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HARRISON, Janice Nedra, 1932–
THE RELATION OF STUDENT EXPECTANCY
LEVEL TO IMPROVEMENT IN A STUDY
SKILLS COURSE AND IN COUNSELING.

The Ohio State University, Ph.D., 1966
Psychology, clinical

University Microfilms, Inc., Ann Arbor, Michigan
THE RELATION OF STUDENT EXPECTANCY LEVEL TO IMPROVEMENT IN A STUDY SKILLS COURSE AND IN COUNSELING

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

by

Janice Nedra Harrison, B.A., M.A.

* * * * * * * *

The Ohio State University 1966

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ACKNOWLEDGMENTS

Sincere gratitude is extended to the following:

Dr. Francis P. Robinson, adviser, for his guidance and support.

Dr. Frank M. Fletcher and Dr. Lyle D. Schmidt for their interest and suggestions as members of the reading committee.

Mr. Burton Price, Mathematics Statistics Laboratory, The Ohio State University, for consultation regarding statistical procedure.

The students, instructors, and counselors of The Ohio State University who participated in the study.
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FIELDS OF STUDY

Major Field: Psychology

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Clinical Psychology
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CHAPTER I

INTRODUCTION

The area of research in counseling is complex. Those who engage in counseling and psychotherapy often have to justify what they are doing and have to show that change in behavior does occur as a result of the counseling interaction. Even if it can be demonstrated that change does occur, it is still important to explain how such change comes about. Studies of the outcome of counseling ask what changes take place in treatment. Studies of the process of counseling ask how changes come about. Both types of studies are important to research in counseling. Process studies help to clarify variables and suggest types of interactions of variables so that investigators of outcome can design more pertinent studies.

Research on improvement in study skills has enjoyed a long history in psychology. While this particular area has not been the major focus of interest for many psychologists that counseling research has been, it is of particular importance today because of the great numbers of students entering our colleges, many of them ill-prepared to cope with college course work because of deficient study skills. Research shows that an individualized teaching approach is needed to facilitate such skill learning. In addition, it appears that student attitudes and motivation have an effect on the learning of
educational skills. Thus research is needed on variables related to outcomes in individualized and group counseling approaches to a broad range of purposes, i.e., personal problems, motivation, choice, skills, information, etc. Many variables have been studied in research in counseling. One variable which has been receiving attention recently is the expectancies of the participants, client expectancies, and counselor expectancies.

The particular variable level of client expectancy is one which is considered to be of sufficient importance to merit further study. This variable not only has relevance for the usual areas of counseling but may also have considerable relevance to research in the area of improvement in study skills. The relation of student expectancy levels to improvement in study skills and to improvement in counseling has not been studied to any great extent.

Expectancy can be viewed as a significant dimension of human behavior. An individual's expectations affect his perception of the world around him, and therefore his behavior. Expectation theory offers a promising access to problems of social learning and behavior. According to English and English (1958)*, expectancy (or expectation) is defined as "an intervening process variable" attributed to an organism such that a "response to a certain sign object or cue stimulus is expected to bring about a certain other situation" (p. 193). Expectancy is inferred from an organism's behavior.

An expectancy is an anticipatory process variable and is closely related to other variables such as "set," "anticipation," "hypothesis," and "level of aspiration." Set is an overlapping
concept which English and English define as a "condition of the organism" which orients him toward "certain stimuli or events rather than toward others," thus facilitating certain activities or responses rather than others. Set is usually considered to be a more temporary condition than is expectancy (p. 495). Anticipation is generally used in a more specific sense to indicate an "attitude of readiness for a coming event" according to English and English (p. 34). But some theorists use anticipation and expectancy almost interchangeably. For example, Kelly's use of "anticipate" is in a predictive and motivational sense to indicate man's seeking for prediction (Kelly, 1955). Hypothesis is described by English and English as an explanation for a set of data, made tentatively by the organism, and which he may act in terms of; formulation of a hypothesis is usually the first step in problem-solving. An expectancy is a type of hypothesis. Level of aspiration is defined as "the standard by which a person judges his own performance as a success or failure, or as being up to what he expects of himself," or a level of performance which the individual feels will be acceptable to his image of himself (English & English, 1958, p. 43). Level of aspiration could be considered synonymous with level of expectancy. In the perceptual framework of Combs and Snygg (1959), the expectancies learned in early childhood form, in later life, the individual's level of aspiration. An individual chooses goals which he considers appropriate to his self-concept. The types of goals an individual sets for himself depend upon the way in which he regards himself and the kind of self-expectancies he has acquired from his life experiences (Combs & Snygg, 1959, p. 140).
In the personality theory of Julian Rotter, anticipatory responses are viewed as a major determinant of behavior. Social interaction situations are analyzed in terms of four constructs: behavioral potential, reinforcement, expectancy, and reinforcement value. A situation contains cues to which are attached expectancies for reinforcement value. The situation determines for the individual what expectancies he has for behavior reinforcement sequences. Expectancy is defined as the probability held by the individual that a particular reinforcement will occur. According to Rotter, an individual's behavior is determined to a large extent by his anticipation or expectancy that certain events will occur. One of the basic formulations of social learning theory is that a subject's expectancy concerning the outcome of his behavior in a given situation is one of the major predictors of behavior (Rotter, 1954, p. 102).

Kelly based his theory of personality on the basic postulate that "a person's processes are psychologically channelized by the ways in which he anticipates events" (Kelly, 1955, Vol. I, p. 46). Following this fundamental postulate, Kelly lists other postulates in his psychology of personal constructs which refer to anticipation or expectation: a person anticipates events by construing their replications; each person characteristically evolves, for his own convenience in anticipating events, a construction system embracing ordinal relationships between constructs; and a person chooses for himself that alternative in dichotomized construct through which he anticipates the greater possibility for extension and definition of his
system. Kelly views human behavior as basically anticipatory rather than reactive.

As Stogdill has described his expectation theory, "the confirmation of an expectation increases the probability estimate by the individual that a course of action which has been successful will, under similar circumstances in the future, result in similarly satisfying outcomes" (Stogdill, 1959). According to Stogdill, expectation theory is the only variant of learning theory which seems to offer a promising access to the problems of social learning. In Stogdill's framework, "expectation, defined as readiness for reinforcement, is a function of drive, the estimated probability outcome, and the estimated desirability of the outcome." Expectation and motivation are overlapping concepts. Motivation may be regarded as a function of drive and confirmed desirability estimates. Drive and desirability estimates contribute to both expectation and motivation. Stogdill has developed his conceptualization in relation to group organization.

Rosenthal et al., (1960) in studies of experimenter bias, have been interested in analyzing the influence of the experimenter's expectancies upon his subjects, and in attempting to find how these expectancies are communicated. The studies have indicated that experimenter bias does take place, but have not been conclusive in showing how the communication occurs. Subjects are likely to respond as the experimenter expects they will, but it is unclear how the experimenter communicates the cues to the subjects. It seems probable from the studies that both verbal and visual cues are involved.
Hemphill et al. (1957) studied the effects of expectancy upon attempts to engage in leadership behavior. They were concerned with the effects of task motivation and expectancy of accomplishment upon attempts to lead. Findings indicated that individuals attempt to lead more frequently when the rewards for mutual problem solution are relatively high. They also attempt more leadership acts if an attempted leadership act has a reasonable possibility of contributing to mutual problem solution than if attempts to lead cannot accomplish the task.

After a review of the literature concerning expectancy, Goldstein (1962) summarized by stating that the general proposition that expectations exert a major influence upon human behavior is very well documented. Thus expectancy can be viewed as a significant dimension of human behavior. An individual's expectations play a major role in the formation of his perceptions and thus have an important effect upon his behavior.

Several authors have suggested that patient, or client, expectancy may have a relationship to improvement in psychotherapy. Rosenthal and Frank (1956), discussing psychotherapy and the placebo effect, make an analogy between a placebo and the therapist's and patient's conviction that "something useful is being done." Therapy is enhanced if the patient has confidence in the therapist's ability to help him. But motivation for help is not equal to expectation of improvement; some patients are greatly distressed and thus strongly motivated to receive help, yet have little faith in a treatment such as psychotherapy. In order to benefit from psychotherapy, the patient must have expectation for improvement, or faith in the procedure.
In a theoretical article concerning faith and improvement in psychotherapy, Cartwright and Cartwright (1958) postulate that the relationship is not strong and positive between the degree of belief that certain effects will result from therapy and the degree of improvement in therapy. They feel that the presence of this belief may or may not relate to improvement. Rosenthal and Frank, on the other hand, suggest that a relationship between degree of belief and degree of improvement would be strong and positive. Cartwright and Cartwright suggest that there are four "beliefs" regarding psychotherapy: belief that certain effects will result; belief in the therapist as a source of help, belief in the technique as a source of help; and unspecified belief in the therapy itself. They feel that the relationship between each of these beliefs and improvement in psychotherapy should be examined separately since the relationship may be quite different with each of them. Cartwright and Cartwright indicate that the first problem is to examine the hypothesis that "entering belief" is related to the results of psychotherapy. The second problem is to examine the hypothesis that "produced belief" is similarly related. The third problem is to distinguish between belief as faith, credulity or over-readiness to accept, and belief as intellectual assent. They conclude by asking: which comes first in therapy, a change in belief, or a change in behavior?

In an article concerning the dynamics of the psychotherapeutic relationship, Frank (1959) points out some of the determinants of the patient's dependence on his psychotherapist for relief: that Americans today are culturally predisposed to expect relief from psychotherapy;
that the treatment situation itself offers cues which heighten the patient's sense of dependency and impress him with the importance of therapy and its promise of relief; that therapists act in such a way as to gain the patient's confidence; and that the patient's values are such that the goals of therapy make sense. Frank believes that sometimes the expectancy for relief which the patient has becomes strong enough to be called "faith." Frank suggests that the speed of improvement may be largely determined by patient expectancies.

