A Comparison of Self-Evaluation in the Management and Achievement Motivation of University Students in Home Management Residence Laboratory Course

Kathleen Slaugh

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A COMPARISON OF SELF-EVALUATION IN HOME MANAGEMENT AND
ACHIEVEMENT MOTIVATION OF UNIVERSITY STUDENTS IN
HOME MANAGEMENT RESIDENCE LABORATORY COURSE

by

Kathleen Slaugh

A thesis submitted in partial fulfillment
of the requirements for the degree
of
MASTER OF SCIENCE
in
Household Economics and Management

Approved:

Thesis Director

Major Professor

Committee Member

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UTAH STATE UNIVERSITY
Logan, Utah

1970
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Kathleen Slaugh
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ABSTRACT

A Comparison of Self-Evaluation in Home Management and Achievement Motivation of University Students in Home Management Residence Laboratory Course

by

Kathleen Slaugh, Master of Science
Utah State University, 1970

Major Professor: Miss Edith Nyman
Department: Household Economics and Management

Self-evaluation in home management and its relationship to achievement motivation was investigated. The discrepancy between student self-evaluation and adviser evaluation was correlated with achievement motivation.

The sample consisted of 33 female students, residents of the Home Management House during Spring Quarter of the 1968-69 school year and Fall and Winter Quarters of the 1969-70 school year.

The instruments used were: (1) a background questionnaire; (2) Management Resource Scale, and (3) Litwin Decision-Making Test. The statistical test used was the Pearson r (correlation coefficient).

No significant relationship was found between absolute discrepancy between student self-evaluation in home management, and adviser evaluation and achievement motivation. However, when directionality of evaluation-deviation scores was considered, a significant relationship was found at the .05 level. Subjects who received positive evaluation-deviation scores were lower in achievement motivation than were subjects who received negative evaluation-deviation scores.
INTRODUCTION

Statement of the Problem

The Home Management House at Utah State University serves as a laboratory for the application of the management process as applied in a group or family living situation. Paolucci and O'Brien (1959) define the management process as a series of three interdependent and interrelated steps: planning decisions, controlling decisions and evaluating decisions.

The steps of planning, controlling and evaluating were defined at a national conference on family life as follows:

Planning is mapping out courses of action in order to reach immediate and long-term goals.

Controlling a plan in action simply means individual or joint effort in making the plan work. It calls for guiding and directing self or others to carry through the plan.

Evaluating is looking back over what has been done and judging the results in light of family (or individual) goals. (Gross and Crandall, 1963, p. 5)

The focus of this research will be on the third step in the management process, that of evaluating. The importance of evaluating in home management lies in the fact that, as stated by Paolucci and O'Brien (1959, p. 40) "on the basis of this assessment [evaluation], [one] determines future courses of action."

Nickell and Dorsey (1967, p. 42) point out that evaluation of the "effectiveness or efficiency of management requires analysis, honesty, and objectivity." They elaborate further that "the ability to view
events objectively makes it possible to arrive at evaluations that will stimulate improvement in future planning or in carrying out plans," and "learning to make intelligent self-evaluations aids materially in this accomplishment."

During the residence period in the Home Management House, the students have many opportunities, both on an individual basis and as a group, to set goals, make plans in relation to these goals, follow the plans through to completion, and evaluate the results. At the completion of the course, each student evaluates her overall performance using a Management Resource Scale and assigns herself a letter grade. The faculty adviser and resident adviser jointly evaluate each student using the Management Resource Scale and assign a letter grade.

The adviser-assigned grade usually corresponds closely to the student's self-assigned grade. Of particular concern for this research are the students whose evaluation of themselves differs markedly from the evaluation given by the advisers. It has been the observation of the advisers that these students tend to show less improvement in management while living in the House than do students whose self-evaluation is the same as or differs only slightly from that of the advisers.

Since objective self-evaluation is a necessary prerequisite to improvement in management, it is important that a student who has difficulty with self-evaluation be identified early in the course in order that she might be given additional guidance in this area. There is evidence that an achievement motivation test may help in this identification. Research done in this area by Mahone (Atkinson and Feather,
1966, p. 193) shows that "subjects with high achievement motivation and low anxiety are more accurate in estimating their own general level of ability than are subjects with low achievement motivation and high anxiety."

A standard measure for achievement motivation, such as the Thematic Apperception Test would have been desirable for this study; however, this test requires specially trained personnel to administer and analyze the results. It was decided to use the Decision-Making Test, a simple objective test for achievement motivation developed by G. Litwin of Harvard University. The Decision-Making Test gives an indication of risk taking disposition in tasks requiring skill (Atkinson and Feather, 1966). Although the test has acknowledged weaknesses, it was selected because it could be administered and scored by the researcher.

The objective of the study was to answer the following question:

Is there a relationship between achievement motivation and discrepancy between student self-evaluation and adviser evaluation?

The following hypothesis (expressed in null form) was formulated:

Hypothesis. There is no significant relationship between achievement motivation and absolute discrepancy between student self-evaluation and adviser evaluation.

**Definition of Terms**

As a basis for this study, the following definitions were used:

*Home management process*--a series of related decisions which coordinates, stabilizes and alters home and family situations so that
specific goals are met. The process seems to progress in an orderly series--planning decisions, controlling decisions and evaluating decisions. (Paolucci and O'Brien, 1959)

**Evaluation**--the mental act of comparison and discrimination in accordance with previously established criteria. The results of evaluation are observable. (Walker, 1968)

**Self-evaluation**--evaluation made by the individual of his own performance at some specified activity.

**Achievement motivation**--a theory attempting to account for the determinants of the direction, magnitude, and persistence of behavior in the domain of achievement oriented human behavior. (Atkinson, 1965)

**High achievement motivation**--motive to achieve success, represented by the formula $T_s = M_s \times P_s \times I_s$.

Operational definition: low deviation score on Litwin Decision-Making Test.

**Low achievement motivation**--motive to avoid failure, represented by the formula $T_f = M_{AF} \times P_f \times I_f$.

Operational definition: high deviation score on Litwin Decision-Making Test.
REVIEW OF THE LITERATURE

Home Management

Definitions of home management center around its purpose, which is expressed in simple terms by Cushman (1945, p. 202) as "using what you have to get what you want." The "haves" are the resources of the family members, and "wants" are family goals. Paolucci and O'Brien (1959, p. 46) describe home management as "a tool for helping individuals or groups to reach goals." Nickell and Dorsey (1967, p. 80) refer to home management as "the administrative side of family living. It is the force--the mental work and power--that puts the machinery of homemaking into action and keeps it going."

Bustrillos (1963, p. 1) defines home management in explicit terms as "the judicious integration or organization of the processes involved in the formulation and execution of decisions related to the home and the family."

Home Management Process

The processes involved in home management have been expressed in a variety of ways. According to Gross and Crandall (1963, p. 90) the management process consists of a series of decisions centered around three interdependent steps, all mental activity: "planning, controlling the plan while carrying it through, whether it is executed by the planner or others, and evaluating results preparatory to future planning." They further explain that these steps occur in a time sequence,
if the process is carried through logically: planning, future tense, occurs before action takes place; controlling, present tense, occurs while action takes place; and evaluating, past tense, occurs after action has taken place.

The home management process is viewed by Nickell and Dorsey (1967, p. 86) as goal-directed activity made up of a series of four progressive and interdependent managerial activities, each of which requires and is diffused with decision making. These managerial activities are "planning to achieve the objectives; then organizing for performance; then controlling the plan as it is carried out; and finally evaluating the results in light of the goals each family seeks."

Schlater views management as

... a dynamic, on-going process which encompasses those human actions directed toward the realization of values and goals; the prime feature of such goal-directed activities is the systematic series of actions which constitute the making and implementing of interrelated decisions under conditions of uncertainty and limited resources. (Schlater, 1967, p. 94)

Although she does not specifically include the steps of planning, controlling, and evaluating in this conceptualization, Schlater states they would be included as part of decision making and decision implementation, their placement in one of these being determined by the predominance of mental or nonmental activity.

