which is considered to be most self-fulfilling (i.e., evaluation and monetary rewards).

CHAPTER II

THEORY AND RELATED RESEARCH

Achievement Motivation

Although the concept of achievement has been studied in many different contexts, one of the most extensive and well-known treatments has been that of McClelland and Atkinson. McClelland (1958) and Atkinson (1964) state that the person who is achievement motivated takes pride in his work when he is held responsible for his actions, when he is informed of his level of performance, and when there is an element of risk involved (when he is not certain of success).

Achievement theory, a cognitive theory, assumes that one's belief about the likelihood of attaining a goal (success at an achievement task) mediates between the perception of the task stimulus and the final achievement-related response (Weiner, 1972, p. 168). In Atkinson's view achievement-related behavior is conceptualized as a resultant in a conflict situation; that is, the cues associated with competition against a standard of excellence are assumed to arouse both the hope of success and the fear of failure. It is therefore the strength of the approach tendency toward the goal (the hope of success) relative to the strength of the avoidance tendency away from the goal (the fear of failure) which determines whether the individual will move toward or away from achievement-related tasks (Weiner, 1972, p. 195). If one uses (M_s) to denote the motive to achieve success and (M_{af}) to denote the motive to avoid failure,

then the resultant motivation to perform the task is positive when $M_S > M_{af}$ and negative when $M_{af} > M_S$. Hence, an individual in whom $M_S > M_{af}$ should demonstrate positive interest in achievement related tasks whereas the individual in whom $M_{af} > M_S$ should tend to avoid achievement related tasks unless he is constrained to perform them.

Inasmuch as Atkinson (1964) defines the need for achievement (M_S) as a "capacity to experience pride in accomplishment" (p. 214), the achievement need is an affective disposition. The motive for success, a relatively stable and enduring disposition, is one of three factors which Atkinson believes are responsible for the tendency to approach an achievement-related goal (T_S). T_S , or the hope of success, is postulated to be a product of: 1) the need for achievement, also known as the motive for success (M_S), 2) the probability that one will be successful at the task (P_S), and 3) the incentive value of success (I_S). It is postulated that these three components are multiplicatively related:

$$T_S = M_S \times P_S \times I_S.$$

It is further postulated that the incentive value of success (I_S) is inversely related to the probability of success (P_S) such that:

$$I_S = I - P_S.$$

Therefore, the incentive value of success increases as the probability of success decreases.

It is similarly postulated that the tendency to avoid failure (T_{af}) is a multiplicative function of the motive to avoid failure (M_{af}), the probability of failure (P_f), and the incentive value of failure ($-I_f$):

$$T_{af} = M_{af} \times P_f \times (-I_f).$$

If one considers that the probability of failure (P_f), like the probability of success, is determined by one's perception of difficulty

of the task, then it can be ascertained that $I_f = - (I - P_f)$. That is, since the incentive value of failure is a negative affect labeled "shame," one would expect greater shame to be experienced following failure at an easy task, than after failure at a difficult task (Weiner, 1972, pp. 195-201). Another assumption of the Atkinson model is that the probabilities total unity: $P_s + P_f = I$.

The resultant tendency to approach or avoid an achievement-oriented activity (T_a) is postulated to be a function of the strength of the tendency to approach the task plus the strength of the tendency to avoid the task: $T_a = T_s + (-T_{af})$ or $T_a = (M_s \times P_s \times I_s) + M_{af} \times P_f \times (-I_f)$.

One can further postulate that the two motivational tendencies are opposing forces (one an approach behavior and the other an avoidance behavior) and are therefore in conflict.

In relation to the motivational effects of success and failure, some researchers have suggested that while success enhances performance of individuals low in achievement concerns, failure further inhibits their achievement strivings. Conversely, success dampens the performance of individuals high in resultant achievement motivation while failure increases their achievement strivings (Weiner, 1972, pp. 230-1). Atkinson (1966) warns, however, that "motivation to avoid failure should always be conceived as inhibitory in character. It specifies what activities a person is not likely to undertake, not what activities he is likely to undertake [p. 19]." Atkinson and Birch (1970) refer to this inhibitory tendency as a negation tendency; that is, the tendency to avoid failure subtracts from the strength of the tendency to achieve success to produce a weaker resultant tendency to achieve (Atkinson, 1977, pp. 44-5). In order to

account for achievement-type behaviors exhibited by individuals in whom

$M_{af} > M_S$, Atkinson (1977) states,

Given a motive to avoid failure that is greater than the motive to achieve, it should require some other kind of positive incentive (social approval for cooperation, or a monetary incentive, etc.) to produce a sufficiently strong extrinsic tendency to undertake the activity to overcome the resistance. In this case, where $T_{res} = (T_S - T_f)$ is negative because the strength of T_S is less than the strength of T_f , the total strength of the tendency for an activity (T_a) is composed as follows: $T_a = (T_S - T_f) + T_{ext}$, where T_{ext} (any so-called extrinsic tendency) depends upon some of the effects of one or more such incentives as money or social approval for merely trying, cooperation or doing what is expected by one's reference group in a social situation [p. 46].

Weiner and Kukla (1970) have found that the degree to which success and failure are perceived as attributable to internal factors (ability and effort) rather than to external factors, when plotted in relation to information about percentage of others who succeed at a task, corresponds almost exactly to the assumed magnitude of I_S and I_f in relation to P_S and may be considered the reason that pride in success (I_S) and shame in failure (I_f) vary, as they do, in relation to P_S .

One concept of particular interest in achievement theory is level of aspiration which is defined operationally by Lewin and his colleagues as the setting of a performance goal. It can be contended that such goal setting necessitates a comparison among a number of possible alternatives differing in P_S level, and a final selection of one of these alternatives as the subjective goal (Weiner, 1972, p. 207). Many studies have been reported which confirm the hypothesis that when performance is confined to achievement-related activities, individuals in whom $M_S > M_{af}$ will select tasks of intermediate difficulty, i.e. where $P_S = .50$, with greater frequency than individuals in whom $M_{af} > M_S$ (Weiner, 1972, p. 206).

Similarly, Atkinson (1966) writes,

Idealistically, the $M_{af} > M_S$ should want to avoid all tasks since competitive achievement situations are unattractive to him. If, however, he is constrained (e.g. by social pressures) and asked to set his level of aspiration, he should avoid tasks of intermediate difficulty ($P_S = .50$) where the arousal of anxiety about failure is greatest. He should choose either the easiest ($P_S = .90$) or the most difficult task ($P_S = .10$) because the strength of avoidant motivation is weakest at these two points [pp. 17-18].

In other words, the fearful person prefers the least threatening of the available alternatives: either the task which is so easy he cannot fail, or the task which is so difficult that failure would be no cause for self-blame or embarrassment. In support of this, Mahone (1966) found that the greatest realism in vocational choice, that is, perceived ability in relation to degree of ability necessary for success at various occupations, was displayed by individuals in whom $M_S > M_{af}$ and that the least amount of realism was exhibited by those in whom $M_{af} > M_S$.

Weiner and Kukla (1970) suggest that individuals high in achievement motivation select tasks of intermediate difficulty because such tasks have the greatest informational (rather than hedonistic or consummatory) value. On the other hand, individuals low in achievement motivation prefer to avoid information concerning their relative abilities, and select activities which result in task attributions. This argument finds support in the data (McClelland, 1961) indicating that high achievement-oriented individuals prefer occupations which can be evaluated and which provide informational feedback (Weiner and Kukla, 1970, p. 19).

Another interesting area concerns rewards. Research has found that individuals high in resultant achievement are better able to delay gratification than low achievers, and that when given a choice between an

immediate small reward and a future larger one, high achievement subjects will more frequently decide in favor of the future larger reward (Mischel, 1961; Cameron and Storm, 1965; cf. Fischer, 1961). In relation to this, high achievers tend to engage in activities which may not be intrinsically satisfying but which lead to future gains. The latter difference is exemplified by the preference of high achievers for activities which involve skill or competition, and therefore striving, to activities which involve chance or cooperation, the reverse being true of low achievers (Mehrabian, 1969, pp. 444-5).

Based on these findings, particularly those concerning evaluation and delayed gratification, this study attempted to identify characteristics of the most-fulfilling activity in which the subjects participate. One characteristic is the degree of objective evaluation involved and therefore veridical feedback provided. The other characteristic studied is the presence of monetary compensation on a regular schedule. Of these two variables, it appears that the former has the stronger basis, but both should relate to the theories being explored.

It is understood that activity choice can be affected by a number of factors, and that what is perceived as most self-fulfilling is relative to the options which one has available. This should, however, in no way detract from the importance of finding support of the theories through a practical, albeit imperfect, dimension with the expectation that even weak relationships might help to better explain achievement-related behaviors and pave the way for a more applicable theory of achievement motivation.

Attribution Theory

"Attribution theory," or achievement responsibility (Crandall, Katkovsky and Preston, 1962) according to Kelley (1967), "concerns the processes by which an individual interprets events as being caused by a particular part of a relatively stable environment (p. 193)." Thus, attribution theorists deal with the relationship between phenomena (effects) and the reasons (responsible agents) for those events. It is assumed that individual differences in achievement needs are associated with differential probabilities of ascription to four causal elements: ability, effort, task difficulty, and luck. These four perceived causes of success and failure can be comprised within two causal dimensions: locus of control (internality-externality) and stability (fixed or variable) (Weiner, 1972, p. 356).

Locus of Control (I-E Concept)

In the locus of control dimension, "internals" are individuals who feel that they control their lives through their own actions while "externals" are individuals who feel that events affecting them are the result of luck or chance (Maccoby and Jacklin, 1974, p. 157). Within the control dimension, ability and effort are classified as internal determinants of action or personal forces, and task difficulty and luck are classified as external determinants of success and failure (Weiner, 1972, p. 356). Rotter (1966) defines the I-E concept (Internality-Externality) in this manner:

When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual we have labeled this a belief in external control. If the person perceives that the event is contingent upon his own behavior or his relatively permanent characteristics, we have termed this a belief in internal control [p. 1].