Patterson (1958), writing about client expectations and social conditioning, suggests that the expectations and preferences of clients in counseling are learned, and that they are socially and culturally determined. The American culture in particular seems to promote the idea that a client plays a dependent role in the counseling relationship. This attitude may have its origin in the general cultural attitude toward specialists; that "they do things to us, or for us, or tell us what to do and how to do it" (Patterson, 1958, p. 137). Patterson feels that counselors do not usually meet the expectations of their clients, and instead persist in attempts to teach clients to change their attitudes and to accept a more responsible role in the counseling relationship. Shaw (1955) writes that the organism orients itself in its environment by means of expectancies, and that reorientation is a matter of up-ending expectancies. He views counseling as an on-going process of up-ending expectancies in hoped for directions. Bordin (1955) points out the discrepancy between what clients expect to happen in terms of personal involvement and what the experienced counselor knows must happen if the client is to improve in the
counseling relationship. Similarly, Cartwright and Cartwright (1958) see a weak curvilinear relationship between belief in the therapist as a source of help and degree of improvement in therapy. They feel that clients who enter therapy with the belief that the therapist will be the main source of help may sit and wait to be helped instead of accepting responsibility for treatment.

Since expectancy has an important effect upon human behavior, expectancy research should be relevant for both counseling and educational skills programs. The expectancies that an individual holds have an effect on the learning process, on motivation, and on self-evaluation. Counseling consists of many aspects, and it is likely that the expectancies of the individuals involved in the counseling interaction have an effect on both the process and the outcome of counseling.

It is the purpose of this study to investigate the effects of students' level of expectancy on the degree of improvement which takes place in a study-skills course and on the degree of improvement which takes place in counseling. The problem is stated as follows: what is the effect of student expectancy level on degree of improvement in a study skills course, and on degree of improvement in counseling? What is the nature of the expectational influence on improvement in learning study skills and on improvement in counseling? What is the relationship between level of expectancy and degree of subjective distress or discomfort? Does degree of distress have an effect on level of expectancy?
Several areas of research are related to the present study. A review of research in the following areas will be presented: level of expectancy, improvement in study skills, client improvement in counseling, degree of distress, and research related to instruments used in this study.

Research on level of expectancy

Goldstein (1962) defined the variable "patient prognostic expectancies" as "those expectations held by the patient regarding the gains he anticipates will accrue to him as a result of his participation in psychotherapy." Several investigators have attempted to examine this variable and its relationship to psychotherapeutic process and outcome. In a study to investigate the relationship between client expectation of personality change, and client perceived personality change due to psychotherapy, Goldstein (1960) randomly assigned 30 clients to two groups, one of which received therapy while the other did not. Client expectation of personality change was operationally defined as the difference between the client's ordering of personality problem Q-sorts under present-self orientation, and his ordering of the same Q-sorts under expected-self orientation, both sortings being
made at the same point in time. Client perceived personality change was defined as the difference between Q-sorts under present-self orientation at two points in time. Goldstein's results suggested an absence of relationship between client perceived change due to psychotherapy, and client expectation of personality change. He concluded that the variable "client expectation of personality change" was too global, and that future research should be more specific regarding the study of expectations.

Goldstein and Shipman (1961) attempted to relate patient expectation of improvement in psychotherapy to the improvement which appears to take place. The subjects for the investigation were 30 psycho-neurotic out-patients who were seen in therapy by medical-student therapists. Results showed a significant positive linear correlation between patient expectancy of symptom reduction and pre-therapy symptom intensity; and a significant curvilinear relationship between expectancy of symptom reduction and patient perceived symptom reduction. The findings suggested a major motivational component in the patient's expectancy estimate.

Frank (1959) postulated that the greater the need for relief of symptoms the greater will be the patient's expectancy that such relief will ensue. He studied a group of 54 out-patients who received either individual psychotherapy, group psychotherapy, or minimal therapy for about six months. The patients were rated with respect to change in subjective discomfort and social ineffectiveness at six months, and at regular follow-up intervals up to two years. It was found that at six months the average discomfort had markedly decreased, and that the
decrease was the same regardless of the kind or amount of treatment. A significant improvement in social effectiveness was found at six months for those patients who received either individual or group psychotherapy. The results of Frank's study are consistent with the view that improvement in psychotherapy may be produced by at least two factors: non-specific expectancy of relief, and relearning related to the amount and kind of treatment contact. His findings suggested that increase in favorable expectancy often occurs very quickly, that its intensity is unrelated to the type or duration of treatment, and that any form of activity by a person culturally defined as a healer may activate a patient's belief that he is being helped.

In a general study of attitudinal factors influencing treatment of psychiatric patients, Brady (1959) found that the favorableness of conscious attitudes was significantly related to the successful outcome of treatment. The favorableness of less conscious attitudes, however, bore no such relationship. A favorable response to treatment was associated with the patient's tendency at the start of treatment to perceive the psychotherapeutic situation as neutral (rather than distinctly pleasurable), and to consider the patient's role in therapy to be both active and passive (rather than wholly active). In a follow-up study, Brady (1960) investigated the relationship of expectation of improvement to actual improvement in psychiatric patients. Results did not support the hypothesis that expectation of improvement significantly influenced actual outcome.

Gliedman (1958) reported on five studies involving responses to placebos in psychiatric patients. He noted the similarity of symptom
reduction attained by placebos and by short-term psychotherapy. From his findings, he concluded that the importance of expectancies is apparent, and he emphasized the fruitfulness of considering the so-called placebo effect from the standpoint of prior learned experiences which dispose to certain favorable present actions. In an earlier study, Gliedman et al. (1957) investigated incentives for treatment related to remaining or improving in psychotherapy. They found that patients whose expectations were congruent with the expectations of their therapists neither remained significantly longer nor improved significantly more than did those patients whose expectations were incongruent with those of their therapists. Their conclusion was that patients tend to remain in therapy when it favorably affects the equilibrium of their present pattern of living.

Lipkin (1954) studied client feelings and attitudes in relation to the outcome of client-centered therapy. He concluded from his findings that the client with positive feelings, attitudes, and expectations toward the counseling experience changed more in counseling that did the client with reservations about counseling. In addition, the more successful clients of Lipkin's study seemed to be in greater distress and more eager for change than did the less successful clients. This finding is in accord with Frank's (1959) statement that degree of favorable expectancy varies positively with degree of patient distress. Lipkin concluded that his study "demonstrated, at least in regard to the group under study, that the patterns of feelings which the client holds toward himself, the patterns of attitudes which he exhibits toward the counselor, and his perception of the counseling experience
bear meaningful relationships to the eventual outcome of therapy" (Lipkin, 1954, p. 29).

In studies of the expected behavior of a potentially helpful person, investigators have concluded that the client in part forms his expectations from observing the behavior of the potentially helpful person and that perhaps commitment on the part of the client is in part a function of his conception of the helping person's commitment to help him (Thomas et al., 1955; Worby, 1955).

Several of the preceding studies have indicated that there is a relationship between patient prognostic expectancies and the degree of improvement in therapy (Frank et al., 1959; Gliedman et al., 1957; Lipkin, 1954). Frank's findings are not explicit regarding the nature of the relationship between expectancy of relief and treatment outcome. He noted only that the factor "expectancy of relief" is one of two major factors involved in producing improvement in psychotherapy. Gliedman et al. pointed out the importance of expectancies, but were not specific as to their effect upon outcome. Lipkin concluded that favorable client expectancies influenced the outcome of therapy, but did not indicate the distribution of the influencing relationship.

Though in one study Brady et al. (1959) found a direct relationship between favorable conscious attitudes and successful outcome of treatment, when they examined the variable of patient prognostic expectation more specifically (1960) they did not find a direct, significant relationship between expectation of improvement and actual outcome. When Goldstein (1960) examined the variable of client expectation of personality change, he found no relationship between that variable and
the variable of perceived change due to therapy. He concluded that the variable was too global. In a subsequent study (Goldstein & Shipman, 1961), the investigators did find a significant curvilinear relationship between patient expectation of improvement and improvement which appears to take place. Those patients with either high or low prognostic expectancies reported the least improvement. After a review of theory and research in the area of patient prognostic expectancies, Goldstein (1962) summarizes by making the following points: that expected and perceived improvement in psychotherapy have been found not to relate in a linear manner; that moderate expectation of improvement in psychotherapy logically appears to be the most realistic range of possible prognostic expectancies; that patients with moderate prognostic expectancies should change the most in therapy, and those with either high or low (extreme) prognostic expectancy levels should change the least in therapy; that the greater the degree of patient distress, the greater will be his expectation for relief.

Some of the research findings on which Goldstein based this summary consisted of therapy consisting of a single interview in duration. It would be desirable to have additional evidence regarding the existence of a curvilinear relationship between the variables of client prognostic expectancy and degree of improvement in psychotherapy from research studies involving greater duration of therapy or counseling.

Research on improvement in study skills

Research in the area of "how to study" programs has a long history—some of the earliest work being done in the 1920's at The Ohio State University. In an early article concerning this work,
Pressey (Pressey, S. L., et al., 1927) wrote that the primary difficulty of students taking a how-to-study course was their lack of good study habits, and that these habits could be developed under supervision and training. The students in this early program were primarily of probationary status, although their university test scores indicated that they had the ability to do college work.

In a study of the effects of training in methods of study on college success (Pressey, L. C., 1928), the investigator gave training to groups of students who were matched with untrained students. Fifty-eight per cent of the students who were trained in how-to-study techniques succeeded in maintaining passing grade averages while in college, but only 18 per cent of a matched control group did as well. Twenty per cent of the trained group graduated, while none of the control group did. Success of how-to-study courses has been consistently reported in the literature (Ferguson, 1928; Behrens, 1935; Sherburne, 1938; Robinson, 1945; Sharp, 1943; Wittenborn, 1944; DeLong, 1948; Blake, 1952; Blake, 1956; Shaw, 1955). Many of the earlier studies were concerned with training students on academic probation in how-to-study techniques, but in 1946 Robinson introduced the concept of "higher level skills" (Robinson, 1946). The emphasis began to change away from remedial techniques and toward the development of more efficient study methods for all students.