The conceptualization of the home management process provided by Paolucci and O'Brien integrates decision making with planning, controlling and evaluating:

Home management is a process--a series of related decisions--which coordinates, stabilizes and alters home and family situations so that specific goals are met. The process seems to progress in an orderly series--planning decisions, controlling decisions, and evaluating decisions. (Paolucci and O'Brien, 1959, p. 39)
Planning, the first step in the management process, is defined by Nickell and Dorsey (1959, p. 40) as "thinking through the possible ways of reaching a desired goal, following each plan in imagination to its completion, and selecting the most promising ... The final act in planning is always one of decision ..."

Controlling, in its broadest sense, is the carrying out of the plan. It includes "energizing or putting the plan into action, checking to see how the plan is working, and adjusting the plan when necessary, all involving fresh decisions." (Gross and Crandall, 1963, p. 117)

Evaluating consists of "looking back over the steps of planning and controlling ... to recognize that a good or a poor job has been done, either absolutely or in relation to given conditions, and [determining] as accurately as possible how good a job has been done ..." (Gross and Crandall, 1963, p. 109) In evaluation a complete review is made of what has already taken place with a view toward better management in the future.

Evaluating

The focus of this paper will be on the third step in the management process, that of evaluation. Evaluation is considered by Goodyear and Klohr (1965, p. 37) to be "the most crucial step in the managerial process for improving management skills."

Nickell and Dorsey (1959, p. 17) see evaluation as "looking constantly toward both the process and the accomplishing of satisfying results." Evaluation, they explain, is the checking-up and testing of whether or not things are turning out as planned, enabling one to move
forward more surely and more advantageously. It goes on as the plan is being carried out, gauging the effectiveness of the plan and judging the quality of the results.

As suggested in the foregoing definitions, evaluation is not just the final phase in the management process but occurs both during and after an activity. Gross and Crandall (1963, p. 110) mention that evaluation is also a "necessary preliminary to the next similar plan, rather than a finale to the one that is already completed."

The core of management, according to Gross and Crandall (1963, p. 109) is the generally accepted principle that everyone should strive to secure increasingly satisfying results with the resources at hand, and "evaluation is a specific device toward that end."

Gross and Crandall (1963, p. 11) state that since "evaluation of management in group or personal living is usually performed by those who are doing the managing,... life situations involve a large amount of self-evaluation." In home management, evaluation commonly takes the form of self-evaluation (Gross and Crandall, 1963).

Self-Evaluation

It has been suggested that objective self-evaluation provides the key to improvement in management. According to Deacon and Bratton...

... people who at some point "check themselves out" on how well their actions and experiences match their expectations have assumed a useful practice for themselves, one which is important in home management. They have placed themselves in the position of being able to profit by their experiences, to clarify their values and goals, to be able to anticipate possibilities in the future more accurately than if this evaluative tendency were not present. (Deacon and Bratton, 1962, p. 766)
Diggory (1966, p. 115) provides a clarification of the relationship between evaluation and self-evaluation. He describes evaluation as a process appearing in "situations where organisms use their cognitive and manipulative capacities to effect changes in their relations to their environments." This process, according to Diggory, is quite a common one, recurring with great frequency in the daily activities of most individuals. When an individual undertakes a task, there is the presumption that he can meet certain criteria of performance. In the case of self-evaluation, Diggory explains that

... the agent decides without the intervention of another opinion whether or not he can accomplish the task at hand. If he is informed of his adequacy or inadequacy by another person, his own evaluation may agree or disagree, but in either case he is evaluated and included in, or excluded from, the set of those who can accomplish the task in question. (Diggory, 1966, p. 115)

Self-evaluation, Diggory states, does not mean evaluation of some global entity which could be called the "whole self," though such evaluations probably do occur. Rather it usually refers to an individual's evaluation of some limited aspect of his own activity: his evaluation of himself as a chessplayer, a singer, a mechanic, etc.

The ability to objectively carry out self-evaluation is an important step towards improvement in home management. Gross and Crandall (1963, p. 110-111) suggest that since "it is impossible for anyone to be completely objective in self-evaluation," it is important to consider evaluation from more than one source in order to "better see situations in the light in which they appear to others." In the home setting family members may help each other toward objective self-evaluation. In a setting such as the Home Management House laboratory, individuals evaluate themselves and are evaluated by their peers.
and faculty advisers. Here evaluation may take the form of an informal discussion or it may be structured through the use of evaluation rating cards.

The need to utilize evaluation checklists as an aid to student self-evaluation and as a guide for advisers in evaluating student achievement in management has been recognized by various home management authors (Gross and Crandall, 1963, Nickell and Dorsey, 1967). However, little attention has been given in home management research to the relationship between student self-evaluation and adviser evaluation. Gross and Crandall (1963, p. 509) cite a study by Ferns in which the level of agreement between faculty ratings, peer ratings, and self ratings were compared. It was found that there was "somewhat higher agreement between faculty and self-ratings than between self and peer ratings, with agreement between faculty and peers nearer faculty-self than peer-self."

A study was done by McConkie (1960) comparing student self-evaluation with adviser evaluation. Thirty-eight students, all former residents of the Home Management House, were interviewed individually by the resident adviser. During the course of the interview both student and adviser completed a checklist evaluating the student's performance in certain common problem areas in home management. Each item was rated on a five-point scale: (1) very much a problem, to (5) no problem. Two findings of interest for this study were that (1) the students tended to rate themselves higher on the checklist than did the adviser, and (2) students judged by the adviser to be "more aware of themselves and their capabilities" evaluated themselves more nearly the same as did the adviser.
Strittmatter (1967) compared student self-evaluation of the home management residence experience with the instructor evaluation and found that the discrepancies between student self-evaluation and instructor evaluation were in favor of a higher self-rating by the students. The discrepancies were correlated with data on the previous homemaking experience of the subjects, and she reported that "students with the highest standards for themselves and who were rated highest by the instructor rated themselves lower than the instructor," and "students with the lowest achievement scores rated themselves higher than the instructor and seemed to be unable to recognize the level of their accomplishment." (Strittmatter, 1967, p. 56)

In business management, self-evaluation programs have been used as an aid in appraising the performance of employees. It is recognized that in order for these evaluations to be meaningful, ratings of the employee from other sources must also be considered; and the relationship between self-evaluation and other-evaluation has important implications for their usefulness. Thornton states that

... the key to the successful use of self-appraisals lies in the relationship of these evaluations to the evaluation by the supervisor . . . . If self-evaluations are to be effective in enlisting a person's cooperation and participation, it seems essential that his perceptions agree with those of his superior. (Thornton, 1968, p. 441)

Thornton (1968) studied the relationship between supervisory evaluations and incumbent executive self-evaluations of the performance of executive personnel. His research attempted to answer the questions: What agreement is there between performance appraisal ratings by supervisors and incumbent executives? and how accurate are the self-perceptions of incumbent executives in appraising their own performance?
The incumbent executives were asked to evaluate their performance on 27 behavioral characteristics considered to be important parts of the executive's job. Ratings were accomplished using a five-point Likert scale from "satisfactory" to "unsatisfactory." The immediate supervisor also evaluated the incumbent executives using the same rating scale. Two of the major findings were that (1) the incumbent executives tended to rate themselves higher than they were rated by their supervisors, and (2) incumbent executives who tended to overrate themselves were found to be the ones who were considered least promotable on the basis of a criterion measure of success in the organization.

Achievement Motivation

Atkinson (1965) states that when an individual confronts an achievement oriented task situation, there are two variables that influence his performance at that task. First, to what extent does he expect that his performance will lead on to his goal? As a consequence of his past experience in situations similar to the one he now faces, the individual may experience very strong, moderately strong or very weak expectancy of success. Second, how much pride of accomplishment does he anticipate if he achieves his goal; that is, how much incentive does it present? Based on past experience in which success and pride in achievement have been experienced, the individual should be able to assess the potential value of certain accomplishments in relation to others, or in other words, assign an incentive value of success to the particular task.