Generally, the potential for a behavior to occur in any specific psychological situation is a function of the expectancy that the behavior will lead to a particular reinforcement in that situation and the value of that reinforcement (Strickland, 1977, p. 222). The degree to which an individual perceives personal responsibility for a particular reinforcement should influence the probability of engaging in the behavior or similar behaviors in the future. Some experimenters (Crandall, 1973; Crandall, Katkovsky and Crandall, 1965) have emphasized that prediction can be improved by specifying the valence of the subsequent reinforcement, i.e. success or failure may result in opposite attributions within the same individual. Unfortunately, the most widely used measure of locus of control (the Rotter I-E Scale) does not make this differentiation. However, in measuring stability, this distinction has been incorporated by measuring stability of attribution or cause in both successful and unsuccessful situations.

Internality-Externality has been found to correlate with a number of achievement-related behaviors. I-E appears to be clearly related to conformity and compliant behavior. Crowne and Liverant (1963), using a typical asch-type conformity paradigm, investigated behavioral conformity. As expected, externals were more likely to yield to peer pressure and were

less likely to trust their own responses than were internals. Similarly, the bulk of I-E research (Strickland, 1970; Getter, 1966; Gore, 1962; Richie and Phares, 1969; Ryckman, Rodda, and Sherman, 1972; Biondo and MacDonald, 1971; Johnson, Ackerman, Frank and Fionda, 1968; Doctor, 1971; Ude and Volger, 1969; Jolley and Spielburger, 1973; Alegre and Murray, 1974; Baron, 1969; and Lichtenstein and Crain, 1969) supports the contention that externals are more compliant and more susceptible to social influence.

Similarly, it has been found that internals react more strongly than externals to the loss of personal freedom (Brehm, 1966; Jones, 1970; Cherulnik and Citrin, 1974). Internals appear to want to behave in ways which facilitate independence and negate the others influence of others.

In problem-solving situations, internals are oriented toward gathering and processing information, while externals seem more concerned with social requirements (Seeman, 1963; Seeman and Evans, 1962; Pines and Julian, 1972). In support of this, it has been found that the presence of an observing audience tends to enhance the performance of externals while it tends to impede the performance of internals (Lefcourt, 1976; Baron, Cowan, Ganz and McDonald, 1974; Baron and Ganz, 1972; Fitz, 1971).

In regard to risk-taking, it has been generally found that externals, when given a choice, are likely to put themselves either in situations of low risk so that they easily attain their goals or in conditions of extremely high risk so that failure does not reflect their own ineptitude (Battle and Rotter, 1963; Ducette and Wolk, 1972; Feather, 1967 a, b, 1968; Julian and Katz, 1968; Lefcourt, 1967; Liverant and Scodel, 1960). There are exceptions to this, however, as a few studies report no relationship between externality and risk-taking (Butterfield, 1964; Gold, 1966;

Minton and Miller, 1970), and one study has even found a reverse relationship (Strickland, Lewicki and Katz, 1966).

In view of the findings concerning compliance, social reinforcement, information processing and risk-preference behavior, Strickland (1977) has written that, "Externals seem to place themselves in situations in which little opportunity is available for veridical feedback about their performance [p. 246]." Considering that externals do not take personal responsibility for their successes and rely so heavily upon social reinforcement, this should not be a surprising conclusion.

The data concerning the effects of an audience as enhancing the performance of the externals may appear to contradict the Strickland hypothesis concerning feedback. However, if one considers the concern of the external with social approval (positive valence) and the lack of personal responsibility for successful behaviors, then one can readily see that the external person might fear the worse possible feedback or evaluation, and not wanting to risk a loss of self-esteem and social approval, avoid activities in which there is an identified standard of excellence and objective evaluation.

Attempts to relate need for achievement to locus of control, as assessed by the Rotter I-E scale, have been generally unsuccessful as the relationship has fairly consistently been found to be low and in a negative direction. Wolk and Ducette (1971) obtained low nonsignificant inverse relationships between the Mehrabian measures of achieving tendency and external locus of control (Rotter scale, 1966): $r = -.22$ for both males and females together ($-.15$ for females) in one study, and $r = -.11$ in a second study (Mehrabian, 1975, p. 7).

In experimental (rather than correlational) research, Maehr and Stallings (1972) explored the effects of internal versus external evaluation of performance and task difficulty on willingness to continue working on a task. It was concluded that high achiever males were more likely to have interest in a challenging task when external evaluation was minimized. There were no significant interactions for females or for low achiever males (Mehrabian, 1975, p. 8). Similarly, Batlis and Waters (1973) and Wolk and Ducette (1973) explored interactions of achieving tendency and locus of control in determining performance. It was hypothesized by Wolk and Ducette (1973) that some inconsistencies associated with achievement research could be better understood by using locus of control (Rotter scale, 1966) as a moderator variable in predicting performance on skill versus chance related tasks, or risk preference. Achieving tendency correlated significantly with each of the dependent variables (preferred level of risk, estimated probability of success and actual performance) for internal subjects, but no significant results were found for externals, thereby suggesting that locus of control may be a significant moderator variable in predicting the effect of achieving tendency on various behaviors (Mehrabian, 1975, p. 8). Batlis and Waters (1973) found similar results using a "log linear expectancy model" to predict performance, thereby lending support to the findings that locus of control may serve as a moderator of achieving tendency in predicting performance (Mehrabian, 1975, p. 8).

Although much research with children has helped to clarify the relationship between beliefs in internality and school achievement (Crandall, Katkovsky & Preston, 1962; Chance, 1965; Crandall, Katkovsky &

Crandall, 1965; McGhee & Crandall, 1968), the strongest correlations (except for Chance, 1965) have been only for males [i.e., with school-aged males it has been found that internals work harder at intellectual and performance tasks, make better grades, and receive more desirable reinforcements by delaying immediate gratification (Platt & Eisenman, 1968; Shybut, 1968; Shipe, 1971; Erikson and Roberts, 1971; Walls and Smith, 1970; Bialer, 1961)]. Studies of internality and academic performance in college students have generally shown weak, confounded or insignificant results also (Eisenman & Platt, 1968; Hjelle, 1970; Massari & Rosenblum, 1972; Wareheim, 1972; Wolfe, 1972) and have used primarily male samples (Brown and Strickland, 1972; Lao, 1970).

As a possible explanation, Weiner (1972) points out that experimental studies such as those by Rotter and his colleagues have confounded the locus of control and stability dimensions of causality by considering one dimension to the exclusion of the other (pp. 356-7). Another possible reason given for the absence of a relationship between achievement motivation and attribution is that the Rotter I-E scale, which is most often used, is made up primarily of nonachievement-related items (Weiner, 1972, p. 369). In relation to this, Weiner and Kukla (1970) point out that the achievement motive theoretically has directional properties, i.e. it influences thoughts and behaviors which are associated with achievement-oriented goals, and therefore it might be unsound to expect a general measure of locus of control to relate to need for achievement [p. 8]. Another problem of general measures of locus of control is the inclusion of items with both positive and negative outcomes in that the ascription of responsibility may be contingent upon the actual or expected consequences

of the event (Weiner & Kukla, 1970, p. 8). Still another problem of assessing I-E is the degree to which responding in the internal direction may be reflecting a social desirability bias. Although Rotter attempted to eliminate this problem, an examination of studies correlating I-E and the Marlowe-Crowne Social Desirability scale reveal an average correlation of $-.23$ (Rotter, 1966). Several recent studies show similar evidence of moderately high correlations between the Rotter scale and the Crowne-Marlowe scale (Cone, 1971; Hjelle, 1971; Vuchinich & Bass, 1974).

The viewpoint of Weiner and his colleagues is an interesting one and will be discussed in detail in the next section. Concerning the lack of specificity of the Rotter I-E scale, it is the opinion of this writer that alternative I-E scales which consist of achievement-related items are appropriate for college students but of questionable value for women who participate in other types of activities and the items are therefore too specific. The problem of valence appears to be valid since a mixed response would be evidenced in a lower I-E score, but raw scores are rarely used. Social desirability data also raises serious questions about traditional I-E instruments. Although the criticism may be well-founded, the possibility also exists that perhaps there just is no significant relationship between achievement motivation and locus of control. Rather, it is suggested that the relationship between these two variables will be evidenced through the control of stability and activity characteristics. The failure of previous studies to develop significant results for women is discussed in a subsequent section of this report.

Stability Dimension

Considering the dimension of stability, it has been postulated that one's perception of his general ability, as well as his beliefs about specific ability after sufficient commerce with an activity, are relatively invariant (stable) over time. Similarly, task difficulty is conceptualized as an unchanging (stable) factor. Effort and luck, on the other hand, are assumed to be variable (unstable) factors. Exertion may change given new tasks just as luck may be inconsistent. Therefore, ability is an internal-stable factor; effort is an internal-unstable factor; task difficulty is an external-stable factor; and luck is an external-unstable factor.

Weiner (1972) notes some of the shortcomings of this classification scheme: 1) individuals may perceive themselves as either diligent or lucky, thereby making the unstable factors of effort and luck appear to be more stable, 2) the model fails to distinguish general ability from specific ability, and 3) systematic change processes, such as gaining skill with commerce at a task (learning), are not incorporated (f.n., p. 356).

Weiner (1972) states that achievement theory fails to explain how judgements of probability level are formed or how success and failure are perceived (p. 269). More specifically, Weiner & Potepan (1970) state that "the systematic relationships between achievement-related needs and causal ascription strongly suggest that achievement motive systems can be considered complex cognitive networks in which attribution for success and failure play an essential role [p. 150]."