After a survey of the literature of evaluation of study skill courses, Entwisle (1960) concluded that (1) a study skills course will usually be followed by improvement, (2) a course will be most beneficial to students desiring to take it, (3) students desiring to take
such a course, but prevented (and therefore presumably of comparable motivation), fail to show significant improvement, (4) any gains noted will not necessarily be related to either the content or duration of the course. Blake (1952) noted that 10 per cent of the colleges in the United States offer a study skills course, and that 10 per cent require it of all freshmen. He observed that favorable results were found in all cases where evaluations of the courses were undertaken. Di Lorenzo (1964) did a study to determine whether students doing passing to outstanding college work would profit from how-to-study training. He was specifically interested in finding whether some variable might be indicative of the degree of improvement to be made from taking the course. He found that training influenced improvement for the experimental group, for the subjects with the lower study habits rating, and for those with higher past academic averages. Ofman (1964) evaluated the effects of a group counseling procedure, the study habits seminar, on academic performance. He found that the technique was effective in improving scholastic performance, defined in the study as improvement in grade-point average.

Other investigators have studied the effects of the non-intellective factors on academic success in college. Jackson (1949) suggested that factors of motivation and personality structure are of more importance than are difficulties in mechanical procedures in problems of poor reading and study skills. His evaluation of a program at the University Of Illinois Student Counseling Bureau showed that there were significant increases in grade averages, in reading speed and comprehension, and MMPI retest indicated fewer and less
extreme deviations on D and Hy scales after participation in a permissively structured group counseling situation as an effective study training technique.

Brown et al. (1954) reported on a series of three studies concerned with motivational differences between high and low scholarship students in college. The following findings were listed: the poor college student is characterized by "activity delay" (lack of decisiveness of action, a tendency to procrastinate); this activity delay is not limited to the classroom but also exhibits itself in regard to activities outside the classroom; factors of interest and motivation are primary contributors to low scholarship.

Weitz and Wilkinson (1957) suggested that differences in intellectual ability seem to account for only a segment of the variability in academic performance found among college students. They postulated that motivation appears to be one of the non-intellective factors which may influence academic performance. They further postulated that there may be a variety of such non-intellective factors which are related in some way to academic performance. In their study, they related academic success in college and six kinds of non-intellective conditions or experiences, such as (1) only child, (2) one or both parents deceased when entered, (3) parents divorced, etc. They found an overall trend to indicate that all groups who had experienced the investigated conditions performed less well than their normal classmates.

Raygor (1959) examined personality changes which take place concomitant with changes in reading and study skills at a university reading and study skills clinic. He reported the following conclusions:
marked increases in measured reading ability take place over the course period; the general trend of personality change is in the direction of decreased anxiety and increased emotional stability and self-confidence; and personality change is not related to the perceived importance of reading as a factor in college success nor to gains in reading skills.

Uhlinger and Stephens (1960) examined the relationship between achievement motivation and academic achievement in students of superior ability. Their subjects were 72 merit scholarship freshmen students. They reported that high achievers had a greater expectancy for academic success and higher minimal grade goals than did low achievers. In general, the students' expectancy statements were better predictors of their later achievement than were any of the inventory results. The investigators suggested in conclusion that an expectancy variable, separate from or interacting with need strength, would be a valuable addition to motivational theory.

Holland (1960), using large samples of talented students attending 227 institutions, studied the usefulness of non-intellective factors in predicting college grades. His results suggested that non-intellectual factors such as Superego, Persistence, and Deferred Gratification are useful in prediction and in understanding the nature of the academic achiever.

Morse (1963) studied "dogmatism" as a variable influencing academic achievement, and provided information on Psychology 411 students regarding the relation of open and closed mindedness to their academic achievement. Findings indicated that achievement is related
to open-mindedness, and conversely, that a lack of achievement is related to closed-mindedness.

Parsons (1964) investigated the effect of selected personality factors on academic achievement and on improvement in a study skills course (Psychology 411 at The Ohio State University). The personality variables she studied were those measured by the Myers-Briggs Type Indicator. Results indicated that the Judging-Perceiving dimension is significantly related to self-ratings and instructor ratings of improvement. The Judging dimension was associated with the ratings of high improvement. The Feeling dimension was associated with high improvement in reading.

Schneyer (1963) studied the factors which distinguished students who made progress in a college reading improvement course from students who failed to make progress. His findings were not statistically significant, but he observed certain characteristics and trends which seemed to suggest tendencies that would describe "high improvers" and "low improvers" as a group. For example, high improvers were characterized by high motivation, emotional stability, and low anxiety.

Taylor (1964) reviewed the research literature concerned with the relation between personality traits and discrepant achievement covering the period from 1933 to 1963. In general, the following factors were found positively related to level of achievement: degree to which a student is able to handle his own anxiety; the value a student places upon his own worth; the ability to conform to authority demands; student acceptance by peers; less conflict over independence-
dependence; activities centered around academic interests; realism of his goals.

One could conclude from a survey of the research on improvement in study skills that courses in how-to-study methods have usually been successful, both with probationary students, as well as with average and superior students; non-intellective factors, factors of motivation and personality, probably do have an influence on academic performance and improvement. The study by Uhlinger and Stephens (1960) particularly pointed out that an expectancy variable is important in the study and understanding of academic achievement. The variable of level of expectancy has not been studied in its specific relationship to degree of improvement in a study skills course. An investigation of the relationship between level of expectancy and degree of improvement in a study skills course could be a contribution to the understanding of this area of research.

Research on client improvement in counseling

The question of how to evaluate the effectiveness of counseling and psychotherapy has been and still remains of great interest to research workers in psychology. Many problems arise in this area: selection of criteria, definition of criteria, objective versus subjective measurement or evaluation of criteria, establishing baselines from which to evaluate change, and providing for adequate control groups. In spite of all the difficulties encountered with outcome research, investigators continue to deal with it because of its importance.
Dressel (1953) surveyed the literature of counseling evaluation studies done between 1945 and 1950, and considered that 12 were clear enough in design and criteria to be useful. In these studies he saw three major approaches to research in evaluation: (1) studies of the counseling process itself: relation of client talk to counseling effectiveness, effect of self-selection of tests, assumptions of responsibility by the client, relation between counselor dominance and use of non-directive technique; (2) studies of the outcome of counseling: increase in insight or self-understanding, increase in self-acceptance or self-respect, increase in self-sufficiency, improved adjustment, increase in acceptance of and respect for others, improved grades, improved attitudes, and satisfaction with counseling; (3) studies based on data accruing from tests and rating procedures where the outcomes are implicit in the technique: MMPI, Bell Adjustment Inventory, Rorschach, TAT, Discomfort-Relief Quotient. Dressel summarized by listing three great difficulties that are involved in research in this area: definition of criteria, experimental design, and finance of projects.

In a discussion of some problems in establishing criteria of effectiveness for counseling, Shoben (1953) commented that investigations of counseling's effectiveness will bring proper returns only when they involve considerations of how the client deals with himself and his associates in the world beyond the clinic's doors. Extra-clinical emphasis, stressing the psychological health values of the community, must ultimately be included in our research designs.
In 1957, Cartwright reviewed studies in the area of counseling evaluation. He concluded that a measure of outcome, or status of the person at the end of counseling, is relatively worthless without a measure of his intake status. The critical dependent variable must be a change variable, and this will vary from one client to another (Cartwright, 1957).

Some investigators have used the criterion of client satisfaction as a way of judging outcome of counseling and psychotherapy (Lipkin, 1948; Porter, 1957; Cartwright & Roth, 1957). Other investigations of outcome have utilized criteria such as change in anxiety level (Gallagher, 1953), changes in test scores (Dymond, 1954), changes in self-ratings (Berdie, 1954; Dymond, 1954; Williams, 1962), a factor-analysis of change in test scores (Gibson, Snyder & Ray, 1955), counselor judgment (Poole, 1957; Seeman, 1954), increase in grade-point average (Nemeroff, 1955), and a follow-up of clients after time (Forgy & Black, 1954; Merenda & Rothney, 1958). The preceding summary is by no means an exhaustive review of the literature of studies in the area of evaluation of counseling and psychotherapy effectiveness, but the listing is made in an attempt to point out studies which are somewhat representative of research work which has been done and is continuing to be done.

In 1952, Eysenck surveyed results of 19 studies reported in the literature, and covering over 7000 cases. He concluded that the data reported failed to prove that psychotherapy facilitates the recovery of neurotic patients. He pointed out that roughly two-thirds will recover or improve markedly within two years of onset whether or not they receive psychotherapy. Referring to Eysenck's report
(Eysenck, 1952), Astin suggested that psychotherapy has achieved "functional autonomy," i.e. in spite of the fact that research does not support psychotherapy as an effective treatment method, it continues to exist as a treatment method. Astin suggested that the principle of functional autonomy will permit psychotherapy to survive long after it has outlived its usefulness (Astin, 1961). Strupp, in a re-examination of the outcome problem (Strupp, 1963), suggested that more meaningful questions must be found before we can address ourselves to the problem of the effectiveness of psychotherapy. He advised exploration of both therapist and patient expectations concerning the course and outcome of therapy, and pointed out that the therapeutic situation itself should be used to generate and develop criteria of outcome. Eysenck (1964), in a reply to Strupp's article, reiterated that he could still find no difference in outcome between treated and untreated groups, and stated that published research has failed to support the claims made for psychotherapy. Strupp (1964), in a reply to Eysenck, stated that the question "does psychotherapy do any good?" is a specious one and that investigators have lost interest in attempting to answer it in this form. Instead, other questions are of interest, such as, "how do patient-therapist variables influence the therapeutic interaction?" and "what is the relative effectiveness of different kinds of therapies?"

Cross (1964), in an analysis of research findings regarding the outcome of psychotherapy, suggested that psychotherapy's efficacy has not yet been scientifically demonstrated beyond a reasonable doubt, but he pointed out that adequate process research could be useful by
showing investigators of outcome where to look. Cross stated that the developing critical literature will not allow psychotherapy to remain functionally autonomous.