Based on these considerations a general principle of achievement motivation is proposed:
The strength of motivation to perform some act is assumed to be a multiplicative function of the strength of the motive, the expectancy (subjective probability) that the act will have as a consequence the attainment of an incentive, and the value of the incentive: \[ \text{Motivation} = f(\text{Motive} \times \text{Expectancy} \times \text{Incentive}). \] (Atkinson and Feather, 1966, p. 13)

These three variables—motive, expectancy or subjective probability, and incentive—are defined as follows:

A motive is conceived as a disposition to strive for a certain kind of satisfaction, as a capacity for satisfaction in the attainment of a certain class of incentives.

An expectancy is 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.

The incentive variable... represents the relative attractiveness of a specific goal that is offered in a situation, or the relative unattractiveness of an event that might occur as a consequence of some act. (Atkinson and Feather, 1966, p. 12-13)

Atkinson (1965) explains that motive \( M_s \), the first variable, is a relatively general and stable characteristic which is present in any behavior situation, while the other two variables, expectancy or probability of success \( P_s \) and incentive \( I_s \) depend upon the individual’s past experience in specific situations similar to the one he now confronts.

The general principle of motivation to succeed is represented by the formula: \[ T_s = M_s \times P_s \times I_s, \] or the tendency to approach success \( T_s \) is equal to the motive to achieve success \( M_s \) times the expectancy or probability of success \( P_s \) times the incentive value of success \( I_s \).

Motivation to avoid failure is represented as follows: \[ T_f = M_{AF} \times P_f \times I_f, \] or, the tendency to avoid failure \( T_f \) is jointly determined by motive to avoid failure \( M_{AF} \), expectancy \( P_f \) and incentive \( I_f \). (Atkinson, 1965)
The theoretical model of achievement motivation states that in all individuals there is motivation to achieve success as well as motivation to avoid failure. In an individual where the motive to achieve success is stronger than the motive to avoid failure, he would be expected to manifest strongest motivation in the performance of a task of intermediate difficulty. If presented either more difficult tasks or easier tasks, the strength of motivation manifested in performance should be lower (Atkinson, 1957). The person in whom the motive to avoid failure is stronger should be expected to select either the easiest of the alternatives or should be extremely speculative and set his goal where there is virtually no chance for success. These are activities which minimize his anxiety about failure. (Atkinson, 1965)

**Achievement Motivation and Self-Evaluation**

Research has been done studying the relationship between various aspects of the theory of achievement motivation and behavior situations found in everyday life. Since the particular concern of this study is self-evaluation, related research in this area will be considered.

The relationship between strength of expectancy or probability of success \( (P_s) \) and self-evaluation has been examined by I. G. Cetlin and by B. S. Rosen (Diggory, 1966). Cetlin tested 60 high school students under the pretense that testing would provide information regarding their qualifications for a specified position in a "Space Science Program." The test consisted of reproducing complex auditory tapping rhythm patterns. Subjects were assigned randomly to four groups, and the examiner "scored" each subject according to a predetermined performance curve for that group. Before each trial the subject was asked
to estimate his \( P_s \) relative to passing the test, and to mark a linear rating scale (poor to superior) indicating how he would evaluate himself as a candidate for the position he was striving for. Findings, as reported by Diggory (1966, p. 196) were that "as \( P_s \) varies up or down, in response to experimental treatments, so does self-evaluation, and we could not wish for a prettier demonstration that we can take \( P_s \) as an index of S's evaluation of himself as an instrument for doing some particular thing."

For Rosen's study, college students volunteered to take a test of psychomotor coordination to determine whether they had at least minimum ability to be acceptable subjects in an experiment on the learning of complex motor skills. The test consisted of trying to sort 40 cards correctly on at least one of ten trials. Subjects were divided into two groups, and each subject was scored according to a predetermined performance curve for that group. Before each trial the subject estimated \( P_s \) and evaluated his "psychomotor coordination" by marking a linear rating scale (completely inadequate to completely adequate). Results indicated that "means for the \( P_s \) estimates vary over conditions exactly as do the means for self-evaluation . . . ." (Diggory, 1966, p. 198)

Mahone (Atkinson and Feather, 1966, p. 170) studied the relationship between an individual's evaluation of his abilities relative to vocational choice and achievement motivation. His hypothesis that "persons who are fearful of failure tend to be unrealistic in their vocational choice with respect to . . . ability . . . ." was based on two considerations: (1) "the fearful person may be expected to lack information concerning his own ability and that required for his choice
of occupation," and (2) following Atkinson's theoretical model for predicting level of aspiration from the relative strengths of fear of failure and need for achievement, "the fearful person (more strongly motivated to avoid failure than to achieve success) should tend either to overaspire or to underaspire (i.e., to avoid the intermediate range of the risk continuum)."

Subjects were 135 male college students. Positive achievement motivation was measured using a \( n \) Achievement Scale and the Debilitating Anxiety Scale was used to measure motivation to avoid failure. Self-evaluation of vocational ability was determined using a Vocational Information Questionnaire. Realism of vocational choice with respect to ability was determined by independent judgments of two clinical psychologists who were also experienced vocational counselors.

The hypothesis that "... Ss with high achievement motivation and low anxiety are more accurate in estimating their own general level of ability than are Ss with low achievement motivation and high anxiety" was confirmed (Atkinson and Feather, 1966, p. 179). Mahone concluded that "on each criterion of realistic versus unrealistic vocational aspiration, significantly more Ss who were low in achievement motivation and high in achievement-related anxiety were classified as unrealistic, than Ss who were high in achievement motivation and low in achievement-related anxiety." (Atkinson and Feather, 1966, p. 183)
METHODS AND PROCEDURE

Sample

The sample was composed of 33 junior and senior students enrolled in the Home Management Residence laboratory course during Spring Quarter of the 1968-69 school year, and Fall and Winter Quarters of 1969-70. The course has a duration of four weeks and is required for girls majoring in Home Economics Education or Household Economics and Management. Prerequisite courses are Home Management (HEM 149), Nutrition (FN 22), and Meal Management (FN 25). Facilities at the House can accommodate six students and a resident adviser.

Factors Included in This Study

Self-evaluation in home management

It is generally agreed that it is impossible for anyone to be completely objective in self-evaluation (Gross and Crandall, 1963). It is important, however, to learn to assess one's abilities realistically and evaluate one's performance objectively in order to "stimulate improvement in future planning or in carrying out plans." (Nickell and Dorsey, 1959, p. 43). It was observed at the Home Management House that students who seemed to make little or no improvement in management while living in the House seemed to experience difficulty in evaluating themselves objectively.
Achievement motivation

The theory of achievement motivation states that in choice situations involving risk, a person in whom the motivation to achieve success is stronger than the motivation to avoid failure should select tasks of intermediate difficulty—where the probability of success is .50. A person in whom the motivation to avoid failure is stronger than the motivation to achieve success should select either very easy or very difficult tasks where probability of success is very high or extremely low (Atkinson, 1965). Research done by Mahone (Atkinson and Feather, 1966, p. 179) suggests that a test for achievement motivation might be helpful in identifying students who have difficulty evaluating themselves objectively. Mahone found that "subjects with high achievement motivation and low anxiety are more accurate in estimating their own general level of ability than are subjects with low achievement motivation and high anxiety."

Study Instruments

The instruments used in this study were: (1) background questionnaire; (2) Management Resource Scale; and (3) Litwin Decision-Making Test.

Background Questionnaire

A one-page questionnaire was prepared by the researcher to obtain information for the purpose of describing the sample population.

Management Resource Scale

The Management Resource Scale used by the faculty adviser, resident adviser, and students as an evaluation measure of the subject's
performance in the Home Management Residence course was taken from Gross and Crandall (1963). Some revisions in the scale have been made by the faculty of the Department of Household Economics and Management at Utah State University.