Using the Mehrabian Scales of Achieving Tendency (1969), the

Intellectual Achievement Responsibility (IAR) Scale (Crandall, Katkovsky and Crandall, 1965) and the Mandler-Sarason (1952) Test Anxiety Questionnaire (TAQ), a correlational study by Weiner and Potepan (1970) separated the relationship between achievement needs and attributions to ability as opposed to effort in situations of success and failure (both ability and effort are internal control factors). It was found that individuals high in resultant achievement needs attribute success to the presence of effort (internal-unstable) and failure to the absence of effort. However, individuals low in achievement needs, relative to subjects in the high motive group, do not perceive effort as an important determinant of outcome. Concerning ability, individuals high in resultant achievement motivation ascribe success to high ability (internal-stable), while those low in achievement concerns ascribe failure to lack of ability. Among both male and female subjects, Weiner and Potepan (1970) found individuals high in achievement motivation persistently attribute relatively high ability to themselves, while those low in achievement needs perceive themselves as relatively low in ability.

In a similar study, Weiner and Kukla (1970) found some data contradictory to the findings of Weiner and Potepan. It was found that high achievement motive subjects attributed success to high ability (internal-stable) and high effort (internal-unstable) and attributed failure to low effort. However, in contradiction to the prior data, the high achievement subjects also attributed failure to a lack of ability. Weiner and Kukla (1970) concluded that males high in achievement concerns are more likely to attribute success to high ability and/or high effort (internal factors) than individuals low in achievement needs, while males

low in achievement needs exhibit greater attributions to internal factors in situations of failure than males high in achievement needs. None of the differences between males high and low in achievement motivation approached significance for the female sample.

Due to the inconsistencies of the findings, the study was conducted again (Kukla, 1972) with task outcome defined by subjective success or failure rather than objective performance. The results of this study are consistent with the original findings.

The results of these studies indicate that individuals high in achievement needs, relative to those low in achievement needs, attribute success to ability and effort, and failure to a lack of effort. Individuals low in achievement needs, relative to those with high achievement motivation, ascribe failure to a lack of ability, and in general perceive themselves as low in ability.

Still another study (Meyer, 1970) examined the relations between causal attributions for success and failure and individual differences in achievement needs. The findings generally supported the research of Kukla (1970), Weiner and Kukla (1970), and Weiner and Potepan (1970) in that individuals high in resultant achievement motivation ascribe success to effort (unstable attribute) and ability (stable attribute) and failure to bad luck and lack of effort (unstable attributes), while individuals low in resultant achievement needs attribute success to good luck (unstable attribute) and failure to a lack of ability (stable attribute). Based upon these findings, it would appear that while stability is consistent with achievement motivation in failure situations, it does not differentiate high achievers in success situations. Therefore, it is expected

that stability with success is not a strong correlate of either achievement motivation or locus of control. That is, given a successful situation, high achievers and internals should tend to attribute their success to both stable and unstable causes.

In general, research has demonstrated that individuals high in resultant achievement motivation are more likely to initiate achievement activities than individuals low in resultant achievement motivation. In addition, research has consistently indicated that individuals high in achievement concerns ascribe success to ability and effort to a greater extent than individuals low in achievement concerns. The high motive individual should therefore experience more pride in success, for internal attributions heighten affective responses, which should increase the subsequent likelihood of undertaking achievement-related behavior. Likewise, high achievement individuals ascribe failure to lack of effort, while those low in achievement needs attribute failure to a lack of ability. The ascription of failure to low ability produces a greater increment in the expectancy of failure on future tasks than ascriptions to a lack of effort. Therefore, even though the low motive group may experience less negative affect for failure, they should be less likely to approach subsequent achievement-oriented tasks (Weiner, 1972, pp. 388-9).

Although Weiner and his colleagues have produced interesting results by considering the stability dimension, once again, these results did not reach significance for female samples. Further, the stability research failed to also consider all four attributions but rather presented only two possible alternatives.

It is therefore appropriate that further research be done considering

both locus of control and stability dimensions and specifying valence of outcomes. For this reason, this study will classify individuals both according to locus of control (LOC) using the Rotter I-E scale and according to stability using a direct method assessment method which considers conditions of success and failure.

Achievement Motivation in Women

Much controversy has surrounded the apparent inconsistencies in achievement motivation in women, when compared to men, as measured by traditional achievement motive instruments (TAT). To exemplify this, Weiner and Potepan (1970, p. 150) state that there is a literature which indicates that assessment of achievement motivation and achievement responsibility (attribution) is of questionable validity for females.

Maccoby and Jacklin (1974, pp. 134-5), after reviewing the literature on achievement motivation, have summarized the following hypotheses concerning sex differences which have emerged:

- 1) Males have a greater need for achievement and are more oriented to achievement for its own sake.
- 2) Males show greater task involvement and persistence.
- 3) Males show more curiosity and engage in more exploratory behavior.
- 4) Females are motivated to achieve primarily in areas related to interpersonal relations whereas males strive to achieve in nonperson-oriented areas including intellectual endeavors.
- 5) Female efforts to achieve are primarily motivated by the desire to please others, so that regardless of the area of achievement they care primarily about praise and approval for their performance, whereas males are more motivated by the intrinsic interest of the task.
- 6) Females have low self-confidence about many tasks. This is sometimes thought to be part of a generalized lack of self-esteem.

If one considers school-aged females, research has shown that girls tend to get better grades throughout their school years (Maccoby, 1966), are more interested in school-related skills from an early age (Baumrind and Black 1967, Barnard 1966), and are less likely to drop out of school before graduating (Fitzsimmons et al. 1969). It is therefore surprising that much of the research shows insignificant and inconsistent results when relating achievement motivation to females. In response to this, Maccoby and Jacklin (1974, p. 138) point out that this deficiency may be due to the effects of socialization, problems with projective measures, or competitive factors.

The idea that women have less motivation to achieve was initially a result of an early study by McClelland which used the Thematic Apperception Test (TAT) and found that, while males increased their achievement imagery subsequent to a "achievement arousal" treatment, the achievement imagery of females did not increase. However, Field (1951), replicating the experiment with the addition of a "social arousal" treatment, found that, while the achievement scores of the male subjects increased slightly over the neutral conditions, the achievement scores of the female subjects increased considerably more sharply (McClelland et. al., 1953, p. 179). This finding has been the primary basis for the assumption that women, when they achieve, achieve out of a need for social acceptance, while men are intrinsic achievers.

Although there exists little research on achievement motivation in women who are older than the traditional college age, Baruch (1966) and others have suggested that while men develop a motive to achieve that remains consistent over their life spans, achievement motivation in women

may fluctuate at different times during their lives and may increase at times when affiliation needs are met and traditional role-demands decline (Bardwick, 1971, p. 189).

It is not the intent of this study to look into sex differences in achievement motivation. But the failure of previous studies to attain significant results, the controversy concerning women in connection with achievement motivation, and the failure of many researchers to use female samples should raise serious questions and clearly indicate the need for more research on achievement motivation in women. Perhaps it is not that achievement theory is inappropriate for women but rather that poor assessment techniques, combined with the extent to which women have internalized societal expectations, have served to confound and invalidate previous findings.

CHAPTER III

DESIGN AND METHODOLOGY

Inasmuch as the purpose of this study was to analyze the relationship between achievement motivation, the attribution characteristics of locus of control and stability, and the activity characteristics of evaluation and monetary rewards, correlational analysis was determined to be the most appropriate method to determine the strength and direction of this relationship through a mail-questionnaire procedure which was implemented in the following manner.

The Sample

The sample consisted of married women whose husbands were in the military on active duty and stationed at Langley Air Force Base, Virginia. The sample was randomly selected from a list of all Air Force wives stationed at Langley AFB during the winter of 1978. The questionnaires were sent to a random sample of one thousand wives based on the assumption that there would be at least a forty percent return. A table of random numbers selection technique as explained by Blalock (1960, p. 395) was used. It should be noted that the population from which the sample was drawn was Air Force wives at Langley Air Force Base and not military wives nor married women in general. It would therefore be inappropriate to generalize the findings to any other than the population which it represents. Because participation in this study was of a voluntary nature,

the final sample consisted of the women who indicated a desire to participate.

Instrumentation

The most commonly used test of achievement motivation is the Thematic Apperception Test (TAT) which was constructed by McClelland, Atkinson, Clarke and Lowell (1953). Although widely used, this instrument has been criticized first, because of its low test-retest reliability (e.g., Krumboltz and Farquahar, 1957; Haber and Alpert, 1958; and Birney, 1959) and also because the administration and scoring of the TAT measure are time-consuming and require considerable training (Mehrabian, 1969, p. 493). Mehrabian points out that possible substitute measures of achievement such as self-report measures (e.g., deCharms, Morrison, Reitman and McClelland, 1955), verbal measures (e.g., the measure of achievement in the Edwards Personal Preference Schedule, Edwards, 1954), or more structured versions of the TAT (e.g., Iowa Picture Interpretation Test, Hurley, 1955; Franch, 1958) do not correlate with the TAT measure (e.g., deCharms, Morrison, Reitman and McClelland, 1955; Williams, 1955; Marlowe, 1959; Atkinson and Litwin, 1960; or Barnette, 1961), and for this and other reasons are only infrequently employed in studies of achievement (1969, p. 493).

For these reasons and because traditional measures of achievement motivation (*n Ach*) in women have produced conflicting experimental results (Tangri, 1975, pp. 239-40), achievement motivation in this study was measured by the Mehrabian (1969) Achieving Tendency Scale for Females.

Based on Atkinson's (1964) model of resultant achievement motivation, the 26-item scale consists of a possible response of -4 to +4 on thirteen items which are stated such that a positive response indicates $M_s > M_{af}$ and thirteen items stated such that a positive response indicates $M_{af} > M_s$, the total score being $(M_s - M_{af})$, thereby eliminating the need to separately assess a fear of failure or anxiety (Mehrabian, 1975, p. 1). In order to eliminate the use of negative numbers, fifty points were added to the raw scores.