Luborsky and Strupp (1962), in a discussion of research in psychotherapy, pointed out that much of the prejudice against outcome studies has been worked through, and that there is continued acceptance of outcome studies because of the greater sophistication of recent work. Present studies promise to give us more than studies of the past, but we still need better criteria for outcome.

It can be concluded from a review of research on improvement in counseling that the criterion problem has not yet been adequately resolved, but that investigators are continuing to look at the problem critically. In the present study, the investigator has elected to use the criterion of counselor judgment of client improvement. This criterion was used by Seeman (1954) and by Poole (1957). According to Poole, a primary element in counseling is the judgment of the counselor. In her study, Poole found a positive relationship between counselors' judgment of client problems, and typescript-readers' judgment of client problems.

The present study utilizes counselor judgment of whether the client has shown improvement on several dimensions or areas as one criterion for whether improvement has taken place as a result of counseling. The second criterion for whether improvement has occurred is a before-and-after measure of the client's feeling of overall self-worth, or a before-and-after evaluation of the client's self-concept.
Research on degree of distress

Frank (1959), in discussing the dynamics of the psychotherapy relationship, postulated that degree of distress felt by the patient is positively related to that patient's remaining in treatment. The greater the need for relief, the greater the expectancy that such relief will be forthcoming. Frank felt that the degree of the patient's distress might be a major determinant of his faith in treatment. He states:

There are at least two possible, and compatible, explanations for this. One, which is consistent with the little that is known about miracle cures, is that presumably the more wretched a person is, the greater his hunger for relief and the greater his predisposition to put faith in what is offered. The other possibility is that the patient's revelation of distress is in itself a sign that he is favorably disposed to trust the therapist and therapy; that is, it may indicate a willingness on the part of the patient to emphasize aspects of himself which show his vulnerability or weakness. (Frank, 1959, p. 22).

Lipkin (1954), in a study of clients' feelings and attitudes in relation to the outcome of client centered therapy, found that, in general, the more successful clients seemed to be more keenly distressed and more eager for change than did the less successful clients. The more successful clients came to therapy feeling favorable to the therapist and the experience, and they consistently discussed themselves and their daily functioning with more emotionality than did the less successful group.

In Goldstein's (1962) summary of a review of the literature relating to patient expectancies, he pointed out that the greater the degree of patient distress, the greater will be his expectation of relief.
Luborsky, in his report of a study concerning the patient's personality and psychotherapeutic change (Luborsky, 1962), formulated as a result of his investigations an "anxiety level" hypothesis. It is: "For the patients who start treatment with at least a moderately high capacity for autonomous functioning, the higher the level of anxiety the greater the change that is likely." His definition of anxiety level included the concept of severity of symptoms.

In the present study, the investigator will attempt to test Frank's hypothesis and Lipkin's finding by relating degree of distress to level of expectancy in order to see if the relationship is positive.

Research related to instruments used in the present study

In this investigation an instrument was needed which would provide an overall measure of self esteem. An instrument was required which would be easy for the subjects to understand, and which would not require too long a time for administration since it would be administered to the subjects three times during the investigation.

The Tennessee (Department of Mental Health) Self Concept Scale was one of the instruments utilized in this investigation. This scale was developed beginning in 1955 by William H. Fitts with the support of the Tennessee Department of Mental Health. The scale consists of one hundred self-reference statements or self-descriptive items. Items were derived from other self-concept measures and from written self-descriptions of patients and non-patients. The one hundred items which compose the Tennessee Department of Mental Health Self Concept Scale (the TDMH Scale) are classified along three dimensions: (1) a negative-
positive dimension, (2) an external reference dimension, and (3) an internal reference dimension. The final classification of items was done by seven clinical psychologists who served as judges to determine whether an item was positive or negative in content, and with which dimension it properly belonged (Fitts, 1965).

The TDMH Scale was constructed for the purpose of measuring the self-concept in a way which is "simple for the subject, widely applicable, well standardized, and multi-dimensional in its description of the self concept" (Fitts, 1965). In his review of the TDMH Scale, Crites (1965) stated that the scale fulfills this purpose to a considerable extent. Further data is needed to make a thorough evaluation of the scale, according to Crites, but an additional technical report is planned by Fitts. The reviewer commented: "The impression of the instrument gained from the findings which are available, however, is a generally favorable one," and "It can be concluded, therefore, that the initial data on the Scale's psychometric attributes indicate that it 'measures up' by traditional criteria rather well" (Crites, 1965).

For his standardization group from which the norms were developed, Fitts used a broad sample of 626 people from various geographic areas ranging in age from twelve to sixty-eight. He has not expanded the norm group since he feels that "the effects of such demographic variables as sex, age, race, education, and intelligence on the scores of this Scale are quite negligible" (Fitts, 1965).

One study which used the TDMH Scale is that of Ashcraft and Fitts (1964) in an investigation of self-concept change in psychotherapy. Their hypothesis, that psychotherapy produces predictable
changes in individuals, was supported. The experimental group changed as predicted in 17 of 21 variables. The experimental group consisted of 30 patients who had been in psychotherapy for three months or more. The control group was made up of 24 patients who had been waiting for psychotherapy for three months or more. All subjects were measured on a test-retest basis with the TDMH Scale. A total of 36 variables from this scale, including a number of sub-scores, were used in the study. The control group showed significant change on only two variables. The subjects who received psychotherapy reported self-concepts at the end of three months that were more positive, more consistent, and less deviant. The experimental group changed, while the control group did not change.

The problem of response sets and their effect on test validity can be considered in relation to the TDMH Scale. Cronbach (1946) assembled evidence demonstrating that response sets have been identified in tests of ability, personality, attitude, interest, and in rating scales. Cronbach (1950), reviewing further evidence of the effect of response sets, suggested that response sets dilute a test with factors not intended to form a part of the test content, and so reduce its logical validity. Among the most widely found sets are "acquiescence" (tendency to say "True," "Yes," "Agree," etc.) and "evasiveness" (tendency to say "?;, "Indifferent," "Uncertain," etc.). He presents extensive evidence demonstrating that such response sets may act as a bias in favor of a particular alternative and thus reduce the validity of the test score (Cronbach, 1950). Since in taking the TDMH Scale, the subject responds to each item on a five-point rating scale running
from "Completely false" to "Completely true," it may be considered that the scale's validity could be affected by a response set on the part of the subject.

Greenberg and Frank (1965) investigated the problem of response set in the TDMH Scale and found results indicating that "Significant distortion can occur in the various subscales of the TDMH due to the development of a response set in the testee induced by the homogenous arrangement of the items." They suggest that investigators using the TDMH Scale present the items in random order instead of in the order they are presented in the scale so as to correct for response set.

Brassard (1963) was also concerned with the problem of response set in self-concept description. The particular response set she investigated was the social desirability set. The question this study attempted to answer was whether or not subjects could respond significantly differently on the TDMH Scale under instructions to describe the self and to describe the socially desirable person. Subjects were 20 male and 20 female normal adults. Each subject served as his own control for the socially desirable person description. A social desirability response set was inferred from a lack of a significant difference between self and socially desirable person descriptions. Analysis was made for subjects as groups and for each individual subject. Results showed that the subjects as a group made significantly different descriptions for the self and for the socially desirable person. An individual analysis showed that 25 of the 40 subjects made significantly different descriptions. The overall measure of the TDMH Scale, Total P Score (self esteem), differentiated at the group level those subjects
making significantly different descriptions from those subjects who did not. But this differentiation did not hold at the individual level. She concluded that a social desirability response set did not affect analysis of TDMH Scale scores at a group level.

While the TDMH Scale is a relatively new one, and though technical data concerning it is not yet extensive, it is considered from the information that is available that the TDMH Scale merits further study and can be useful in research investigations. The results of one study (Greenberg & Frank, 1965) have suggested that response sets may affect scores on the TDMH Scale, especially sub-scale scores. Another study (Brassard, 1963) has indicated that a particular response set, social desirability, did not affect total scores when scores were analyzed by groups. In the present study, sub-scale scores are not used; only total scores are used, and scores are analyzed as a group.

In this investigation an instrument was needed which would provide a measure of study habits and attitudes. Since the instrument would be administered twice to the subjects--once at the beginning of the course, and again at the end of the course--as a measure of change, or improvement, in study habits and attitudes, an instrument was required which would be easily understood, widely applicable, and reliable.

The Brown-Holtzman Survey of Study Habits and Attitudes (the SSHA) was another of the instruments used in this study. The SSHA was developed as a measure of study methods, motivation for studying, and certain attitudes toward studying and classroom behavior (Brown & Holtzman, 1956). The SSHA contains 75 five-choice items concerning
study attitudes and study mechanics. The student response to the items along a scale ranging from "rarely" to "almost always." The higher a student's score, then the better his study habits and attitudes are considered to be. According to the college norms, the mean score for men is 36, and for women is 33 (Brown & Holtzman, 1956).

Two studies (Holtzman, Brown, & Farquhar, 1954; and Brown & Holtzman, 1955) report extensive data concerning the development of items, the establishment of norms, and the reliability of validity of the SSHA. The test-retest reliability after 11 weeks was .88 for men and .84 for women. The SSHA correlated from .13 to .48 with the ACE, and the investigators concluded that the SSHA measures important traits which are not assessed by the standard college entrance examination.

Deese (1959), in a review of the SSHA, pointed out that the SSHA provides an important tool for the assessment of student habits of work and motivation for studying. It is especially suitable for getting at attitudinal and motivational difficulties, more so than any other published study inventory. In addition, the SSHA is considered to be of value for research on counseling and for research on remedial teaching.

Another reviewer, Wrenn (1959), indicated that reliability coefficients seem to be satisfactory, ranging from .79 to .95 for different methods and different groups. Wrenn pointed out that the test must assume that the student taking the test is responding with frankness and that he has an accurate memory regarding his study behaviors and attitudes. In general, the SSHA is "well grounded, easy to understand, and can be an excellent source of study habit and
attitude information for use by student and counselor." But, Wrenn cautioned, "there are limiting factors inherent in self reports of any kind."