The Management Resource Scale calls for evaluation of performance in the following management-related areas: (a) time and energy, (b) money, (c) goods and property, (d) knowledge, (e) skills and abilities, and (f) general attitude regarding the residence experience. A total of 56 items is included in the scale; the subject rates her performance assigning a numerical value of one to four points to each item as follows: (1) below average, (2) average, (3) very good, and (4) excellent. The total possible score is 224 points.

**Litwin Decision-Making Test**

The Decision-Making Test was developed by George H. Litwin of Harvard University as a measure of risk-taking preference. The test consists of five different kinds of tasks. Each task is made up of a set of problems or puzzles similar in character, but obviously differing in difficulty. The subject is required to make a rapid decision as to which one he will undertake to complete in a one-minute time period. He then attempts to complete the task within the time limit.

The Decision-Making Test gives an assessment of risk preference in tasks requiring skill. According to the theory of achievement motivation (Atkinson and Feather, 1966, p. 303), "persons in whom the motive to achieve success ($M_s$) is relatively strong in relation to the motive to avoid failure ($M_{af}$) will show a more marked preference for
intermediate achievement risks (i.e., for tasks of intermediate difficulty) than persons in whom \(M_{af}\) is relatively strong in relation to \(M_s\)."

**Testing**

The testing was divided into two phases. The first consisted of (a) the subject's self-evaluation of her performance in the Home Management House residence course, and (b) the adviser evaluation of the subject's performance. The Management Resource Scale was used as the evaluation tool by both subject and faculty advisers.

Within a week following the conclusion of each group's four-week stay in the Home Management House, the students and advisers met jointly for two hours. The first hour was devoted to an oral evaluation by the group of their management; they discussed those things they did well as a group and changes they would make if they had another opportunity to live in the House. The group was then asked to take seats widely separated from each other, and each student was given a copy of the Management Resource Scale. They were given verbal instructions to evaluate their individual performance in the House, giving themselves a rating on each item of from one to four points (1 = below average, 2 = average, 3 = very good, and 4 = excellent). No information was given as to relationship between total numerical score and letter grade.

Following this evaluation session, the faculty adviser and resident adviser met jointly and evaluated each student using the same Management Resource Scale. They assigned scores in the same manner as did the students. The student- and adviser-assigned scores were tallied and an evaluation-deviation score determined for each subject.
In the second phase of the research, the Litwin Decision-Making Test was administered individually to the subjects. This was done between the months of December, 1969, and March, 1970. The researcher arranged an appointment with each student during which the background questionnaire was completed and the Decision-Making Test administered.

The researcher read the general instructions for the test to the subject. Following the general instructions, the subject opened the test booklet and the researcher read instructions for the first task and explained an example. The subject was given an opportunity to ask questions at this time. The subject was allowed 15 seconds to select the specific task he would attempt, and then one minute was allowed for performance of the task. The researcher kept time. After one minute had elapsed, the subject was told to turn to the next page, the next task was described in a similar manner, and so on. Five different kinds of tasks were included; therefore, the subject made five relatively quick decisions as to the degree of difficulty he would attempt on each task.

An effort was made to keep conversation between researcher and subject to a minimum to avoid statements that might influence the subject's performance.

When the Decision-Making Test had been completed, the researcher thanked the student for her time and asked that the test not be discussed with anyone else. Each subject agreed to comply with this request. After the subject left the room, the researcher wrote done any comments the subject had made relative to the test.
Analysis of Data

Evaluation deviation score. The student- and adviser-assigned scores on the Management Resource Scale were compared and an evaluation-deviation score assigned to each student reflecting a deviation of the student self-evaluation score from the adviser evaluation score. A positive (+) score was given when the student-assigned score was lower than the adviser-assigned score. A negative (-) score was given when the student-assigned score was higher than the adviser-assigned score.

Decision-Making Test score. The method for scoring the Decision-Making Test as outlined by Litwin (Atkinson and Feather, 1966) yields a score representing degree of deviation from choice of tasks of intermediate difficulty. Litwin defined the level of intermediate difficulty using the median choice of subjects known to be high in achievement motivation. Because no independent measure of achievement motivation was used for this study, the mean choice of subjects was determined, with scores representing degree of deviation from choice of tasks of average difficulty. Mean choice was used as this provides a good statistical measure when the increase in difficulty between choices for any one task is the same for any two adjacent choices, as is the case in the Decision-Making Test.

The mean choice of subjects was determined for each task, and the discrepancy between the rank of the level of difficulty chosen by the subject and the rank of the mean choice was determined. This deviation was then divided by the average deviation for that task to yield a score. Scores obtained in this way on each of the five tasks were summed to provide a single index of degree of deviation of choices from average difficulty.
Statistical analysis. The correlation between the evaluation-deviation score and the score for the Decision-Making Test was determined using the following formula (Pearson $r$):

$$
 r = \frac{\Sigma xy}{\sqrt{(\Sigma x^2)(\Sigma y^2)}}
$$

where $x = \text{evaluation-deviation score}$ and $y = \text{Decision-Making Test score}$. 
RESULTS AND DISCUSSION

The present investigation was concerned with the relationship between discrepancy between student self-evaluation and adviser evaluation in home management and achievement motivation. An evaluation-deviation score was derived from a comparison of student self-evaluation in home management and adviser evaluation. Achievement motivation was measured using the Litwin Decision-Making Test.

Sample

The sample consisted of 33 Utah State University students ranging in age from 19 to 27 years. Ages of 32 of the subjects were between 19 and 23 years; one subject was age 27. The mean age for the group was 21.5 years. All subjects were majors in Home Economics Education. There were 11 juniors and 22 seniors; 24 of the subjects had previously attended another university.

Background information was collected regarding number of children in the family of origin, ordinal position of subject in family, family income, size of home town, number of towns lived in, and participation in high school and university extracurricular activities. For purposes of presenting the background information in tabular form, the sample has been divided into two groups: (a) + evaluation—subjects who evaluated themselves higher than or the same as the advisers (17 subjects), and (b) - evaluation—subjects who evaluated themselves lower than the advisers (16 subjects).
The subjects represent families ranging in size from 2 to 10 children, the average number of children in the family of origin being 4.33 (Table 1). Most of the subjects were from families with three or four children.

Table 1. Distribution of sample according to number of children in family of origin.

<table>
<thead>
<tr>
<th>Number of Children</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Evaluation</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>- Evaluation</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>4</td>
<td>10</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 2 presents the distribution of subjects by ordinal position in their family of origin. It is interesting to note that 9 of the 17 subjects who received positive evaluation-deviation scores were in a middle position in their family of origin, while 9 of the 16 subjects who received negative evaluation-deviation scores were the youngest child.

Table 2. Distribution of sample according to ordinal position in family of origin.

<table>
<thead>
<tr>
<th></th>
<th>First Child</th>
<th>Middle Child</th>
<th>Last Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Evaluation</td>
<td>5</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>- Evaluation</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>13</td>
<td>11</td>
</tr>
</tbody>
</table>
The distribution of subjects according to family income is given in Table 3. Family incomes ranged from $2,000 to $12,000 and above. Two of the subjects from families in the lower income ranges indicated their parents were retired and living on pensions. Seven of the subjects, or 23 percent of the total sample, had no idea of the amount of the family income.

Table 3. Distribution of sample according to family income.

<table>
<thead>
<tr>
<th>Income Range</th>
<th>+ Evaluation</th>
<th>- Evaluation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,000-3,999</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>4,000-5,999</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>6,000-7,999</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>8,000-9,999</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>10,000-11,999</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>12,000 &amp; over</td>
<td>3</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>No Idea</td>
<td>1</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

Most of the subjects (57.3 percent) were from home towns with a population under 10,000; 27.3 percent were from home towns with a population between 10,000 and 50,000; and the remaining 15.3 percent were from home towns of 50,000 or more (Table 4). Subjects had lived in from one to six towns; the average number of towns lived in was 2.79 (Table 5).

Table 4. Distribution of sample according to size of home town.