Considering only the female scale, a Kuder-Richardson (1937) internal reliability coefficient of 0.61 for female undergraduates has been obtained recently, a split-half reliability of 0.55 is reported by Strumpfer (1973), and Mehrabian (1968) found a ten-week test-retest coefficient of 0.72 ($n = 111$) (Mehrabian, 1975, p. 2).

A correlation of .30 was obtained with the Bass Task Orientation Scale; a correlation of .37 was obtained with Jackson's Achievement scale; and a correlation of 0.34 was obtained with the Cattell and Eber Venturesome scale, (Mehrabian, 1969, pp. 449-450). With $df = 109$, the female achievement scale correlated 0.17 with the TAT ($p > .05$); -0.11 with the TAQ ($p > .05$); 1.13 with the TAT - TAQ ($p > .05$); and 0.41 with the internal-external control scale ($p > .01$) and 0.00 with the Crowne and Marlowe scale (Mehrabian, 1969, p. 498).

Based upon the reliability findings, the relative ease of administration and scoring, and the availability of a female form of the test, the Mehrabian questionnaire appeared to be an instrument of achievement orientation that was appropriate for the particular type of sample and study.

Locus of Control (LOC) was measured by the Rotter I-E Scale, a thirteen-item scale (Rotter, 1966) designed to reflect the degree to which a person sees himself as controlling the outcome of his experiences. A forced-choice technique is used with a possible raw score ranging from 13 to 26 (Egeland et al., 1970, p. 376). So that all analyses would produce positive correlations, locus of control was scored in reverse. Although the noncomparability of the items in an additive scale of this type makes it difficult to achieve high estimates of internal consistency, Rotter (1966) has reported moderate but rather uniform estimates ranging from .65 to .79. Rotter (1966) reported test-retest reliabilities for several samples that vary from .49 to .83, depending upon the time interval and the sample involved (Phares, 1976, p. 42).

In measuring stability, the Intellectual Achievement Responsibility (IAR) Scale devised by Crandall, Katkovsky, and Crandall (1965) and used by Weiner and his colleagues (Weiner and Kukla 1970, Weiner and Potepan 1970, and Kukla 1972, 1974) was ruled out as an instrument in this study because of its specificity, and therefore, poor applicability to the sample. Instead, this study attempted to assess the stability dimension of causal attribution for successful and unsuccessful events directly with two questions which comprise the ATT Questionnaire (see APPENDIX C). The lack of specificity in the questions, although a limitation in one sense, was necessary in order to relate to the diverse situations in which the women find themselves. This study did not have the limitation of other achievement studies which were confined to college students or some other homogeneous sample (Kukla 1974). Therefore, the ATT Questionnaire was a preferable assessment technique to accommodate diversity. In order to

consider positive and negative situations, stability was assessed in a failure situation as well as a successful situation. The control variables of stability with success (STABSC) and stability with failure (STABFL) were scored with dummy variables to accommodate the use of nominal data in correlation analysis.

Similar to stability, the characteristics of the activity viewed as most self-fulfilling were assessed directly through the Female Interest Inventory. The characteristics which were measured by this instrument were evaluation (EVAL) and monetary rewards (MONEY). The control variables of evaluation and monetary rewards were scored on a three-point scale, whereby a "1" in evaluation corresponded to no evaluation, but a "3" in monetary rewards represented no monetary reward.

The estimated time for completion of the instruments was approximately thirty minutes.

Data Gathering Procedure

The random sample of one thousand military wives was mailed a package containing the following: The "Female Interest Inventory" which identified the activity characteristics of evaluation and monetary rewards, the "Mehrabian (1969) Achieving Tendency Scale for Females" which assessed resultant achievement motivation, the "Rotter I-E Scale (1966)" which measured locus of control (internality-externality), and the "ATT Questionnaire" which measured the stability dimension of attribution for success and failure conditions. Also enclosed was a cover letter explaining the nature of the study, a Privacy Act Statement

and a return card on which the subject could elect not to participate in the study (see APPENDICES A through F).

Design and Statistical Analysis

Because there was no manipulation or direct control of variables as exists in experimental design, the type of research which was done in this study was *ex post facto*. The study analyzed achievement motivation, attributional factors (locus of control and stability) and activity characteristics (evaluation and monetary rewards) through the statistical procedures of correlational analysis and regression analysis.

Correlational analysis, through the correlation coefficient, indicates the degree to which variation in one variable is related to variation in other variables. The correlation coefficient (r) is not only a measure of the "goodness of fit" of a regression line but also indicates the strength of the linear relationships between two variables (Nie et al., 1975, p. 279). A major concern of this study was with the comparative strength of one variable with other variables. In this report zero-order correlations are provided for paired variables in the form of the Pearson Product-Moment coefficient and also the Spearman coefficient. Unlike the Pearson coefficient, the Spearman coefficient does not assume that all of the variables are continuous and is therefore the more appropriate correlation coefficient for use in this study. Zero-order correlations are valuable in that they help to explain more complex relationships.

Partial correlation analysis generally provides the researcher with

a single measure of association describing the relationship between two variables while adjusting for the effects of one or more additional variables (Nie et al., 1975, p. 305). With control based upon the simplifying assumptions of linear relationships among the variables, partial correlation analysis enables the researcher to remove the effect of the control variables. In this case, stability with success, stability with failure, evaluation and monetary rewards were removed from the relationship between the dependent variable (achievement motivation) and the independent variable (locus of control) statistically rather than by physically manipulating the data as in crosstabulation. It is because of this advantage of correlational analysis over crosstabulation that the variables of achievement motivation and locus of control were used as raw scores rather than nominal data.

Multiple regression analysis is a general statistical technique through which one can analyze the relationship between a dependent variable or criterion variable and a set of independent or predictor variables (Nie et al., 1975, p. 321). For this procedure, the dependent variable was achievement motivation and the independent variables were locus of control, stability with success, stability with failure, evaluation, and monetary rewards. The purpose of this particular analysis was to determine the degree to which each of the independent variables, individually and in combination, contributes to variation in the dependent or criterion variable, achievement motivation. Although one of the most important uses of multiple regression analysis is prediction, it was not expected that a strong prediction equation would result with the variables being used based upon previous research. Prediction, however, is only one of many uses of

multiple regression, and it was expected that this procedure would uncover significant relationships which would contribute to a better understanding of the nature of achievement motivation.

Hypotheses

Based upon previous findings of achievement motivation and attribution research, it was hypothesized that:

- H1: A significant positive correlation exists between locus of control and achievement motivation.
- H2: When controlling for stability with success, stability with failure, evaluation, and monetary rewards individually, stability with failure produces the strongest relationship between locus of control and achievement motivation.
- H3: When controlling for stability with success, stability with failure, evaluation, and monetary rewards in combination, the strongest relationship between locus of control and achievement motivation occurs when controlling for stability with failure, evaluation, and monetary rewards.
- H4: When considering the variables of locus of control, stability with success, stability with failure, evaluation, and monetary rewards as predictors of achievement motivation, the strongest relationship is produced by the combined effect of locus of control, stability with failure, and evaluation.

Limitations of the Study

There were several limitations associated with this study that must be considered. First, although the sample which received the initial questionnaire was randomly selected from all military wives at Langley, the ultimate sample consisted of only that portion which volunteered to participate in the study. Such a sample may not be an accurate representation of the total population. Also, any generalizations to other military wives from other branches of the armed forces or even other Air Force bases would be inappropriate, unless they are comparable in their personnel (race, geographic origination, socio-economic status, childhood experiences, etc.) and structure and organization (location, size, organization, opportunities for activity participation, etc.).

Aside from sampling limitations, there were also other limitations which are associated with ex post facto research. One such limitation is that "ex post facto research has an inherent weakness: lack of control of independent variables (Kerlinger, 1973, p. 380)." Because neither manipulation nor random assignment can be used in relation to the factors, the hypothesized relationship cannot be asserted with the same degree of confidence as in an experimental situation. Another problem associated with ex post facto research is self-selection. "Self-selection", according to Kerlinger (1973, p. 381),

occurs when the members of the groups being studied are in the groups, in part, because they differentially possess traits or characteristics extraneous to the research problem, characteristics that possibly influence or are otherwise related to the variables of the research problem.

There exists the possibility that members of the sample in the study possess one or more of these extraneous characteristics which may

have affected the subsequent results. A final limitation of ex post facto research cited by Kerlinger (1973) is the risk of improper interpretation (p. 390). Because of the lack of control over independent variables and the complex relationships which can arise in the absence of an experimental laboratory, there is frequently a danger of misinterpreting results and assuming cause and effect relationships where none exist.

Still other limitations result from the use of mail questionnaires. Two major problems associated with this are lack of response and the inability to check the accuracy of the responses (Kerlinger, 1973, p. 414). The possible alternative procedure of bringing the sample together physically to complete the questionnaires in a controlled environment, while it would have partially solved the problem of control and return, would have had the bias of attracting only those women with transportation available or who were free to meet at the designated time. It was therefore assumed that the mail questionnaire procedure would accommodate the largest proportion and most heterogeneous representation of the population.

In an attempt to better understand the relatively low return (37.7%) of questionnaires (see APPENDIX G), a random sample (10%) of the non-returns were contacted by telephone to attain information concerning the reason for their failure to acknowledge the questionnaire (see APPENDIX H). It was found that over one-third (34.1%) of the non-returns reported never receiving the questionnaire either because they had recently moved and their mailing address was not current, they were temporarily out of town, or they simply did not know the reason for the delay or absence of the questionnaire, and another 4.2% no longer qualified as members of the

population. It was therefore assumed that, because of the high mobility of the sample, the size of the sample was in actuality considerably less than 1,000, and therefore the return is substantially higher than it appears. Because it was suspected that such a problem might arise, the number of questionnaires mailed was considerably greater than that necessary to do the study. Further, since military transfers and mobility are not based upon criteria which would have biased this study, it was assumed that the percentage return would not seriously affect the randomness of the sample.