One study (Ahmann & Glock, 1957) attempted to investigate the utility of the SSHA in a reading improvement program at Cornell University. The investigators report two attempts to evaluate the usefulness of the SSHA. The first was to find if any changes occurred in total scores when students were tested before entering the reading program and after completing it. The second part of the study was to use SSHA scores as a prediction variable with academic achievement as a criterion. The study did not find evidence to support the inclusion of the SSHA in a freshman testing battery for use in connection with a reading improvement program. While there were gains in SSHA scores from the beginning to the end of the reading improvement program, the gains were too small to be significant. Further, the SSHA did not prove to be of value as a predictor of academic achievement. As the investigators point out, however, the study dealt only with male freshmen in the College of Agriculture, and only total SSHA scores.

Popham and Moore (1960) tested the hypothesis that students' scores on the SSHA evidence a stronger relationship to students' grades than to an index of students' intellectual aptitude (ACE scores). The SSHA was administered to 287 undergraduate students. Results revealed a significantly stronger relationship between student scores on the SSHA and student grades than between scores on the SSHA and Student ACE scores. The investigators concluded that the SSHA does in fact measure something other than intellectual aptitude, and may
therefore be of use in identifying potential overachievers and under-
achievers.

De Sena (1964) administered the SSHA to three matched groups
of 42 over-, under- and normal-achieving male college students in an
effort to identify non-intellectual factors which discriminate among
those three groups and which may significantly influence academic
achievement. The SSHA discriminated significantly only between over-
achievers and the remaining achievement groups, but did not discrimi-
nate between under- and normal-achievers. The findings lend support
to the validity of the SSHA as an instrument which measures scholastic
attitude, as well as study habits, which are significantly related to
academic success.

From the reviews and research which are available for the SSHA,
it is concluded that this instrument can be of use in the present
investigation. Reliability ratings are satisfactory, and it does meas-
ure something other than intellectual aptitude. The SSHA is as good
as any published survey now available to measure a student's attitude
and motivation toward studying as well as his study habits per se.

Both the TDMH Scale and the Brown-Holtzman SSHA are instruments
which ask the subject to make an evaluation of himself. In addition,
a Study Skills Self Rating Inventory (described in Chapter III) was
constructed for this study. Since all of these three instruments are
self-evaluation instruments, the topic of research regarding self-
evaluation is considered to be pertinent here.

As Wrenn (1959) pointed out, there is some question as to how
much faith we can place in a person's evaluation of himself.
Arsenian (1942), discussing correlation between self-estimate and objective measurement, summarized by stating that a college freshman's estimates of his abilities, knowledges and interests do not correspond highly with objective measurement of these attributes. It does seem, however, that a student's estimates are more closely related to objective measurement when the self-estimate is done after taking the objective test than when it is done before. Self-estimates made after taking an objective test tend to be somewhat lower and are more in the direction of scores on the test. According to Arsenian, students who grossly over or under-estimate themselves in their self-estimates are somewhat less intelligent and less well-adjusted as a group.

Russell (1953), in a review of the literature of research regarding self-evaluation, indicated that usually self-ratings of personality bear a positive but slight relationship to two other criteria of adjustment: teacher ratings and peer ratings. In making self-ratings of academic achievement, students often tend to overestimate their grades in direct proportion to their poorness as students. The best students show a strong tendency toward underestimating their accomplishments, while the poorer students have a tendency to over-rate themselves. Regarding the relationship between self-evaluation and level of aspiration, it appears that the characteristic pattern of consistently successful and secure individuals is to indicate a level of aspiration that is slightly above their achievement. On the other hand, most unsuccessful students have aspirations far above their achievement. Further, these goals are not responsive to mild fluctuations in successes.
Borislow (1962) studied the importance of self-evaluation as a non-intellectual factor in scholastic achievement. Subjects for the investigation were freshmen at the University of Pennsylvania in 1958, who were divided into four groups: achievers and underachievers, both oriented toward academic attainment; and achievers and underachievers, not oriented toward academic attainment. Borislow reached the following conclusions based on the results of his study: (1) underachievers cannot be distinguished from achievers on the basis of general self-evaluation either before or after their first semester in college; (2) underachievers have a poorer conception of themselves as students than do achievers following scholastic performance regardless of initial intention to strive for scholastic performance as a goal; (3) when scholastic achievement is seen as a prime goal, underachievers have a poorer conception of themselves as students than do achievers before their actual scholastic performance; (4) when scholastic achievement is seen as a prime goal, and when the student evaluates himself favorably as a student and then does achieve scholastically, his general self-evaluation becomes more favorable.

In conclusion, it seems that poor students are more likely to over estimate themselves than are good students; that self-estimates correspond more closely to objective test scores when the estimates are made after taking the test; that unsuccessful students tend to have unrealistically high levels of aspiration; that general self-estimates become higher when a student who sees scholastic achievement as a prime goal, and who has evaluated himself favorably as a student, does achieve scholastically.
In evaluating results of the present study, it will be important to consider the limitations of self-evaluation instruments since three of the instruments used are of the self-evaluation type. In this study, however, other instruments which are not of the self-evaluation type are used as additional measures of the variables.
CHAPTER III

METHODS AND PROCEDURES

The purpose of this study is to investigate the nature of the relationship between student level of expectancy and improvement which takes place in a study skills course, the relationship between level of expectancy and improvement which takes place in counseling, and the relationship between degree of distress and level of expectancy.

Population

Subjects for this study were students enrolled in Psychology 411 (The Psychology of Effective Student Adjustment), an educational skills course, at The Ohio State University during the Summer academic Quarter, 1965. Course content includes the psychological principles of effective learning and performance in college, and the psychological problems involved in the transition from control of adults to self-management. Two main areas are emphasized: (1) the attitudinal aspects of higher level skills (motivation, concentration, attention, perception, adjustment); (2) the content aspects of higher level skills (reading rate and comprehension, writing skills, academic performance such as examination and classroom skills, and systematic inquiry). The class meets five hours each week in small sections of 18 to 22 students.
A total of 162 students were enrolled in Psychology 411 during the Summer Quarter, 1965. Some students, 26 in all, who either dropped the course or who did not complete one or more of the 11 measures of the study, were not used as subjects in this study. This left a total of 136 students who completed all of the measures of the study and who served as the population for the study.

TABLE 1

CHARACTERISTICS OF TOTAL CLASS, SUBJECTS, AND NON-SUBJECTS

<table>
<thead>
<tr>
<th>Age in Years</th>
<th>Total Class</th>
<th>Subjects</th>
<th>Non-subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>36</td>
<td>31</td>
<td>5</td>
</tr>
<tr>
<td>18</td>
<td>72</td>
<td>64</td>
<td>8</td>
</tr>
<tr>
<td>19</td>
<td>26</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>20</td>
<td>14</td>
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<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>23</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>24</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>28</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>162</td>
<td>136</td>
<td>26</td>
</tr>
</tbody>
</table>

Class Rank

<table>
<thead>
<tr>
<th>Class Rank</th>
<th>Total Class</th>
<th>Subjects</th>
<th>Non-subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>135</td>
<td>117</td>
<td>18</td>
</tr>
<tr>
<td>Sophomores</td>
<td>23</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>Juniors</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Seniors</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>162</td>
<td>136</td>
<td>26</td>
</tr>
</tbody>
</table>

Sex

<table>
<thead>
<tr>
<th>Gender</th>
<th>Total Class</th>
<th>Subjects</th>
<th>Non-subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>111</td>
<td>91</td>
<td>20</td>
</tr>
<tr>
<td>Females</td>
<td>51</td>
<td>45</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>162</td>
<td>136</td>
<td>26</td>
</tr>
</tbody>
</table>

Tables 1 and 2 show characteristics (age, class rank, sex) of the class as a whole, of subjects, and of non-subjects. A comparison
of the three groups (Total Class, Subjects, and Non-Subjects) reveals no outstanding differences between the groups.

TABLE 2

COMPARISON OF TOTAL CLASS, SUBJECTS AND NON-SUBJECTS

<table>
<thead>
<tr>
<th></th>
<th>Mean Age</th>
<th>Per cent of Freshmen</th>
<th>Per cent Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Class</td>
<td>18.49</td>
<td>83%</td>
<td>68%</td>
</tr>
<tr>
<td>Subjects</td>
<td>18.36</td>
<td>86%</td>
<td>67%</td>
</tr>
<tr>
<td>Non-Subjects</td>
<td>18.75</td>
<td>69%</td>
<td>77%</td>
</tr>
</tbody>
</table>

Table 2 shows that the mode of each group is an 18-year-old male freshman.

Students who are enrolled in Psychology 411 have the opportunity to receive individual counseling in conjunction with the course. During the first week of the quarter, the students are told by their instructors about the opportunity for counseling and are presented with cards on which they are to indicate whether they are "very interested" in counseling, "interested" in counseling, or "not interested" in counseling. Lists are then made of the students from each class section who are "very interested" and "interested" in counseling. From these lists the counselors select clients. The students who are clients meet with their counselors once a week during an hour of the regular class meeting time. During the Summer Quarter, 1965, 86 of the students in Psychology 411 were clients in a counseling relationship. Only those clients who had at least two counseling interviews were included as client-subjects in this study. Since 19 of the clients had only one counseling interview, they were dropped as client-subjects.
In addition, five other clients failed to complete one or more of the measures of the study and were therefore dropped as subjects. This left a total of 62 clients who were the client-subjects for this study. The mean number of interviews per client for the 62 client-subjects was 4.1, and the total number of interviews held was 254.