<table>
<thead>
<tr>
<th>Town Size</th>
<th>1-10,000</th>
<th>10,000-50,000</th>
<th>Above 50,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Evaluation</td>
<td>9</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>- Evaluation</td>
<td>10</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>9</td>
<td>5</td>
</tr>
</tbody>
</table>
Table 5. Distribution of sample according to number of towns lived in.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Evaluation</td>
<td>2</td>
<td>5</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>- Evaluation</td>
<td>1</td>
<td>3</td>
<td>11</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>8</td>
<td>18</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

The number of extracurricular activities in which subjects participated in high school and college is summarized in Tables 6 and 7. The activities are listed according to those in which subjects participated as members (Mbr.) only and those in which they held leadership positions (Ldr.). The average number of activities participated in both in high school and in college was higher for students who received positive evaluation-deviation scores than for students who received negative evaluation-deviation scores. In high school, the (+) evaluation group participated as members in an average of 4.18 activities and as leaders in an average of 2.35 activities. The (-) evaluation group participated as members in an average of 2.25 activities and as leaders in an average of 1.88 activities. In college, the (+) evaluation group participated as members in an average of 2.12 activities and as leaders in an average of 2.12 activities. The (-) evaluation group participated as members in an average of 1.0 activities and as leaders in an average of 1.25 activities.
Table 6. Distribution of sample according to participation in high school extracurricular activities

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1-2</th>
<th>3-4</th>
<th>5-6</th>
<th>7-8</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Evaluation</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>- Evaluation</td>
<td>2</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>9</td>
<td>11</td>
<td>14</td>
<td>9</td>
</tr>
</tbody>
</table>

Table 7. Distribution of sample according to participation in college extracurricular activities

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1-2</th>
<th>3-4</th>
<th>5-6</th>
<th>7-8</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Evaluation</td>
<td>2</td>
<td>8</td>
<td>9</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>- Evaluation</td>
<td>5</td>
<td>4</td>
<td>11</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>12</td>
<td>20</td>
<td>13</td>
<td>4</td>
</tr>
</tbody>
</table>

Decision-Making Test Scores

The Decision-Making Test scores ranged from 2.06 to 9.57 with a mean of 5.04. In Table 8 the distribution of scores is presented for subjects who received (+) evaluation-deviation scores and those who received (-) evaluation-deviation scores. The mean score for the (+) evaluation group is 5.92; the mean score for the (-) evaluation group is 4.08. A low Decision-Making Test score, representing little deviation from choice of tasks of average difficulty, was considered an
indication of high achievement motivation, or motivation to achieve success. A high Decision-Making Test score, representing considerable deviation from choice of tasks of average difficulty, was considered an indication of low achievement motivation, or motivation to avoid failure.

Table 8. Distribution of Decision-Making Test scores

<table>
<thead>
<tr>
<th></th>
<th>2.0-</th>
<th>3.0-</th>
<th>4.0-</th>
<th>5.0-</th>
<th>6.0-</th>
<th>7.0-</th>
<th>8.0-</th>
<th>9.0-</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Evaluation</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>- Evaluation</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>8</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Evaluation-Deviation Scores

The Home Management Resource Scale completed by subjects and advisers has a possible total score of 224 points with a possible minimum score of 56 points. Subject self-evaluation scores ranged from 168 to 224 points with a mean of 198.61. Adviser evaluation scores ranged from 134 to 215 points with a mean of 197.18. The difference between subject and adviser evaluation scores was stated as a positive (+) or negative (-) deviation. A (+) deviation score was given when the subject self-evaluation score was higher than the adviser evaluation score, and a (-) deviation score was given when the subject self-evaluation score was lower than the adviser evaluation score. Evaluation-deviation scores ranged from +56 to -32 with a mean deviation score of ±13.91. A high deviation score (positive or negative) was
considered to be indicative of inability to evaluate oneself objectively and a low deviation score was assumed to indicate ability to be objective in self-evaluation.

In Figure 1 the relationship between student self-evaluation scores and adviser evaluation scores is graphically presented. Of the 33 subjects, 16 rated themselves higher than the advisers, one rated herself the same as the advisers, and 16 rated themselves lower than the advisers. McConkie (1960) and Ferns (Gross and Crandall, 1963) found that students tended to evaluate themselves higher than the advisers. The findings for this sample indicate this to be only partially the case. Of the subjects who received evaluation scores from the advisers of 200 points or more (16 subjects) 5 evaluated themselves higher than the advisers and 11 subjects evaluated themselves lower than the advisers. The average adviser-assigned score for this group was 208.56, and the average subject-assigned score was 204.19, for a mean deviation score of -4.37. For subjects who received adviser-assigned scores of 199 and below (17 subjects), 11 subjects evaluated themselves higher than the advisers, 5 subjects evaluated themselves lower than the advisers, and 1 subject evaluated herself the same as the advisers. The average adviser-assigned evaluation score was 185.29, and average self-evaluation score was 193.55, with a mean evaluation-deviation score of +8.06.

**Hypothesis: Relationship Between Achievement Motivation and Absolute Discrepancy Between Student Self-Evaluation and Adviser Evaluation**

The hypothesis to be tested stated that achievement motivation is not related to discrepancy between student self-evaluation and adviser
Figure 1. Relationship between student self-evaluation scores and adviser evaluation scores.
evaluation. The hypothesis was tested using the correlation coefficient (Pearson r). A correlation of .027 was obtained which was not significant at the .05 level of significance.

In tabulating the evaluation discrepancy scores and the Decision-Making Test scores, a pattern seemed to emerge which had not been anticipated by the researcher. Most of the high Decision-Making Test scores (indicating low achievement motivation) were received by students who had positive evaluation-deviation scores. Those subjects who received negative evaluation-deviation scores had low Decision-Making Test scores (indicating high achievement motivation) (see Table 8).

Based on this observation the following null hypothesis was formulated: There is no significant relationship between achievement motivation and discrepancy (positive or negative) between student self-evaluation and adviser evaluation.

This hypothesis was tested using the correlation coefficient (Pearson r) and the obtained correlation of .453 was significant at the .05 level. Therefore, the hypothesis that the population correlation \( r = 0 \) was rejected. The confidence level for the population lies somewhere between .13 and .69.

Mahone (Atkinson and Feather, 1966) found that subjects who were high in achievement motivation were more accurate in estimating their own level of ability than were subjects who were low in achievement motivation. The results of this study did not show a significant relationship between evaluation-deviation scores in general and achievement motivation. However, a significant relationship was found between positive evaluation-deviation scores (over-
evaluation) and high Decision-Making Test scores (low achievement motivation), and negative evaluation-deviation scores (under-evaluation) and low Decision-Making Test scores (high achievement motivation).

**Discussion**

The observation which formed the basis for the original hypothesis for this research was that students whose evaluation of themselves differed markedly from that of the advisers did not show as much improvement in home management as did those whose evaluation of themselves differed only slightly from that of the advisers. The particular students the researcher had in mind when formulating the hypothesis were those who evaluated themselves considerably higher than did the advisers. Little or no attention had been given to the fact that some students evaluated themselves considerably lower than did the advisers. It was the observation of the researcher that the under-evaluaters did show improvement in management. The results of this study seem to indicate those who over-evaluate themselves are different from those who under-evaluate themselves. This observation seems to be borne out by the fact that those who evaluated themselves lower than the advisers obtained significantly lower scores on the Decision-Making Test (high achievement motivation) than did those who evaluated themselves higher than the advisers.

Table 9 gives the Decision-Making Test scores for the six subjects with the highest positive evaluation-deviation scores and the six subjects with the highest negative evaluation-deviation scores. The mean evaluation-deviation score for the former group is 6.07 and
for the latter group 3.46, suggesting considerable variation between the two groups.