One final limitation is inherent in the questionnaire used. There is a tendency to respond in an "internal" direction on the Rotter instrument because to do so is perceived as socially desirable. Similarly, some have criticized that females in particular tend to give fewer achievement responses due to their perceptions of societal expectations upon women (Maccoby and Jacklin, 1974, p. 137). Although there is currently little empirical evidence for the latter, it is a possibility which must be considered. In order to counteract this tendency to respond according to what one perceives as socially desirable, two precautionary measures were taken in the study. First, the word "achievement" and all of its derivatives were eliminated from the questionnaires and attachments to minimize a biased response. Hence, the Mehrabian instrument had the word "achieving" deleted from the title and the study was referenced as a study of attitudes. Second, to eliminate the arbitrary assignment of respondents as "Internal" or "External", as is normally found in locus of control research, the Rotter scores were used as raw data and not dichotomized. While the instruments used in this study are not yet

perfected, particularly for female samples, it appears that they are the most refined instruments of those presently available and were the most appropriate ones for this particular study.

CHAPTER IV

ANALYSIS OF RESULTS

Presentation of Findings

The findings of this study indicated that significant relationships exist among the variables of achievement motivation, locus of control, stability with success, stability with failure, evaluation and monetary rewards. The findings also, for the most part, supported achievement motivation theory and attribution theory in terms of the comparative strengths and direction of the relationships. These findings are presented below in the following format: 1) statement of the hypothesis, 2) description of the method of analysis, 3) results, and 4) discussion of the findings. In all hypotheses, a significance level of .05 was required for acceptance.

H1: A significant positive correlation exists between achievement motivation and locus of control.

The method of analysis was bivariate or zero-order correlation and non-parametric correlation.

ACCEPTED. The findings indicate a Pearson correlation coefficient (r) of .1310 at the .027 level of significance and a Spearman correlation coefficient (R) of 0.1765 at the .002 level of significance.

In analyzing the zero-order correlations between variables, it was hypothesized that a significant relationship would be found between achievement motivation and locus of control. Both the Pearson correlation coefficient and the more appropriate Spearman correlation coefficient produced low but significant relationships of $r = .1310$ and $R = .1765$ at the .027 and .002 level of significance respectively. Also, uncovered through the bivariate correlation procedure was a significant, positive correlation between achievement motivation and stability with success ($r = .2051$, $p = .001$) and between locus of control (scored in reverse) and stability with failure ($r = .1315$, $p = .027$) and a significant, negative correlation between evaluation and monetary rewards ($r = .4668$, $p = .000$), with monetary rewards scored in reverse. Nonparametric correlational analysis provided significant relationships only between locus of control and achievement motivation (previously cited) and between evaluation and monetary rewards ($R = -0.4857$, $p = .001$). Nonparametric correlation differs from the Pearson correlation procedure in that the latter assumes that all variables are continuous, and therefore the nonparametric correlation procedure was more appropriate for this particular study. Both procedures substantiated the hypothesis.

It should be noted that although achievement motivation is related to locus of control, the relationship of each to the stability dimension is dependent upon whether considering a successful or unsuccessful situation. This appears to substantiate the concerns of Weiner and his colleagues for the importance of valence (success or failure) in attribution research. Based upon previous research, the fairly low relationship between achievement motivation and locus of control was not unexpected.

However, unlike previous research, the relationship was significant and this was particularly surprising considering that the sample consisted solely of females. The relatively large size of the sample should, nevertheless, be considered as a factor possibly affecting the significance of the findings.

H2: When controlling for stability with success, stability with failure, evaluation, and monetary rewards individually, stability with failure produces the strongest relationship between achievement motivation and locus of control.

The method of analysis was partial correlation.

ACCEPTED. The findings indicate a Pearson product-moment correlation coefficient (r) of .1361 at the .023 level of significance. The other control variables produced slightly lower correlation coefficients although all of the variables meet significance requirements (see APPENDIX I).

According to Weiner (1972), a fallacy of previous research which has attempted to relate achievement motivation to locus of control was the exclusion of the stability dimension and the failure to consider success and failure as they affect one's perception of control. Also found to be related to achievement motivation and locus of control are the characteristics of achievement-related activities. The factors selected for this research were characteristics of an activity which was chosen by the respondents as most self-fulfilling. Those characteristics are evaluation and monetary rewards. It was therefore appropriate that a partial correlation procedure be used to determine the strength of the

relationship between achievement motivation and locus of control while controlling for stability with success, stability with failure, evaluation, and monetary rewards. Based upon previous findings, it was expected that controlling for stability with failure would produce the strongest relationship between achievement motivation and locus of control. It is Weiner's contention that both success and failure are important factors within the stability dimension. However, previous research has shown high achievers to attribute success to both ability and effort (Kukla, 1972), thereby confounding the stability dimension and differentiating degrees of achievement motivation to a lesser extent. As expected, stability with failure produced the highest correlation coefficient of the four individual control variables, followed by monetary rewards ($r = .1320$, $p = .026$), evaluation ($r = .1305$, $p = .028$), and stability with success ($r = .1251$, $p = .033$). The hypothesis was therefore accepted.

H3: When controlling for stability with success, stability with failure, evaluation, and monetary rewards in combination, the strongest relationship between achievement motivation and locus of control occurs when controlling for stability with failure, evaluation, and monetary rewards.

The method of analysis was partial correlation.

ACCEPTED. The findings indicated a Pearson coefficient (r) of .1384 at the .022 level of significance. The other combinations of variables produced lower correlations although all of the coefficients were significant (see APPENDIX I).

Based upon the results of previous research, it was expected that the strongest relationship between achievement motivation and locus of control would occur when controlling for stability with failure, evaluation, and monetary rewards. Once again, it was not expected that stability with success would produce significant results since in previous studies it has failed to differentiate high achievers. The partial correlation analysis substantiated the hypothesis since the combined control of stability with failure, evaluation, and monetary rewards resulted in the highest correlation coefficient produced. As expected, control of the same variables with the addition of stability with success produced a somewhat lower correlation coefficient ($r = .1323$, $p = .027$).

As in the bivariate correlation procedure, the correlation coefficients produced by the partial correlation analysis were found to be relatively low, although all are significant at the .05 level of significance. Once again, the low correlations were not unexpected based upon findings of previous research. The fact that the variables being tested account for so little of the variance in achievement motivation further supports the need to better understand this complex area and the ways in which it is related to human behavior.

H4: When considering the variables of locus of control, stability with success, stability with failure, evaluation, and monetary rewards as predictors of achievement motivation, the strongest relationship is produced by the combined effect of locus of control, stability with failure, and evaluation.

The method of analysis was stepwise multiple regression analysis with an F of greater than 3.0 required to meet tolerance specifications of the regression equation. The variables were entered into the regression equation with the highest correlation entering first, and those variables which did not reach significance were not entered.

REJECTED. The findings indicate that only the variables stability with success and locus of control meet the tolerance specifications for stepwise regression with stability with success producing the highest F of 9.44219 and the addition of locus of control into the regression equation producing an F of 6.47388 (see APPENDIX J).

Based upon previous achievement motivation research, it was expected that the best fit would be produced by the inclusion of locus of control, stability with failure and evaluation into the regression equation. The data, however, did not support this hypothesis and it was therefore rejected. Contrary to previous findings, the data indicates that the best predictor of achievement motivation is stability with success, while the addition of locus of control produces a lower F but nevertheless is significant. No other variables reached significance in the multiple regression procedure. Although, based upon previous studies, this finding would appear unlikely, it is consistent with the zero-order correlations done in testing the first hypothesis. A Pearson product-moment correlation (r) revealed a relationship between achievement motivation and stability with success of .2051 at the .001 level of significance. This relationship is even stronger than that found between achievement motivation and locus ($r = .1310$, $p = .022$). Considering the more appropriate nonparametric

correlation procedure, the relationship between achievement motivation and stability with success did not reach significance at the .05 level with a Spearman correlation coefficient. Therefore, stability with success appears to be highly susceptible to the method of analysis being used. Perhaps further research of stability under successful conditions will provide an explanation for the apparent discrepancy.

Other Findings

Due to the nature of the relationship between achievement motivation and locus of control when controlling for stability, an analysis of variance procedure was employed to see if a similar relationship existed between achievement motivation and stability when controlling for locus of control. The data provided significant relationships for both stability with success ($F = 8.093$) and stability with failure ($F = 8.065$) at the .005 level of significance (see APPENDIX J). In effect, this provides an indication of the variance in achievement motivation due to stability after removing the variance due to locus of control. This would indicate then that both locus of control and stability appear to be important elements in achievement motivation theory and have much potential as mediating variables.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS FOR FURTHER STUDY

Summary

This study has attempted to establish a relationship between the psychological construct of achievement motivation, the attributional factors of locus of control and stability (in success and failure situations), and the activity characteristics of evaluation and monetary rewards. The findings of this study are supportive of both achievement motivation and attribution theory. More specifically, the findings support the contention of recent attribution theorists that early achievement motivation and locus of control research failed to reach significant results partially due to the failure to consider the stability dimension of causal attribution and valence of outcome in achievement situations.

It was hypothesized that a significant relationship existed between achievement motivation, the need to find satisfaction through successful performance based upon a criterion or standard of excellence, and locus of control, or the degree to which one perceives self-control over the consequences of one's behavior. This relationship was found to be statistically significant. This would indicate that women with a high need for achievement, that is, women who require competition with a standard of excellence upon which to measure their performance, are most likely to perceive the consequences of their behaviors as internally controlled rather than controlled by external forces.