**TABLE 3**

CHARACTERISTICS OF CLIENT-SUBJECTS, CLIENT NON-SUBJECTS, AND OTHER SUBJECTS

<table>
<thead>
<tr>
<th>Age</th>
<th>Client-Subjects</th>
<th>Client Non-Subjects</th>
<th>Other Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>16</td>
<td>3</td>
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<tr>
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<td>27</td>
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<td>5</td>
<td>1</td>
<td>1</td>
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<td>22</td>
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<td>0</td>
</tr>
<tr>
<td>23</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>28</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>24</td>
<td>74</td>
</tr>
</tbody>
</table>

Class Rank

<table>
<thead>
<tr>
<th>Class Rank</th>
<th>Client-Subjects</th>
<th>Client Non-Subjects</th>
<th>Other Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>53</td>
<td>20</td>
<td>64</td>
</tr>
<tr>
<td>Sophomores</td>
<td>9</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Juniors</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Seniors</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>24</td>
<td>74</td>
</tr>
</tbody>
</table>

Sex

<table>
<thead>
<tr>
<th>Sex</th>
<th>Client-Subjects</th>
<th>Client Non-Subjects</th>
<th>Other Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>36</td>
<td>19</td>
<td>55</td>
</tr>
<tr>
<td>Females</td>
<td>26</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>24</td>
<td>74</td>
</tr>
</tbody>
</table>

Table 3 shows characteristics of client-subjects as compared to client non-subjects and to other subjects. The groups were somewhat similar in respect to age and class rank. There was, however, a greater percentage of males in the client non-subject group.
This suggests that males more than females tended not to remain in counseling, i.e. to have only one counseling interview.

Counselors were 30 college counselors enrolled as graduate students in a Counseling and Guidance Institute (NDEA) at The Ohio State University during the Summer Quarter, 1965. The counselors saw the clients as part of a supervised practicum in counseling, Psychology 832. The mean number of clients seen by each counselor was 2.87. The mean number of interviews per counselor was 9.5.

There were 23 male counselors and seven female counselors. The greater number of male counselors may in part explain the higher percentage of females in the client-subject group as compared to percentage of females in the total class group. In the total class, 32 per cent were females; but in the client-subject group, 42 per cent were females. It may be that male counselors tended to select female clients. A second factor related to the difference in percentages may be that females more than males tended to indicate that they were either very interested or interested in counseling.

Instructors for the Psychology 411 classes were all advanced graduate students studying for the Ph.D. degree in Counseling Psychology. The instructors taught the classes as part of a supervised internship experience in counseling psychology. There were two male and two female instructors. Each instructor taught two classes.

**Measures**

Six separate instruments provided data on four variables: level of expectancy, improvement in the course, client improvement in counseling, and degree of distress.
Level of expectancy

An overall measure of how the individual perceives himself as a person was needed. The Tennessee Self Concept Scale, discussed in Chapter II, was selected as an appropriate instrument to provide such a measure.

1. The Tennessee Self Concept Scale (Fitts, 1965) was administered twice during the first week of the course. For the first administration, the subjects were asked to describe themselves "as you are now." This administration will be referred to as the "present-self orientation." The next day the scale was administered a second time. This time the subjects were asked to describe themselves "as you expect to be at the end of the quarter." This administration will be referred to as the "expected-self orientation." For both administrations the Counseling Form of the TDMH was used.

The only score used from the Tennessee Self Concept Scale (TDMH) was the Total P Score. In the manual, Fitts (1965) reports the following regarding the Total P Score:

This is the most important single score on the Counseling Form. It reflects the overall level of self esteem. Persons with high scores tend to like themselves, feel that they are persons of value and worth, have confidence in themselves, and act accordingly. People with low scores are doubtful about their own worth; see themselves as undesirable; often feel anxious, depressed, and unhappy; and have little faith or confidence in themselves (Fitts, 1965, p. 2).

The difference between the Total P Score of the TDMH under present-self orientation and the Total P Score under expected-self orientation was one measure of expectancy level.

2. An overall estimation of the individual's perception of
his competence in the area of study skills was needed. An instrument was required which would be appropriate to the type of study skill work offered in Psychology 411.

The Study Skills Self Rating Inventory was constructed by the investigator for this study (Appendix A). It was designed for the purpose of asking the student to make a self-estimate regarding his level of skill as he compared himself with other college freshmen. The instrument is patterned after a check list presented by Robinson (1961, p. 4), and one used by Parsons (1964), and was adapted for this study. The Robinson text, Effective Study, is the text used in Psychology 411. The Parsons study used Psychology 411 students as subjects. The Study Skills Self Rating Inventory was constructed to be appropriate to course material presented in Psychology 411.

In completing the Study Skills Self Rating Inventory, the student is asked to "put a check mark on the line at a point which most accurately describes your level of skill." Following each of the seven study skills and the one overall rating, is a line made up of 50 dots and divided into fifths representing comparisons with other college freshmen. An overall score was derived from the inventory by counting the point on each line at which the student's check mark was made (this could be from point one to point 50), and then totaling the scores for each line. The lowest possible score would be eight, and the highest possible score would be four hundred.

The Study Skills Self Rating Inventory was administered twice during the first week of the course. For the First administration (Appendix A), the subjects were asked to describe themselves "as you
are now" (the present-self administration). The next day the inventory was administered a second time (Appendix B). This time the subjects were asked to describe themselves "as you expect to be at the end of the quarter" (the expected-self orientation).

The difference between the total score on the Study Skills Self Rating Inventory under present-self orientation and the total score under expected-self orientation was the second measure of expectancy level.

Since it was possible that students' ratings of themselves on these two instruments, the Tennessee Self Concept Scale and the Study Skills Self Rating Inventory, might be affected by a desire to show greater change with a lower rating at the beginning and a higher rating after the course, several attempts at control were instituted. The subjects were instructed that they were being asked to participate in a research project, and that "this information will not be used by your instructor." The investigator, who was not one of the 11 instructors, administered both instruments to the students when their instructor was not present. In addition, the students were not forewarned that there would be a second opportunity to complete the research instruments. They did not know when they completed the two instruments the first day that the investigator would return the next day to administer the instruments a second time.

**Improvement in the course**

1. The Brown-Holtzman SSHA (Brown & Holtzman, 1956) was administered twice during the course: the first time during the first week, and the second time during the last week. The difference between
the total score on the SSHA at the beginning of the course, and the
total score on the SSHA at the end of the course was one measure of
improvement in the course. A change from a lower score at the begin­
ning to a higher score at the end was considered to be an indication
of improvement.

2. The Robinson-Hall Reading Tests (1949) were administered
once during the first week of the class, and again at the end of the
course. The tests are a series of five timed readings (Art, Geology,
Fiction, Canadian History, Russian History) with appropriate tests of
comprehension. The tests measure rate over ten minutes of reading
material. According to the manual (Robinson and Hall, 1949), the tests
are designed to differentiate between rate of reading and accuracy of
comprehension, and to differentiate ability for reading different sub­
ject matter. The Canadian History and Russian History Tests have high
intercorrelations (.98) and can be used as before-and-after measures
of overall reading ability. The mean scores for college freshmen for
rate and comprehension accuracy are: Canadian History, rate 207 words
per minute, 67 per cent comprehension accuracy; Russian History, rate
198 words per minute, 65 per cent comprehension accuracy.

The Canadian History Test was administered during the first
week of class and the Russian History Test was administered during the
last week of class. The percentile scores on rate and comprehension
accuracy at the beginning of the course were compared separately with
percentile scores on rate and comprehension at the end of the course.
An increase in reading rate score was considered to be one measure of
improvement in the course. An increase in comprehension was considered to be another measure of improvement in the course.

3. The Tennessee Self Concept Scale, Counseling Form, was again administered at the end of the course. For this administration the subjects were asked to describe themselves "as you are now." The difference between the Total P Score of the TDMH under present-self orientation at the beginning of the course, and Total P Score under present-self orientation at the end of the course was another measure of improvement. A change from a lower score at the beginning of the course to a higher score at the end of the course was defined as improvement.

4. The Study Skills Self Rating Inventory was again administered at the end of the course. For this administration (Appendix C), the subjects were asked to "estimate the level of skill you have now at the end of the quarter." The difference between the total score on the Study Skills Self Rating Inventory under present-self orientation at the beginning of the course and total score at the end of the course was another measure of improvement. A change from a lower score at the beginning of the course to a higher score at the end of the course was considered to be an indication of improvement.

5. The Instructor Rating Scale (Appendix D) was constructed by the investigator for this study. The scale asks the instructor to rate each student as to degree of improvement in key aspects of the course. The rating is made along a 50-point line, so that the possible range of rating scores for each student is from one to 50. The line, however, is divided into fifths, ranging from the lowest fifth, "no
improvement," to the highest fifth, "much improvement." The instructors were not asked to make fifty degrees of differentiation in their ratings, but instead to make only five, with the possibility of shading each rating up or down within each section. In scoring the rating the points were counted such that more degrees of differentiation could be available. The lowest possible improvement rating was a rating of one. The highest possible improvement rating was a rating of 50. Thus, the higher the score, the greater the improvement in the course.

Champney (1939) has examined in detail the topic of length of rating line, and the actual measurement from the point at which a rating check is made by a rater. The type of scale he used for the Fels Parent Behavior Rating Scales placed no limits on precision other than those inherent in the rater and the definition of the variable.

The purpose of having a rating line of 50 points instead of merely five discrete divisions into which ratings had to be made was to allow for greater variability in ratings. The rater was given greater freedom in his rating by being permitted to shade a rating up or down within a section. In the scoring, such shadings were taken into account.

Client improvement in counseling

1. The Counselor Rating Scale (Appendix E) was constructed by the investigator for this study. The scale lists nine areas or dimensions in which client improvement might take place in counseling, and adds one rating for "overall estimation of improvement." The first five dimensions (self-understanding and self-acceptance, self-sufficiency and acceptance of responsibility, acceptance of others and
inter-personal skills, motivation to study and attitude toward college, making of feasible choices) were chosen as appropriate dimensions on which client change might take place from a reading of the literature (c.f. Dressel, 1953; Poole, 1957). The last four dimensions (study skills, concentration and organization, examination skills, class participation) were included because of the nature of the course in which the clients were enrolled. It was considered that these dimensions might be brought up in counseling by the clients since they were enrolled in a study skills course.