Table 9. Relationship between Decision-Making Test scores and extreme positive and negative evaluation-deviation scores

<table>
<thead>
<tr>
<th>Evaluation-Deviation Score</th>
<th>Decision-Making Test Score</th>
<th>Evaluation-Deviation Score</th>
<th>Decision-Making Test Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>+56</td>
<td>6.21</td>
<td>-32</td>
<td>4.58</td>
</tr>
<tr>
<td>+41</td>
<td>7.64</td>
<td>-29</td>
<td>3.45</td>
</tr>
<tr>
<td>+29</td>
<td>3.66</td>
<td>-26</td>
<td>3.96</td>
</tr>
<tr>
<td>+22</td>
<td>4.12</td>
<td>-21</td>
<td>2.34</td>
</tr>
<tr>
<td>+20</td>
<td>5.77</td>
<td>-18</td>
<td>2.19</td>
</tr>
<tr>
<td>+19</td>
<td>8.72</td>
<td>-12</td>
<td>4.22</td>
</tr>
</tbody>
</table>

No attempt was made to show statistical relationship between background factors and self-evaluation and/or achievement motivation. However, an interesting relationship was observed between ordinal position in the family of origin and negative evaluation-deviation scores. Five of the six students who received the highest negative evaluation-deviation scores (see Table 9) were the last child in their family.

The Decision-Making Test has five sections, each containing a series of problems or puzzles of a different type. The instructions for the test indicate that the type of ability required in one series differs quite a bit from the type of ability required in the next; therefore, the subject's experience with one series of problems should not be used as a guide to the choice made on the next series. Some subjects apparently disregarded these instructions when taking the test. The general pattern was that if a subject attempted a task and
failed to complete it in the allotted time limit, she selected a task of lower ordinal position on the following problem series. Of a total (for all subjects) of 165 tasks attempted, 41 were not completed in the allotted time limit of one minute. In 25 of the 41 cases, the subject selected a task of lower ordinal value on the next task; in 11 cases a task of the same ordinal value was selected next; and in 5 cases a task of higher ordinal value was selected. The first task, the jigsaw puzzle, proved to be more difficult than most subjects anticipated: 26 of the 33 subjects failed to complete it in the one-minute time limit. Thirteen of those who failed to complete the puzzle selected a task of lower ordinal value on the next problem (pathfinding). This problem proved easier, and most of the subjects completed it in approximately 10 to 30 seconds. Typical comments when this happened were, "I should have picked a harder one;" "I should have known these were easier;" and "Oh, yes, ability required on one task isn't the same as that required on another." One subject commented with some insight, "I failed on the first one so I picked one I could succeed on next. Guess I picked one that was too easy."

It was interesting to observe the reactions of students as they came to take the Decision-Making Test. Some students were rather apprehensive. One girl who had been quite retiring while living in the House was hesitant about taking the test because, as she told the researcher, "You will find out how dumb I am." When she didn't complete the first puzzle, she looked as if she could cry. As she attempted each successive task she "wore her emotions on her sleeve," and it wasn't difficult to tell if she had completed the task in the allotted time or not.
Another student, also a quiet person in social situations, commented as she began the test, "I don't like to do this kind 'cause they make me feel bad."

A possible explanation for this reaction is suggested in the observation by Diller that

. . . the individual, in a situation which is important to him, reveals how deeply affected he really is. He perceives the experience not merely as one which shows him to be more or less intelligent than he thought he was but as one which makes him more or less attractive as a total person. (Diller, 1954, p. 7-8)

Litwin (Atkinson and Feather, 1966) mentions that one weakness of the Decision-Making Test as a measure of achievement motivation is that it does not take into account individual differences of ability. This was found to be true in this research. For example, no consideration of the degree of accuracy obtained by the subject is made in scoring the tests. A subject may select difficult tasks, complete them accurately, and receive a high Decision-Making Test score indicating low achievement motivation when in actuality she is simply capable of solving more difficult problems than the average subject. In this study the highest Decision-Making Test score was received by a subject (No. 11) who selected difficult tasks and completed them within the specified one-minute time limit, indicating that her choice was based on ability rather than over-aspiration. It should be noted, however, that her case was an exception rather than the general pattern. Most subjects who selected tasks of high ordinal value either did not complete them in the allotted time limit or completed them inaccurately, thus indicating the task selected was beyond their capabilities.
Another high Decision-Making Test score was received by a subject (No. 19) who showed no consistency or pattern in the selection of tasks. She selected tasks of intermediate difficulty as well as very simple and very difficult ones. When taking the test, she was flighty and silly; it was the observation of the researcher that she considered the test to be a game of little consequence. Upon completing the test she commented that she had "figured out what the test was measuring--selection of more difficult problems indicated higher intelligence." This, of course, was erroneous but no doubt influenced her selection of alternatives. Fortunately her response proved to be an exception rather than the general pattern.
SUMMARY AND CONCLUSIONS

Self-evaluation in home management and its relationship to achievement motivation, as measured by the Litwin Decision-Making Test, was investigated. Discrepancy between student self-evaluation in home management and adviser evaluation was correlated with achievement motivation.

The instruments used in this study were: (1) background questionnaire, (2) Management Resource Scale, and (3) Litwin Decision-Making Test.

The sample was composed of 33 students, residents of the Home Management House during Spring Quarter of the 1968-69 school year and Fall and Winter Quarters of the 1969-70 school year. The Management Resource Scale was completed by the subjects and the advisers within one week after the subjects had moved from the Home Management House. The background questionnaire and the Litwin Decision-Making Test were administered between December, 1969, and March, 1970.

A single null hypothesis was formulated for testing: There is no significant relationship between achievement motivation and absolute discrepancy between student self-evaluation and adviser evaluation.

Based on preliminary findings, a second hypothesis was formulated and tested: There is no significant relationship between achievement motivation and discrepancy (positive or negative) between student self-evaluation and adviser evaluation.

The statistical test used was correlation coefficient (Pearson r). The original null hypothesis was accepted. No significant correlation
was found between achievement motivation, as measured by the Litwin Decision-Making Test, and discrepancy between student self-evaluation and adviser evaluation.

The second null hypothesis was rejected at the .05 level of significance. When positive and negative evaluation discrepancy scores were related to achievement motivation as measured by the Litwin Decision-Making Test, a significant correlation was found. Subjects who received positive evaluation discrepancy scores (self-evaluation score was higher than the adviser evaluation score) received higher scores on the Litwin Decision-Making Test (low achievement motivation) than did subjects who received negative evaluation-discrepancy scores (self-evaluation score was lower than the adviser evaluation score).

The following conclusions may be drawn from this study:

1. Positive discrepancy between student self-evaluation and adviser evaluation seems to be related to low achievement motivation, and negative discrepancy between student self-evaluation and adviser evaluation seems to be related to high achievement motivation.

2. No conclusive patterns relating background factors to high or low achievement motivation emerged.

3. No strong relationship between background factors and ability to evaluate oneself objectively were observable.

4. Of the subjects rated by the advisers as having done the best job of managing (upper 48.5 percent of adviser evaluation scores), 69 percent under-evaluated themselves in comparison to the adviser evaluation score.

5. Of the subjects rated by the advisers as not having managed as well (lower 51.5 percent of adviser evaluation scores), 64 percent
over-evaluated themselves in comparison to the adviser-assigned evaluation score.

Limitations

The following limitations are noted for this study:

1. A basic assumption for this research was that the adviser evaluation was more objective than the student self-evaluation.
2. The instrument used for measuring evaluation was not examined for reliability or validity.
3. The Litwin Decision-Making Test is not the standard measure for achievement motivation.
4. The sample size was small.
5. The oral group evaluation which was held prior to the time the subjects completed the self-evaluation form may have influenced subject self-evaluation.

Recommendation

The findings of this study encourage the idea that a measure of achievement motivation could be used as a guide in identifying students who are not objective in self-evaluation. It is recommended that a similar study be conducted using a standard measure for achievement motivation in addition to the Litwin Decision-Making Test.
LITERATURE CITED


APPENDIX
Table 10. Summary of data collected for 33 subjects.

<table>
<thead>
<tr>
<th>No.</th>
<th>Adviser Evalution Score</th>
<th>Self-Evaluation Score</th>
<th>Decision Making Test Score</th>
<th>Children of Family Origin</th>
<th>Ordinal Position in Family</th>
<th>No. of Towns lived in</th>
<th>Size of home town&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Annual Family Income&lt;sup&gt;b&lt;/sup&gt;</th>
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<sup>a</sup>1 = 0-10,000; 2 = 10,000-50,000; 3 = 50,000 and above.