It was also hypothesized that if the relationship between achievement motivation and locus of control while controlling for stability with success, stability with failure, evaluation, and monetary rewards is considered independently, the strongest relationship would result when controlling for stability with failure, or the quality of attributing one's failures to factors which are relatively permanent or invariant over time (for example, ability or task difficulty). Because the relationship was also found to be statistically significant, this hypothesis was also accepted. This would indicate that if those women who have a tendency to attribute their failures to their lack of ability or the difficulty of the task were identified and considered independently of women who attribute their failures to other causes, the pattern of achievement motivation level in relation to locus of control would be more clearly defined than it would be if the women were isolated in accord to any of the other variables tested.

It was further hypothesized that if the relationship or pattern that exists between achievement motivation or one's need for competition against a standard of excellence and locus of control were considered, that being the degree to which individuals perceive self-control over the consequences of their behavior, the strongest relationship or most clearly defined pattern would result when controlling for stability with failure, evaluation, and monetary rewards. The findings supported this hypothesis, although there were only minor differences in the comparative strengths of the relationships produced by the various combinations of control variables. This means that if individuals were classified according to 1) stability with failure, that is, the invariability of the perceived cause of one's failures, 2) the degree to which the activity which one feels is most self-fulfilling is

evaluated and 3) the presence of monetary rewards in the activity which one feels is most self-fulfilling, then one's level of achievement motivation when given information about his degree of self-control or the reverse could best be predicted.

Finally, it was hypothesized that achievement motivation could be best predicted through the identification of the degree to which an individual perceives self-control over the consequences of their behavior, the stability or invariability of the perceived cause of unsuccessful situations, and the degree to which one's most self-fulfilling activity is evaluated. Stability with success, or the invariability of one's perceived cause of successful situations, was found to be the best predictor of achievement motivation, followed by locus of control. No other variables were significant enough to be considered as predictors. The hypothesis was therefore rejected. This would indicate that an individual's consistency in identifying the causes of success would provide us with the best information upon which we could predict an individual's achievement motivation level. Further, knowledge of the degree of perceived internal control over the consequences of one's behavior would be the second best indicator in predicting achievement motivation.

In addition to the stated hypotheses, an attempt was made to show that by controlling for locus of control, a significant relationship would be produced between achievement motivation and stability in success and failure situations. A significant statistical relationship was in fact produced between achievement motivation and both stability with failure and success. This indicates that the pattern which exists between an

individual's level of achievement motivation and the degree of stability in an individual's perceived causes for failure and success is more clearly defined if the degree to which the individual feels personally responsible for the consequences which result from her behavior are known. Stated otherwise, not only is stability a mediator in the relationship between achievement motivation and locus of control, but locus of control is a mediator in the relationship between achievement motivation and stability as well.

Conclusions

The findings of this study support the view that achievement motivation and locus of control are related to each other. The data also supports the claims of Weiner and others that previous studies have erred in failing to consider the stability dimension of attribution and in confounding the valence of outcome (success and failure), although the relationship of success in attribution is still unresolved. In effect, the findings indicate that an individual's need to achieve is not only related to the degree to which he perceives the cause for his accomplishments and failures to be internally controlled or self-controlled, but that this relationship is even stronger when the degree to which the cause of failure is permanent or stable is considered. Further, it has been found that if the characteristics of the activity which is perceived as most self-fulfilling (evaluation and monetary rewards) are considered in addition to the above, the relationship between achievement motivation and

locus of control is even stronger. As expected, stability with success proved to be the weakest correlate and it weakens rather than improves the relationship between achievement motivation and locus of control. When using regression analysis to determine which variables best predict achievement motivation, however, it was found that stability with success was the best predictor of achievement motivation. In addition, when removing the variance in achievement motivation due to locus of control, a significant relationship was produced for both stability with success and stability with failure. In effect, if one were to separate subjects according to the type of control they attribute to the perceived causes of their accomplishments, there would be a pattern of association between the level of achievement motivation and the degree of permanency or stability which they attribute to the causes of their successes and failures.

Most attempts to apply achievement motivation research to female samples have been unsuccessful. This has prompted some psychologists to claim that women are not achievers in the sense of competing against a standard of excellence but rather that they strive for success only as it evokes social approval. The psychologists who have rejected this view have argued that traditional measurement instruments have a sexual bias in that they describe or depict traditionally male activities or situations which are relatively meaningless to females. This study attempted to counteract this alleged bias through the use of an instrument which correlates with the traditional instruments, minimizes scorer error, and is in a form which is pertinent to the activities and interests of women. Another advantage of this study over previous studies done with females is that selection of the sample was not based upon the

achievements or achievement-related activities of the women themselves which resulted in a more diverse group.

In respect to the relationship between achievement motivation and locus of control, early research in this area had produced low, non-significant results. Weiner attributed this first, to the failure to consider the stability dimension of attribution and second, to the failure to control for valence of outcome or whether one's activity was perceived as successful or unsuccessful. Although Weiner's studies provided significant results, they considered stability to the exclusion of the control dimension. This study attempted to consider both locus of control and stability in situations which were successful and unsuccessful. In addition, an attempt was made to relate the theoretical constructs of achievement motivation and attribution to certain characteristics of the activity which was considered to be most self-fulfilling, those being evaluation and monetary rewards, in an effort to apply the theories to actual behavior.

Although the findings in this study have not provided extremely high correlations, some contributions have been made to our knowledge of achievement motivation and attribution. First of all, the findings have provided a basis for the application of achievement motivation theory and attribution theory to females with some success. The problem of social bias and its effect upon female self-concept and motivational needs are important areas to be considered in achievement motivation research, and assessment instruments must be refined to further minimize this variable. Secondly, the results of this study have supported the contention that the relationship between achievement motivation and locus of control is

strongest if one controls for stability. In regard to the valence of outcome, although stability with failure produced significant results which were consistent with the theories, the findings of this study showed contradictory results when analyzing the relationship between achievement motivation and stability with success. One reason may have been the direct assessment technique. Such a technique may incorporate a social desirability bias similar to that which exists in locus of control instruments. In support of this, several subjects indicated that they had never failed, perhaps indicating that the word failure evokes a defensive response in some individuals. It would have been advantageous to have a single instrument available which considers both the control and stability dimensions of attribution which accounting for success and failure. However, much more research is necessary before such an instrument would be possible.

Similarly, the variables of evaluation and monetary rewards may have been more clearly identified through a more detailed questionnaire. Both evaluation and reinforcement are very complex and not easily measured thus indicating a possible need for a more complex instrument. A drawback of activity identification is that it assumes free-choice behavior which is not always the case, particularly with females. As a result, one's perception of what is self-fulfilling is often tempered by the options that one has available.

The fairly low correlations which were produced may be partially a result of the poor assessment instrumentation, but they might also be an indication of the relative lack of precision of both achievement motivation theory and attribution theory as predictors of human behavior

or as predictors of each other. At this time, very little is known about what factors contribute to the need for achievement and the causal attributes that are associated with accomplishments and failures. Even more crucial is our inability to identify those situations, events, or processes which enhance or develop one's disposition to achieve and our perceptions of self-control and stability as responsible for achievements. Perhaps the best that can be said concerning the application of achievement motivation theory and attribution theory to actual situations at this point is that individuals differ in their achievement needs and that those needs are significantly related to their self-perceptions and degrees of acceptance of responsibility for successful and unsuccessful actions. It therefore appears that in achievement-related areas (i.e., employment and education) it would be preferable to provide a variety of recruitment techniques, evaluative styles, and reward patterns which would contribute to a favorable environment for many individuals with diverse psychological needs.

In conclusion, the findings of this study have, for the most part, substantiated the validity of what some theorists have posed as fallacies in previous attempts to relate achievement motivation and locus of control. In addition, achievement theory, which is predominantly based upon research done with male samples, has been applied to females with reasonable success.

Implications for Further Study

Although it appears that this study has contributed significantly to

our knowledge of achievement motivation and attribution, need still exists for additional research. Specifically, the greatest need for further study appears to be in the areas of 1) achievement motivation in women, 2) attribution as a composite of both locus of control and stability, and 3) applicability of achievement motivation and attribution to behavior.

This study has provided evidence that achievement motivation theory can be successfully applied to females. More research is necessary using groups of women other than those who are the traditional college age, the sample population of previous studies. Comparison studies of women with various careers and those women without careers are important areas of investigation. There also exists a need for studies which determine the effects of such variables as parental style, number of siblings, order of birth, motivational disposition of parents, achievement orientation of husband, highest educational level at the time of marriage, and educational level of parents upon the achievement motivation of females. Finally, more research is necessary to determine the extent to which achievement motivation instruments measure social desirability or social bias. This problem is particularly acute for women since there are indications that achievement-related activities are less socially acceptable for women than the more traditional roles of wife and mother. Eventually, as more information becomes available concerning how social expectations and societal values affect the achievement motivation responses of women, an attempt should be made to develop an achievement motivation instrument that is appropriate for both males and females. Until such an instrument is perfected, it is advisable to use an instrument that

contains items that are relevant to the sample being studied.

This study has also substantiated to some degree the position of Weiner that attribution research should analyze both the locus of control and stability dimensions. Much more research is indicated in the area of attribution, particularly under experimentally controlled conditions of success and failure. Much of the research previously conducted with locus of control, such as that which investigates value formation, might be replicated with an added measure of stability. Additional studies are needed which investigate factors contributing to an individual's perceptions of control and stability. In addition, a social desirability bias may exist such as in locus of control which causes an individual to respond in a more socially acceptable direction. As our knowledge increases in the areas of locus of control and stability, an attempt should be made to devise a single instrument which measures both dimensions while accounting for success and failure.