When this rating scale was submitted to the counselors at the end of counseling, however, it was found that the counselors did not feel themselves able to rate the improvement of their clients on all nine dimensions. The counselors, therefore, were asked to rate client improvement on only those dimensions which they considered appropriate to their counseling relationships. In subsequent analysis and scoring of the rating scales by the investigator, those dimensions were omitted which were not used by all of the counselors in making their ratings. Analysis showed four of the dimensions were checked by all of the counselors. They were Self-understanding and self-acceptance, Self-sufficiency and acceptance of responsibility, Acceptance of others and interpersonal skills, and Making of feasible choices. These dimensions are indicated by asterisk in Appendix E. In addition, all counselors checked "overall estimation of improvement." Thus it was possible to derive an overall rating of improvement in counseling for each client by adding his rating of improvement on the four dimensions used by all of the counselors along with the overall rating of improvement made
by the counselor. The lowest possible rating of improvement was five, and the highest possible rating of improvement was 250. The higher a client is rated by his counselor on the improvement rating scale, the greater his improvement is considered to be.

2. The Tennessee Self Concept Scale was administered both at the beginning and at the end of the quarter. The first administration was the "present-self" orientation at the beginning of the quarter. The third administration was the "present-self" orientation at the end of the quarter. The difference between the Total P Score of the TDMH under present-self orientation at the beginning of the quarter, and present-self orientation at the end of the quarter was the second measure of client improvement in counseling. A change from a lower score at the beginning of the quarter to a higher score at the end of the quarter was defined as client improvement in counseling.

**Degree of distress**

1. The Total P Score on the Tennessee Self Concept Scale from the first administration of the TDMH (present-self orientation at the beginning of the course) was one measure of degree of distress. Students with lower scores were considered to feel greater subjective distress. According to the manual (Fitts, 1965, p. 2), "People with low scores are doubtful about their own worth; see themselves as undesirable; often feel anxious, depressed, and unhappy; and have little faith or confidence in themselves."

2. The total score on the Study Skills Self Rating Inventory (Appendix A) from the first administration (present-self orientation at
the beginning of the quarter) was another measure of degree of distress. Students who ranked themselves low in comparison with others were considered to feel greater subjective distress. The lower the self-rating, the greater the subjective distress.

**Operational Definitions**

*Level of expectancy* is defined in this study in two ways:

1. As the difference between Total P Scores on the TDMH under present-self orientation at the beginning of the quarter and expected-self orientation; (2) as the difference between total rating scores on the Study Skills Self Rating Inventory under present-self orientation at the beginning of the quarter and expected-self orientation. The larger the difference between scores, the higher the level of expectancy.

*Improvement in the course* is defined in six ways:

1. As the change in total score on the Brown-Holtzman SSHA from the beginning of the quarter to the end of the quarter. A higher score at the end of the quarter indicates improvement;

2. As the change in reading rate percentile scores on the Robinson-Hall Reading Tests from the beginning of the quarter to the end of the quarter. A higher reading rate percentile score at the end of the quarter indicates improvement;

3. As the change in reading comprehension percentile scores on the Robinson-Hall Reading Tests from the beginning of the quarter to the end of the quarter. A higher reading comprehension percentile score at the end of the quarter indicates improvement;
4. As the change in Total P Scores on the TDMH from the beginning of the quarter, present-self orientation, to the end of the quarter, present-self orientation. A higher Total P Score at the end of the quarter indicates improvement;

5. As the change in total rating scores on the Study Skills Self Rating Inventory from the beginning of the quarter, present-self orientation, to the end of the quarter, present-self orientation. A higher total rating score at the end of the quarter indicates improvement;

6. As the rating on the Instructor Rating Scale. The higher the rating, the greater the indication of a student's improvement in the course.

**Client Improvement in counseling** is defined in two ways:

1. As the rating on the Counselor Rating Scale. The higher the total improvement rating, the greater the indication of a client's improvement in counseling;

2. As the change in Total P Scores on the TDMH from the beginning of the quarter, present-self orientation, to the end of the quarter, present-self orientation. A higher Total P Score at the end of the quarter indicates improvement.

**Degree of distress** is defined in two ways:

1. As the Total P Score on the TDMH under present-self orientation at the beginning of the quarter. The lower the Total P Score, the greater the degree of distress;

2. As the total rating score on the Study Skills Self Rating Inventory under present-self orientation at the beginning of the
quarter. The lower the total rating score, the greater the degree of
distress.

Hypotheses

The following hypotheses will be tested:

$H_1$. Participation in the educational skills course leads to improve­
ment in the course.

A $t$ Test for the difference between correlated pairs of means
(Guilford, 1956, p. 220) was used with the null form of this hypothesis
to find if there was any statistically significant difference between
the means of the five measures of improvement in the course which were
given at the beginning and end of the course (before-and-after meas­
ures):

1) Brown-Holtzman SSHA

2) Robinson-Hall Reading Rate

3) Robinson-Hall Reading Comprehension

4) Tennessee Self Concept Scale, Total P Score

5) Study Skills Self Rating Inventory.

For the sixth measure of improvement in the course, the Instruc­
tor Rating Scale, which was given only at the end of the course, the
following were calculated: range, median, mean, standard deviation,
standard error of the mean. The results of these calculations were
examined to determine whether the scale had an adequate range of
scores, and a good top and bottom. A $t$ Test for the significance of
a sample mean was done to determine whether the mean was significantly
different from zero (McNemar, 1949, p. 221).
H<sub>2</sub>. Client participation in counseling leads to client improvement in counseling.

For the first measure of client improvement, the Counselor Rating Scale, the following were calculated: range, median, mean, standard deviation, standard error of the mean. The results of these calculations were examined to determine whether the scale had an adequate range of scores, a good top and bottom. A t Test for the significance of a sample mean was done to determine whether the mean was significantly different from zero.

For the second measure of client improvement, increase in Total P Score of the Tennessee Self Concept Scale from the beginning of the quarter to the end of the quarter, a t Test for the difference between correlated pairs of means was done to find if the mean Total P Score at the end of the quarter was significantly different from the mean Total P Score at the beginning of the quarter.

H<sub>3</sub>. Those students with a moderate expectancy level will show a greater improvement in the educational skills course than will students with an extreme (either high or low) level of expectancy.

Each of the two measures of expectancy level was paired separately with each of the six measures of improvement to determine whether the relationship between the dependent variable (improvement in the course) was related in a linear or a non-linear manner to the independent variable (expectancy level). Both a linear and a quadratic regression equation was derived for each relationship, a t test of the regression coefficients was done, multiple correlation (R) was computed, and an F test of R was done to test significance.
H₄. Those students (who are clients in a counseling relationship) with a moderate expectancy level will show a greater improvement in counseling than will clients with an extreme (either high or low) expectancy level.

Each of the two measures of expectancy level was paired separately with the two measures of improvement in counseling to determine whether the relationship between the dependent variable (improvement in counseling) was related in a linear or non-linear manner to the independent variable (expectancy level). Both a linear and a quadratic regression equation was derived for each relationship, a t test of the regression coefficients was done, multiple correlation (R) was computed, and an F test of R was done to test significance.

H₅. Those students who express a greater degree of distress will have a higher expectancy level than will those students who express a lesser degree of distress.

Each of the two measures of the independent variable (degree of distress) was paired separately with each of the two measures of the dependent variable (level of expectancy) to determine whether the relationship between the independent and dependent variables was linear. A t test of the regression coefficients was done, a multiple correlation (R) was computed from the linear regression equation, and an F test of R was done to test significance.
CHAPTER IV

RESULTS AND DISCUSSION

Results will be presented for each hypothesis separately:

H₁. Participation in the educational skills course leads to improvement in the course.

The means and standard deviations of each of the five measures of improvement in the course which were administered both at the beginning and end of the course are presented in Table 4.

TABLE 4

MEANS AND STANDARD DEVIATIONS FOR BEFORE-AND-AFTER MEASURES OF IMPROVEMENT IN THE COURSE FOR ALL SUBJECTS

<table>
<thead>
<tr>
<th>Measure</th>
<th>At Beginning of Course</th>
<th>At End of Course</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard Dev.</td>
</tr>
<tr>
<td>Brown-Holtzman SSHA</td>
<td>28.426</td>
<td>11.102</td>
</tr>
<tr>
<td>Robinson-Hall Reading Rate</td>
<td>41.007</td>
<td>29.307</td>
</tr>
<tr>
<td>Robinson-Hall Reading Comp.</td>
<td>54.419</td>
<td>28.000</td>
</tr>
<tr>
<td>Tennessee Self Concept, Total P</td>
<td>339.713</td>
<td>31.425</td>
</tr>
<tr>
<td>Study Skills Self Rating</td>
<td>183.706</td>
<td>48.996</td>
</tr>
</tbody>
</table>

N = 136
Table 4 shows an increase in mean score for each measure of improvement given at the beginning of the course and repeated at the end of the course. A t test for the difference between correlated pairs of means was done to see if the difference between means was statistically significant. Table 5 provides a summary of this analysis.

**TABLE 5**

**IMPROVEMENT AS SHOWN BY BEFORE-AND-AFTER MEASURES**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Means of N Differences of Paired Observations</th>
<th>Standard Deviation of Differences</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown-Holtzman SSHA, (2-1)</td>
<td>4.147</td>
<td>10.707</td>
<td>4.500***</td>
</tr>
<tr>
<td>Robinson-Hall Reading Rate</td>
<td>24.375</td>
<td>25.400</td>
<td>11.155***</td>
</tr>
<tr>
<td>Robinson-Hall Reading Comprehension</td>
<td>15.051</td>
<td>29.899</td>
<td>5.849***</td>
</tr>
<tr>
<td>Tennessee Self Concept, Total P</td>
<td>6.743</td>
<td>28.974</td>
<td>2.704**</td>
</tr>
<tr>
<td>Study Skills Self Rating</td>
<td>63.338</td>
<td>43.444</td>
<td>16.698***</td>
</tr>
</tbody>
</table>

*.05 level of significance
**.01 level of significance
***.001 level of significance

N = 136
df = 135

Table 5 shows that the difference between each pair of means is significant. Therefore the null hypothesis is rejected, and it can be stated that the mean of the difference between each before-and-after measure of improvement is significantly different from zero. The probability that t values as large, or larger, than the obtained t values
will occur on the basis of chance variations in sampling is extremely small.