<sup>b</sup>Expressed in thousands of dollars.
BACKGROUND QUESTIONNAIRE

NAME __________________________ AGE __________
YEAR IN SCHOOL ___________________ MAJOR __________________________
COLLEGE OR UNIVERSITY ATTENDED BESIDES U.S.U. __________________________

This information will be kept confidential. No names will be used; therefore, no personal references will be cited. Please answer the following carefully.

1. Number of children in the family. Circle the correct number.
   1 2 3 4 5 6 7 8 9 10 more

2. Your order of arrival into your family. Circle the correct number.
   first second third fourth fifth sixth seventh eighth ninth tenth other (please specify) __________

3. Beginning with the most recent, list all the cities and states in which you have resided. (List approximate population of each--up to 10,000, 10,000-50,000, above 50,000--and indicate the approximate length of time you lived at each location.)

   ____________________________________________
   ____________________________________________

4. Check the average annual income of your family.
   _ $2,000-$3,999 ___ $4,000-$5,999 ___ $6,000-$7,999 ___ $8,000-$9,999 ___ $10,000-$11,999 ___ $12,000-or more ___ have no idea

5. Indicate the activities in which you participated in high school. (Put an asterisk(*) if you were an officer or leader in activity.)
   __ FICA __________________________ __ Student Government __________
   __ Pep Club _______________________ __ Service Club __________________________
   __ Band or Orchestra ____________ __ Volunteer Work __________________________
   __ Chorus __________________________ __ Church activities __________________________
   __ Drama __________________________ __ Other (please specify) __________________________
   __ Debate __________________________

6. List extracurricular activities in which you participated during college. (Put an asterisk(*) if you were an officer or leader in activity.) Please list activities in each category.
   __ Scholastic __________________________
   __ College (Family Life) __________________________
   __ University __________________________
   __ Church __________________________
   __ Community __________________________
   __ Other __________________________
MANAGEMENT OF RESOURCES

1 = below average
2 = average
3 = very good
4 = excellent

Your score: __________
Adviser's score: __________

Time and Energy

_____ Meal service on time
_____ Menus turned in two days before meals begin
_____ Account books balanced and checked with adviser 24 hours after
hostess-managing
_____ Entertainment plan effective and posted 24 hours before entertain-
ment
_____ College housing rules obeyed
_____ Ready when guests arrived and in the living room
_____ Invitations out in sufficient time
_____ Dates of entertainment planned ahead of time
_____ Worked toward work simplification
_____ Amount of rest and sleep that you needed
_____ Planned ahead so that others might also make definite plans
_____ Considered others' time and energy
_____ A self-starter--does not need to be pushed
_____ Attended regular classes and kept school work up-to-date
_____ Made proper arrangements for guests
_____ Organized food preparation with a minimum of clean-up after meals

Money

_____ Kept daily journal up-to-date
_____ Kept within food budget costs
_____ Purchased those things necessary for the house
_____ Left household supplies for next girl
_____ Utilized food purchases so there was a minimum left for inventory
_____ Incorporated "save-overs" into meals
_____ Careful in writing checks and keeping receipts

Goods and Property

Kept the house at a comfortable level of cleanliness and order
_____ (a) Dining and living room
_____ (b) Kitchen
_____ (c) Upstairs
_____ (d) Other areas
_____ (e) Kept equipment clean and in running order
_____ (f) Kept household furnishings clean
_____ (g) Which instruction and equipment books did you read concerning
use of goods and property? List:
Knowledge

- Planned appetizing foods that fulfilled the basic nutritional needs
- Knew and assumed responsibility of hostess while acting as manager
- Set the table correctly
- Used proper etiquette at the table and throughout the house
- Accepted responsibility of hostess whenever guests were invited
- Gave clear, concise directions
- Knew where to go for help and information—and "went"
- Evaluated and improved from each group experience
- Alert to social situations and people's feelings
- Recognized personal obligation to group

Skills and Abilities

- Able to guide group
- Able to integrate all members of the group
- Gave the group the benefit of past experiences
- Added to bulletin board
- Kept records neat and accurate
- Made the house a more pleasant place to live because of your efforts to arrange centerpieces and other centers of interest

Attitude

- Carried full share of load and more if necessary
- Showed enthusiasm for group activities
- Attempted to reach goals set up
- Entered into a fair share of conversing with group members and guests
- Interested in and accepted a wide variety of food
- Used initiative
- Tried to become more efficient in use of time and energy
- Worked well with others without expecting recognition
- Had a spirit of being with and one of the group
- Saw the needs of different persons and helped them

Community facilities

Which community facilities did you use? (list)

To what extent did you enter into the planning, controlling, and evaluating the house activities?
In this test you are required to make decisions in situations involving risk of gain or loss. Your objective will be to make a decision in each situation which will be most likely to maximize your gain and minimize your loss.

Although you will be asked to solve some problems or simple puzzles, this is not a test of your intelligence or of your problem-solving ability. In fact, it has more of the features of a game than a test.

Each section of this test presents a series of problems or puzzles of a particular type. For example, one section presents arithmetic problems, another presents jig-saw puzzles, another has scrambled-letter puzzles, and so on. The problems or puzzles within each section are presented in sets which vary in difficulty. Short, easy sets are presented first in each series and longer, more difficult sets are presented last.

In each section you are to select the one set you will work on in the time allowed. (The time limit for each task will be one minute.) Your selection should be based on the following facts:

(1) The number of points awarded for completing a set will be proportional to the difficulty of the problems— that is, the more difficult the problems, the higher the point payoff.

(2) No credit will be given for partially completed or partially correct problems.

As a general rule, your experience with one series of problems will not be a good guide to the choice you should make on the next series, since the type of ability required in one series will differ quite a bit from the type of ability required in the next.
Jigsaw Puzzle

On the next page there is a series of seven jigsaw puzzles similar to the one shown in the example below. The puzzles range from simple to relatively difficult ones. You are to select one puzzle that you wish to try. You will then have one minute to work on the puzzle you select. You must complete the puzzle to receive credit.

The puzzles are rectangles made up of several numbered pieces. You are to find the pieces making up the puzzle in the pool of pieces given below; then number the correct pieces from the pool.

EXAMPLE:

When the signal is given to turn the page, look over the sets quickly and decide which set you wish to try. You will have only 10-15 seconds to make your choice. As soon as you have made your choice, circle the letter of the set you are trying (above the puzzle).

You may begin working on the puzzle you select as soon as the signal is given to start.

DO NOT TURN THE PAGE UNTIL A SIGNAL IS GIVEN.
Pathfinding

On the next page there are a series of nine pathfinding tasks. The object is to trace the paths and write in the boxes at the right the numbers of the boxes from which the path originated. Two boxes are provided since more than one path may end in the same box. You are to select one task that you wish to try. You will then have one minute to work on the pathfinding task you select. You must complete the entire task correctly to receive credit.

EXAMPLE:

When the signal is given to turn the page, look over the tasks quickly and choose the one you wish to try. You will have only 10-15 seconds to make your choice. As soon as you have made your choice, circle the letter of the task you are trying (at the side).

You may begin tracing the paths as soon as the signal is given to start.

DO NOT TURN THE PAGE UNTIL A SIGNAL IS GIVEN.
Arithmetic Problems

On the next page there is a series of nine sets of two-step arithmetic problems similar to those shown in the example below. Each set contains a different number of problems; the more problems, of course, the more difficult the set will be to solve in the time allotted. You are to select one set that you wish to try. You will then have one minute to work on the set you select. You must get all the problems in the set correct to receive credit.

The problems consist of two lines of simple arithmetic. You are to solve each line separately. If the top line is larger than the bottom, subtract the bottom line from the top and write in the answer. If the top line is smaller than the bottom, add the two lines and write in the answer. If the two lines are equal, multiply the two numbers and write in the product.