A final area in which further research is indicated is in relating achievement motivation and attribution theory to actual behavior. This study has provided evidence that achievement motivation and attribution are significantly related to the activity characteristics of evaluation and monetary rewards. The comparatively weak relationships produced indicate that there are probably many other variables which contribute to the relationship between achievement motivation and attribution. Further studies should consider other characteristics of activities such as the instrumentality of the activity in the attainment of future goals, the presence or degree of social interaction afforded by the activity, or the degree of participation in the planning and decision-making process

which is available within the activity. Further studies might also investigate other behaviors such as career choice, voting preference, or community involvement as they are related to one's need for achievement. In the area of education, future studies might consider various degrees of structure, different modes of evaluation, or the degree of individualization as related to a student's need for achievement or attributional disposition. Only through further research involving actual behavior can achievement motivation theory and attribution theory enhance our understanding of human behavior.

APPENDICES

APPENDIX A: Cover Letter

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APPENDIX A

COVER LETTER

APPENDIX A

January 3, 1979

Dear Air Force wife,

As an Air Force wife, like yourself, I have been very interested in the attitudes and interests of married women, particularly those who are military dependants. Most motivational research has been done solely with male subjects and therefore relatively little information exists concerning women and their interests. As a doctoral student, I would like to solicit your help in studying this important area through a survey of Air Force wives stationed at Langley AFB. Your participation in this survey will help to insure that the information provided by this study accurately represents the opinions of Air Force wives as a collective group. Should you elect to participate, all that is required is that you spend approximately 30 minutes of your time answering the enclosed questions concerning various activities in which wives participate. Your responses will be confidential as per the enclosed Privacy Act Statement and a code number has been assigned to you for this reason. This study is being conducted under the supervision of the College of William and Mary and with the authorization of the Base Commander. Please note that this in no way constitutes sponsorship or endorsement by Langley AFB or the United States Air Force and that the Base Commander neither encourages nor discourages participation in this survey. If you choose to participate in this study, please complete the enclosed questionnaires and mail them in the envelope provided. Whether or not you choose to participate, please indicate your decision by marking the enclosed card accordingly and mailing the card and the questionnaires no later than January 16, 1979. Regardless of your decision, please accept my sincere appreciation for your time and interest.

Sincerely,

Mrs. L. G. Fineran

APPENDIX B

FEMALE INTEREST INVENTORY

APPENDIX B

FEMALE INTEREST INVENTORY

Instructions: The following questions pertain to your particular interests and activities. Please place your answer in the space provided.

- | | YES | NO |
|--|-------|-------|
| 1. Do you participate in any activities outside of your home? | _____ | _____ |
| 2. Do you work outside of your home? | _____ | _____ |
| 3. Do you attend a college or other educational institution? | _____ | _____ |
| 4. Do you belong to any voluntary organizations?
(church groups, women's club, PTA, Scouts, etc.) | _____ | _____ |

If you have answered NO to ALL of the above questions, skip questions #5, #6, and #7 and proceed directly to the next page. If you have answered YES to any or all of the above questions, please continue to the next question and complete the remainder of the questionnaire.

-
5. What one activity, group or job do you participate in outside of your home which affords you the most satisfaction, self-fulfillment or sense of accomplishment? (Identify or describe the activity, group or job as accurately as possible in the space provided below.)

 6. Which one of the following would best apply to evaluation in the activity described in question #5?
 - a. There is a periodic written or verbal evaluation of my performance based on predetermined criteria.
 - b. There is a periodic, written or verbal evaluation of my performance relative to others who participate in the same activity.
 - c. There is an informal evaluation of my performance by a superior or fellow worker in which I am informed as to whether I am performing successfully or unsuccessfully.
 - d. I sometimes receive compliments or criticisms from others concerning my performance but not at specific times nor according to any specific predetermined standards.
 - e. There is no objective evaluation or feedback concerning my performance.

 7. Which one of the following would best apply to the reward structure in the activity described in question #5?
 - a. I receive a regular salary.
 - b. I am paid but not on a regular schedule.
 - c. I am not paid for my participation or services.

APPENDIX C

ATT QUESTIONNAIRE

APPENDIX C

ATT Questionnaire

The following questions pertain to how you perceive success and failure. Please place a check in space provided.

1. Consider a situation in which you felt extremely successful or proud of yourself or in which you were evaluated by someone else as having done well. Which one of the following best describes your situation?

_____ I had the best or at least ample skills to complete the job or task.

_____ I worked hard enough and it paid off.

_____ The job or task wasn't all that difficult.

_____ I was just lucky.

2. Consider a situation in which you felt extremely unsuccessful or ashamed of yourself or in which you were evaluated by someone else as having done poorly. Which one of the following best describes your situation?

_____ I lacked the skills or ability to do the job or task well.

_____ I just didn't try hard enough.

_____ The job or task was too difficult for me to handle.

_____ It was just an unlucky circumstance.

APPENDIX D

ROTTER I-E SCALE

APPENDIX D

ROTTER INTERNAL-EXTERNAL CONTROL SCALE

Instructions: Below you will find sets of paired statements with each one preceded by a letter (a) or (b). In the space provided place the letter which corresponds to the statement with which you most agree. Be sure to fill every space and to choose only one letter per space.

- _____ 1. a. Children get into trouble because their parents punish them too much.
b. The trouble with most children nowadays is that their parents are too easy with them.
- _____ 2. a. Many of the unhappy things in people's lives are partly due to bad luck.
b. People's misfortunes result from the mistakes they make.
- _____ 3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
b. There will always be wars, no matter how hard people try to prevent them.
- _____ 4. a. In the long run people get the respect they deserve in this world.
b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
- _____ 5. a. The idea that teachers are unfair to students is nonsense.
b. Most students don't realize the extent to which their grades are influenced by accidental happenings.
- _____ 6. a. Without the right breaks one cannot be an effective leader.
b. Capable people who fail to become leaders have not taken advantage of their opportunities.
- _____ 7. a. No matter how hard you try some people just don't like you.
b. People who can't get others to like them don't understand how to get along with others.
- _____ 8. a. Heredity plays a major role in determining one's personality.
b. It is one's experiences in life which determine what they're like.
- _____ 9. a. I have often found that what is going to happen will happen.
b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
- _____ 10. a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
b. Many times exam questions tend to be so unrelated to course work that studying is really useless.
- _____ 11. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
b. Getting a good job depends mainly on being in the right place at the right time.

- _____ 12. a. The average citizen can have an influence in government decisions.
b. This world is run by the few people in power, and there is not much the little guy can do about it.
- _____ 13. a. When I make plans, I am almost certain that I can make them work.
b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyway.
- _____ 14. a. There are certain people who are just no good.
b. There is some good in everybody.
- _____ 15. a. In my case getting what I want has little or nothing to do with luck.
b. Many times we might just as well decide what to do by flipping a coin.
- _____ 16. a. Who gets to be boss often depends on who was lucky enough to be in the right place first.
b. Getting people to do the right thing depends upon ability; luck has little to do with it.
- _____ 17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand nor control.
b. By taking an active part in political and social affairs the people can control world events.
- _____ 18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
b. There really is no such thing as "luck".
- _____ 19. a. One should always be willing to admit mistakes.
b. It is usually best to cover up one's mistakes.
- _____ 20. a. It is hard to know whether or not a person really likes you.
b. How many friends you have depends upon how nice a person you are.
- _____ 21. a. In the long run the bad things that happen to us are balanced by the good ones.
b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
- _____ 22. a. With enough effort we can wipe out political corruption.
b. It is difficult for people to have control over the things politicians do in office.
- _____ 23. a. Sometimes I can't understand how teachers arrive at the grades they give.
b. There is a direct connection between how hard I study and the grades I get.
- _____ 24. a. A good leader expects people to decide for themselves what they should do.
b. A good leader makes it clear to everybody what their jobs are.
- _____ 25. a. Many times I feel that I have little influence over the things that happen to me.
b. It is impossible for me to believe that chance or luck plays an important role in my life.
- _____ 26. a. People are lonely because they don't try to be friendly.
b. There's not much use in trying too hard to please people, if they like you, they like you.

- _____ 27. a. There is too much emphasis on athletics in high school.
b. Team sports are an excellent way to build character.
- _____ 28. a. What happens to me is my own doing.
b. Sometimes I feel that I don't have enough control over the direction my life is taking.
- _____ 29. a. Most of the time I can't understand why politicians behave the way they do.
b. In the long run the people are responsible for bad government on a national as well as local level.

APPENDIX E

MEHRABIAN (1969) ACHIEVING TENDENCY SCALE
FOR FEMALES

APPENDIX E

Mehrabian (1969) Scale for Females.

Instructions: The following questionnaire of personal attitudes consists of a number of items worded as: "I'd rather do (A) than (B)", such as, "I'd rather go swimming than go bowling." You are to indicate the extent of your agreement with each item using the scale below. Please note that if you give strong agreement to the statement, "I'd rather do (A) than (B)," this indicates that you prefer (A) much more than (B). If you give strong disagreement to that same statement, this indicates that you prefer (B) to (A).

Indicate for each item the extent of your agreement or disagreement with that item by entering the appropriate numeral (+4 to -4) in the space provided.

- +4 = very strong agreement
- +3 = strong agreement
- +2 = moderate agreement
- +1 = slight agreement
- 0 = neither agreement nor disagreement
- 1 = slight disagreement
- 2 = moderate disagreement
- 3 = strong disagreement
- 4 = very strong disagreement

- ___ 1. I think more about getting a good evaluation when I worry about getting a bad evaluation.
- ___ 2. I more often attempt difficult tasks that I am not sure I can do than easier tasks I believe I can do.
- ___ 3. I would rather do something at which I feel confident and relaxed than something which is challenging and difficult.
- ___ 4. If I am not good at something I would rather keep struggling to master it than move on to something I may be good at.
- ___ 5. I would rather have a job in which my role is clearly defined by others and my rewards could be higher than average, than a job in which my role is to be defined by me and my rewards are average.
- ___ 6. My strongest feelings are aroused more by fear of failure than by hope of success.
- ___ 7. I would prefer a well-written informative book to a good movie.
- ___ 8. I would prefer a job which is important, difficult, and involves a 50% chance of failure to a job which is important but not difficult.
- ___ 9. I would rather learn fun games that most people know than learn unusual skill games which only a few people would know.
- ___ 10. It is important for me to do my work as well as I can even if it means not getting along with my co-workers.
- ___ 11. For me, the pain of getting turned down after a job interview is greater than the pleasure of getting hired.
- ___ 12. If I am going to play cards I would rather play a fun game than a difficult game.

- _____ 13. I prefer competitive situations in which I have superior ability to those in which everyone involved is about equal in ability.
- _____ 14. I think more of the future than of the present and past.
- _____ 15. I am more unhappy about doing something badly than I am happy about doing something well.
- _____ 16. I worry about whether people will praise my work than I do about whether they will criticize it.
- _____ 17. If I had to spend the money myself I would rather have an exceptional meal out than spend less and prepare an exceptional meal at home.
- _____ 18. I would rather do a paper on my own than take a test.
- _____ 19. I would rather share in the decision-making process of a group than take total responsibility for directing the group's activities.
- _____ 20. I would rather try to make new and interesting meals that may turn out badly than make more familiar meals that frequently turn out well.
- _____ 21. I would rather do something I enjoy than do something that I think is worthwhile but not much fun.
- _____ 22. I would rather try to get two or three things done quickly than spend all my time working on one project.
- _____ 23. If I am ill and must stay home, I use the time to relax and recuperate rather than try to read or work.
- _____ 24. If I were rooming with a number of girls and we decided to have a party, I would rather organize the party myself than have one of the others organize it.
- _____ 25. I would rather cook for a couple of gourmet eaters than for a couple who simply have huge appetites.
- _____ 26. I would rather that our women's group be allowed to help organize community projects than be allowed to work on the projects after they have been organized.

APPENDIX F

PRIVACY ACT STATEMENT

APPENDIX F

PRIVACY ACT STATEMENT

In accordance with paragraph 30, AFR 12-35, Air Force Privacy Act Program, the following information about this survey is provided:

- a. AUTHORITY. 10 U.S.C., 8012, Secretary of the Air Force: Powers and Duties, Delegation by.
- b. PRINCIPAL PURPOSE. This survey is being conducted to ascertain motivational tendencies of a random sample of Air Force wives stationed at Langley Air Force Base, Virginia, relative to their participation in various extra-familial activities.
- c. ROUTINE USE. The survey will provide data for studying the relationship between motivational variables and activity participation of Air Force wives. No immediate practical application is intended beyond the broader empirical context. Access to individual responses is limited to the researcher and data will be used in collective form only.
- d. Participation in this survey is entirely voluntary.
- e. No adverse action of any kind may be taken against any individual who elects not to participate in any or all of this survey. However, the failure to provide information could affect the validity and reliability of the findings, distort the representativeness of the sample, and hamper the overall significance of the study.

APPENDIX G

NUMERICAL BREAKDOWN OF QUESTIONNAIRE RETURN

APPENDIX G

BREAKDOWN OF QUESTIONNAIRE RETURN

		<u>%-AGE OF TOTAL</u>
Number of questionnaires mailed.	1000	100%
Number of completed questionnaires	271	27%
Number of incomplete questionnaires (refusals) . .	97	9%
Number of non-returns.	632	63%

BREAKDOWN OF COMPLETED QUESTIONNAIRES

Number of improperly completed questionnaires. . .	9	1%
Number of properly completed questionnaires. . . .	262	26%
Total completed questionnaires	271	27%

APPENDIX H

NUMERICAL BREAKDOWN OF REASONS FOR NON-RETURN

APPENDIX H

REASONS GIVEN FOR FAILURE TO ACKNOWLEDGE MAILED QUESTIONNAIRES BY A
RANDOM SAMPLE (10%) OF NON-RETURN RESPONDENTS.

REASON	# OF RE- SPONDENTS	%-AGE OF TOTAL
GROUP A: NON-RECEIVERS	24	34.10
Reason unknown	13	18.50
Moved, mail not forwarded	8	11.40
Out of town temporarily	1	1.40
Received past due date	2	2.80
GROUP B: NO LONGER MEMBERS OF POPULATION	3	4.20
Recently retired	1	1.40
No longer married	2	2.80
GROUP C: QUESTIONNAIRE RELATED REASONS	3	4.20
Did not approve of some questions	1	1.40
Could not accurately respond to some questions	2	2.80
GROUP D: NON-QUESTIONNAIRE RELATED REASONS	38	54.00
Forgot to mail	8	11.40
Misplaced questionnaire	9	12.80
Foreign, physically disabled, or otherwise unable to comprehend survey	3	4.20
Lack of time (personal or family illness, small child, etc.)	11	15.70
Does not like to participate in surveys	5	7.10
Had not finished answering questions	2	2.80
GROUP E: REFUSED TO GIVE REASON	2	2.80
No reason given	2	2.80
TOTAL NUMBER OF RESPONDENTS CONTACTED.		70
PERCENTAGE OF NON-RETURNS (AT TIME OF CONTACT)		10%

APPENDIX I

CORRELATIONAL ANALYSIS RESULTS

APPENDIX I

Correlation Analysis Results

Zero-Order Partials (Pearson Product-Moment Correlation Coefficient)

	<u>p</u> (level of sig.)	<u>r</u>
ACHMOT X STABSC . . . . .	.001	.2051
ACHMOT X LOC . . . . .	.027	.1310
LOC X STABFL . . . . .	.027	.1315
EVAL X MONEY . . . . .	.000	-.4668

Nonparametric Correlational (Spearman Correlation Coefficient)

	<u>p</u>	<u>R</u>
ACHMOT X LOC . . . . .	.002	.1765

Partial Correlation Analysis (Pearson Product-Moment Correlation Coefficient)

	<u>p</u>	<u>r</u>
ACHMOT X LOC / STABSC	.033	.1251
ACHMOT X LOC / STABFL	.023	.1361
ACHMOT X LOC / EVAL	.028	.1305
ACHMOT X LOC / MONEY	.026	.1320
ACHMOT X LOC / STABSC, STABFL	.029	.1298
ACHMOT X LOC / STABSC, EVAL	.034	.1247
ACHMOT X LOC / STABSC, MONEY	.032	.1261
ACHMOT X LOC / STABFL, EVAL	.023	.1357
ACHMOT X LOC / STABFL, MONEY	.022	.1378
ACHMOT X LOC / EVAL, MONEY	.027	.1320
ACHMOT X LOC / STABSC, EVAL, STABFL	.029	.1295
ACHMOT X LOC / STABSC, STABFL, MONEY	.027	.1316
ACHMOT X LOC / STABSC, EVAL, MONEY	.033	.1262
ACHMOT X LOC / STABFL, EVAL, MONEY	.022	.1384
ACHMOT X LOC / STABFL, STABSC, EVAL, MONEY	.027	.1323

APPENDIX J

REGRESSION ANALYSIS RESULTS AND ANALYSIS
OF VARIANCE RESULTS

APPENDIX J

Regression Analysis Results

Multiple Regression Analysis

	<u>F</u>	<u>Multiple R</u>
ACHMOT X LOC X STABSC X STABFL X EVAL.	3.31466	.26986
ACHMOT X STABSC (step 1)	9.44219	.20511
ACHMOT X STABSC X LOC (step 2)	6.47388	.23886
(no other variables met tolerance specifications)		

Analysis of Variance Results

Analysis of Variance

	<u>F</u>	<u>p</u>
ACHMOT X STABSC / LOC	8.093	.005
ACHMOT X STABFL / LOC	8.065	.005
ACHMOT X EVAL / LOC	3.731	.055
ACHMOT X MONEY / LOC	3.755	.054
ACHMOT X STABSC	3.861	.050
ACHMOT X STABFL	2.582	.109
ACHMOT X EVAL	0.640	.447
ACHMOT X MONEY	1.434	.241

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Abstract

A STUDY OF THE RELATIONSHIP OF ACHIEVEMENT MOTIVATION TO ATTRIBUTION AND ACTIVITY CHARACTERISTICS OF MILITARY WIVES

Linda Joseph Fineran

The College of William and Mary in Virginia, May 1979

Chairman: Professor Donald J. Herrmann, Ph.D.

The purpose of this study was to investigate the relationship between the psychological construct of achievement motivation, the attributional factors of locus of control and stability (in success and failure situations), and the activity characteristics of evaluation and monetary rewards. In addition, an attempt was made to successfully apply achievement motivation theory and attribution theory to females.

The sample studied for this project was randomly selected from the wives of active duty Air Force personnel stationed at Langley Air Force Base in Virginia. Langley wives were chosen for this project because of the availability of a total list from which the sample could be drawn and the diversity which resulted from being defined by the chosen career of their husband's rather than their own accomplishments.

One thousand wives were mailed questionnaires which measured achievement motivation, attributional factors (i.e., locus of control, stability with success, and stability with failure), and characteristics of the activity which was perceived as most self-fulfilling (i.e., evaluation and monetary rewards).

It was hypothesized that 1) a significant relationship would exist between achievement motivation and locus of control, 2) when considering control variables independently, the strongest relationship

between achievement motivation and locus of control would be produced when controlling for stability with failure, 3) when considering the combined effects of the control variables, the strongest relationship between achievement motivation and locus of control would be produced when controlling for stability with failure, evaluation, and monetary rewards, and 4) achievement motivation would be best predicted by the combined effects of locus of control, stability with failure, and evaluation.

The data was supportive of the first three hypotheses but the final hypothesis was not substantiated by the findings. It was concluded that achievement motivation theory can be successfully applied to females and that a relationship does indeed exist between achievement motivation and locus of control. It was also concluded that the control of stability produces a stronger relationship between achievement motivation and locus of control although the data was inconclusive concerning the effect of stability with success.

Further study is needed to refine the assessment instruments thereby minimizing social and sexual bias. In addition, more studies relating achievement motivation and attribution to actual behavior are needed in order to enhance the applicability and predictiveness of the theories.