EXAMPLE:

\[
\begin{align*}
5+2-3 &= 4 \\
8-6+7 &= 9 \\
13 \\
8+3-4 &= 9 \\
6-2+1 &= \frac{5}{4} \\
7-2+2 &= 7 \\
11-6+2 &= \frac{7}{49}
\end{align*}
\]

When the signal is given to turn the page, look over the sets quickly and decide which set you wish to try. You will have only 10–15 seconds to make your choice. As soon as you have made your choice, circle the letter of the set you are trying (at the left).

You may begin working on the problems in the set you have chosen as soon as the signal is given to start.

DO NOT TURN THE PAGE UNTIL A SIGNAL IS GIVEN.
|   | A. |   | B. |   | C. |   | D. |   | E. |   | F. |   | G. |   | H. |   | I. |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|   | 9+3-4 = |   | 8-2+8 = |   | 9-2+9 = |   | 7+5-7 = |   | 3+8-7 = |   | 9-3+8 = |   | 3+9-4 = |   | 5+6-2 = |   | 9+3-8 = |   |
|   | 8-2+8 = |   | 7+5-7 = |   | 9-2+9 = |   | 7+5-7 = |   | 9-3+8 = |   | 3+9-4 = |   | 5+8+4 = |   | 5+6-2 = |   | 9+3-8 = |   |
|   | 9-4+2 = |   | 7-2+8 = |   | 3+9-5 = |   | 9+2-8 = |   | 7+5+4 = __ |   | 9+2-7 = __ |   | 7+8-6 = __ |   | 7+5+6 = __ |   | 3+9-5 = |   |
|   | 9+2-8 = |   | 7+5+6 = __ |   | 3+9-5 = |   | 9+2-8 = |   | 7+5+4 = __ |   | 9+2-7 = __ |   | 7+8-6 = __ |   | 7+5+6 = __ |   | 3+9-5 = |   |
|   | 5-2+6 = |   | 9+4+3 = |   | 9-3+8 = |   | 5+6-2 = __ |   | 5-2+6 = |   | 9+4+3 = |   | 5+6-2 = __ |   | 5-2+6 = |   | 9+4+3 = |   |
|   | 9-4+8 = |   | 5+6-2 = __ |   | 5-2+6 = |   | 9+4+3 = |   | 5-2+6 = |   | 9+4+3 = |   | 5-2+6 = |   | 9+4+3 = |   | 5-2+6 = |   |
|   | 8+3+6 = |   | 8+3+6 = |   | 8+3-6 = |   | 4-9+6 = |   | 8+3+6 = |   | 8+3+6 = |   | 8+3+6 = |   | 8+3+6 = |   | 8+3+6 = |   |
|   | 8+4-9 = |   | 9+3-8 = |   | 7+5-4 = |   | 8+3+6 = |   | 8+3+6 = |   | 8+3+6 = |   | 8+3+6 = |   | 8+3+6 = |   | 8+3+6 = |   |
|   | 5+6+8 = |   | 9+4+3 = | 7-5-3 = |   | 7+5-4 = |   | 9+4+3 = | 7-5-3 = |   | 7+5-4 = |   | 9+4+3 = |   | 7+5-4 = |   | 9+4+3 = |   |
|   | 8-2+8 = |   | 8-2+8 = |   | 8-2+8 = |   | 8-2+8 = |   | 9+2-8 = |   | 9+2-8 = |   | 9+2-8 = |   | 9+2-8 = |   | 9+2-8 = |   |
|   | 4+9+4 = |   | 9+3+4 = |   | 9+3+4 = |   | 9+3+4 = |   | 9+3+4 = |   | 9+3+4 = |   | 9+3+4 = |   | 9+3+4 = |   | 9+3+4 = |   |
|   | 6+5-3 = |   | 9+3+4 = |   | 9+3+4 = |   | 9+3+4 = |   | 9+3+4 = |   | 9+3+4 = |   | 9+3+4 = |   | 9+3+4 = |   | 9+3+4 = |   |
|   | 8+4-5 = |   | 8-2+9 = |   | 6-3+4 = |   | 6-3+4 = |   | 6-3+4 = |   | 6-3+4 = |   | 6-3+4 = |   | 6-3+4 = |   | 6-3+4 = |   |
|   | 9+5+6 = __ |   | 8-2+9 = |   | 9+5+4 = __ |   | 8-2+9 = |   | 9+5+4 = __ |   | 9+5+4 = __ |   | 9+5+4 = __ |   | 9+5+4 = __ |   | 9+5+4 = __ |   |
|   | 9+5-6 = __ |   | 3+8-4 = |   | 9+5+4 = __ |   | 3+8-4 = |   | 9+5+4 = __ |   | 9+5+4 = __ |   | 9+5+4 = __ |   | 9+5+4 = __ |   | 9+5+4 = __ |   |
|   | 7-4+7 = |   | 9+2-8 = |   | 6+5-2 = |   | 9-2+8 = |   | 4+9-5 = |   | 4+9-5 = |   | 4+9-5 = |   | 4+9-5 = |   | 4+9-5 = |   |
|   | 5-3+4 = |   | 8-2+9 = |   | 8+3-7 = |   | 8-2+9 = |   | 4+9-5 = |   | 4+9-5 = |   | 4+9-5 = |   | 4+9-5 = |   | 4+9-5 = |   |
|   | 6+3-3 = |   | 6+5-3 = |   | 8-2+9 = |   | 4+9-5 = |   | 4+9-5 = |   | 4+9-5 = |   | 4+9-5 = |   | 4+9-5 = |   | 4+9-5 = |   |
|   | 7-4-3 = __ |   | 6+7-8 = __ |   | 7+5-4 = |   | 4+2+5 = |   | 5+6-3 = __ |   | 5+6-3 = __ |   | 5+6-3 = __ |   | 5+6-3 = __ |   | 5+6-3 = __ |   |
|   | 7+4-3 = __ |   | 7+5-4 = __ |   | 7+6+4 = __ |   | 5+7-3 = __ |   | 8-2+9 = __ |   | 8-2+9 = __ |   | 8-2+9 = __ |   | 8-2+9 = __ |   | 8-2+9 = __ |   |
Scrambled Letters

On the next page there are nine statements or phrases in which the letters of each word have been scrambled. All the letters are given and the words are in the correct order. All you have to do is rearrange the letters and write the correct words in the space provided. You are to select one statement that you would like to try. You will than have one minute to work on the statement you select. You must complete all the words in the statement or phrase correctly to receive credit.

EXAMPLE:

eh lilw eveal

he will leave

When the signal is given to turn the page, look over the statements quickly and choose the one you wish to try. You will have only 10-15 seconds to make your choice. As soon as you have made your choice, circle the letter of the statement you are trying (at the left).

You may begin unscrambling the letters as soon as the signal is given to start.
A. Htye liwl og.

B. Eh yma lacl oson.

C. Ehs noncat kame ti won.

D. Het eopelp liwl eb ywaa.

E. Ragrnæ hte tretam rfo hetm.

F. Reddsas eth moctiemet lulyraecf.

G. Epaprra ot eashcr oangm oshte esppar.

H. Herit lniotuos si tailyceron otn qeautead.

I. Uor nrgratamene si tdlopmccaei tbu yevr tftasirysoac.
Puzzle Task

This booklet contains 7 pencil mazes varying in complexity. The object is to draw a continuous line from the START box, marked S, to the FINISH box, marked F. You are not allowed to lift your pencil from the paper; if you hit a blind alley you must retrace your path. A sample solution is shown below:

You are to select a puzzle to work on. You will be allowed one minute to work on the puzzle, no matter which one you select. We would like to see how well you can do on this task.

You may begin working on the puzzle you select as soon as the signal is given to start.
Puzzle Number 1
Puzzle Number 2
Puzzle Number 3

[Diagram of a maze with starting point S and ending point F]
Puzzle Number 4
Puzzle Number 5
Puzzle Number 6
Puzzle Number 7
VITA

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Master of Science

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