Data regarding the sixth measure of improvement in the course, the Instructor Rating Scale, which was given only at the end of the course, are presented in Table 6.

**TABLE 6**

**IMPROVEMENT AS SHOWN BY INSTRUCTOR RATING**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible range of scores:</td>
<td>0 - 50</td>
</tr>
<tr>
<td>Actual range of scores:</td>
<td>4 - 46</td>
</tr>
<tr>
<td>Median Score:</td>
<td>23.00</td>
</tr>
<tr>
<td>Mean Score:</td>
<td>22.044</td>
</tr>
<tr>
<td>Standard Deviation:</td>
<td>9.894</td>
</tr>
<tr>
<td>Standard Error of the mean:</td>
<td>.8515</td>
</tr>
</tbody>
</table>

\[ t = 25.88^{***} \]

*** .001 level of significance  N = 136  df = 135

Table 6 shows that the Instructor Rating Scale had an adequate range of scores and a good top and bottom. The t test for the significance of a sample mean, or the critical ratio (the ratio of the mean to the standard error of the mean) is significant at the .001 level. Thus the null hypothesis can be rejected, and it can be stated that the mean is significantly different from zero at the .001 level of probability.

On the basis of the results presented in Tables 4, 5, and 6, it can be concluded that \( H_1 \) is accepted. Participation in the educational skills course did lead to improvement in the course, when improvement
was measured by the six measures of improvement in the course used in this study.

$H_2$. Client participation in counseling leads to client improvement in counseling.

Data regarding the first measure of client improvement, the Counselor Rating Scale, is presented in Table 7.

**TABLE 7**

CLIENT IMPROVEMENT AS SHOWN BY COUNSELOR RATING OF IMPROVEMENT

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible range of rating scores:</td>
<td>0 - 250</td>
</tr>
<tr>
<td>Actual range of scores:</td>
<td>25 - 198</td>
</tr>
<tr>
<td>Median Score:</td>
<td>101.00</td>
</tr>
<tr>
<td>Mean Score:</td>
<td>109.839</td>
</tr>
<tr>
<td>Standard Deviation:</td>
<td>43.914</td>
</tr>
<tr>
<td>Standard Error of the Mean:</td>
<td>3.779</td>
</tr>
</tbody>
</table>

$t = 29.065***$  

***.001 level of significance  

$N = 62  \quad df = 61$

Table 7 shows that the Counselor Rating Scale had an adequate range of scores, and a good top and bottom. The t test for the significance of a sample mean, or the critical ratio (the ratio of the mean to the standard error of the mean) is significant at the .001 level. Thus the null hypothesis, that the mean is not significantly different from zero, can be rejected at the .001 level of probability, and it can be stated that client improvement was demonstrated by the counselor ratings on the Counselor Rating Scale.
For the second measure of client improvement, increase in Total P Score on the Tennessee Self Concept Scale, the means and standard deviations of the beginning-of-the-quarter scores and the end-of-the-quarter scores are shown in Table 8.

**TABLE 8**

**MEANS AND STANDARD DEVIATIONS FOR BEFORE-AND-AFTER TOTAL P SCORES ON THE TENNESSEE SELF CONCEPT SCALE FOR CLIENTS; N = 62**

<table>
<thead>
<tr>
<th>Measure</th>
<th>At Beginning of Quarter</th>
<th>At End of Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard Dev.</td>
</tr>
<tr>
<td>Tennessee Self Concept, Total P</td>
<td>337.935</td>
<td>29.995</td>
</tr>
</tbody>
</table>

Table 8 shows an increase in mean score from the beginning of the quarter to the end of the quarter. A t Test for the difference between correlated pairs of means was done to see if the difference between means was statistically significant. Table 9 provides a summary of this analysis.

**TABLE 9**

**CLIENT IMPROVEMENT AS SHOWN BY BEFORE-AND-AFTER TOTAL P SCORES**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean of N Differences of Paired Observations</th>
<th>Standard Deviation of Differences</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tennessee Self Concept, Total P</td>
<td>7.194</td>
<td>29.492</td>
<td>2.00*</td>
</tr>
</tbody>
</table>

* .05 level of significance

N = 62
df = 61
Table 9 shows that the difference between the pair of means is significant at the .05 level of significance. There the null hypothesis is rejected, and it can be stated that the mean of the difference is significantly different from zero.

On the basis of results presented in Tables 7, 8, and 9, it can be concluded that $H_2$ is accepted. Client participation in counseling did lead to client improvement when improvement was measured by the two measures of client improvement used in this study.

It is often difficult to demonstrate over-all improvement or change in a total client group from beginning to end of counseling. The before-and-after Total P Scores on the TDMH for clients show a change, which if expressed in percentile scores, would be from the 35th percentile at the beginning of the quarter to the 50th percentile at the end of the quarter. The mean Total P Score at the end of the quarter as shown in Table 8 (345.129) is very close to the mean score for the norm group on which the TDMH was standardized (345.57) as reported in the TDMH Manual (Fitts, 1965, p. 14). The Total P Score, which reflects the overall level of self-esteem, changed in a significantly positive direction during counseling. With the self-concept as a criterion of change, the clients' concepts of themselves did change in a positive direction during counseling, but the change was not great. Counseling did not lead to marked changes in self evaluation. A marked change would be unlikely since the counseling was of relatively brief duration.

Since no control group was used in this study, it is possible that change in scores (or gain shown) could be attributed to the
placebo effect (Rosenthal & Frank, 1956). The clients may have felt that since they had participated in counseling then something useful had been done. This feeling could have influenced their responses to the scales and instruments they completed at the end of the quarter.

$H_3$. Those students with a moderate expectancy level will show a greater improvement in the educational skills course than will students with an extreme (either high or low) level of expectancy.

The first measure of expectancy level (Tennessee Self Concept Scale, Total P Score, 2 - 1) was paired with each of the six measures of improvement in the course to find the line or curve of best fit. Given a set of measurements in variable $Y$, the dependent variable (improvement in the course), that has been taken in conjunction with corresponding measurements in variable $X$, the independent variable (level of expectancy), the two were related in a mathematical way to find the equation that would best fit the data (Guilford, 1954, p. 54).

In order to find the mathematical equation which best fit the data, or described them best, both quadratic and linear equations were used. The quadratic equation would be the equation for a parabola, or a curvilinear relationship. The linear equation would be the equation for a straight line, or a linear relationship between the variables level of expectancy and improvement in the course.

The quadratic equation was written: $Y = b_0 + b_1X + b_2X^2$. $Y$ is the dependent variable, improvement in the course (e.g., Brown-Holtzman SSHA 2 - 1). $X$ is the independent variable, level of expectancy (e.g., Tennessee Self Concept, Total P Score, 2 - 1). The regression coefficients are $b_0$, $b_1$, and $b_2$. The $b_1$ term tells how many
units $Y$ is increasing for every increase in one unit of $X$, and gives the slope of the regression line. The constant, $b_0$, gives the $Y$ intercept, or tells where the line cuts the $Y$ axis. The $b_2$ term indicates whether or not the data is best described by a parabola instead of a straight line.

The linear equation was written: $Y = b_0 + b_1 X$. Again, $Y$ is the dependent variable, $X$ is the independent variable, and $b_0$ and $b_1$ are the regression coefficients.

In the quadratic equation, if $b_2$ is less than zero (or negative) and significant, the curve is a parabola with its high point in the middle and its low points on either end. If $b_2$ is greater than zero (or positive) and significant, the curve is a parabola with its low point in the middle and its high points on either end. If $b_2$ is equal to zero, and therefore not significant, no particular curvilinear relationship is indicated.

In the linear equation, if $b_1$ is greater than zero (or positive) and significant, the line slopes upward and the relationship between the variables is a positive one. If $b_1$ is less than zero (or negative), the line slopes downward and the relationship between the two variables is negative. If $b_1$ is equal to zero, then no particular linear relationship is described.

Table 10 shows the results of regression on Tennessee Self Concept Total $P, 2 - 1$ (the first measure of level of expectancy) versus the six dependent variables, or measures of improvement in the course. The relationship between the Tennessee Self Concept ($2 - 1$) and the Brown-Holtzman ($2 - 1$) will be discussed first as an example of how
<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Quadratic</th>
<th>Linear</th>
<th>( t_1 )</th>
<th>( b_2 )</th>
<th>( t_2 )</th>
<th>( R )</th>
<th>( F )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown-Holtzman SSHA, 2-1</td>
<td>2.04</td>
<td>0.13</td>
<td>1.93</td>
<td>-0.00</td>
<td>-0.65</td>
<td>.21</td>
<td>3.17*</td>
</tr>
<tr>
<td>Robinson-Hall Reading Rate, 2-1</td>
<td>26.67</td>
<td>-.20</td>
<td>-1.23</td>
<td>0.00</td>
<td>0.78</td>
<td>.11</td>
<td>.83</td>
</tr>
<tr>
<td>Robinson-Hall Reading Comp., 2-1</td>
<td>15.92</td>
<td>-.34</td>
<td>-1.82</td>
<td>.01</td>
<td>2.16*</td>
<td>.18</td>
<td>2.33</td>
</tr>
<tr>
<td>Tennessee Self Concept, Total P, 3-1</td>
<td>-1.70</td>
<td>.64</td>
<td>3.62**</td>
<td>-.01</td>
<td>-1.89</td>
<td>.33</td>
<td>8.32**</td>
</tr>
<tr>
<td>Study Skills Self Rating, 3-1</td>
<td>57.19</td>
<td>.66</td>
<td>2.40*</td>
<td>-0.01</td>
<td>-1.83</td>
<td>.20</td>
<td>2.90</td>
</tr>
<tr>
<td>Instructor Rating Scale</td>
<td>21.79</td>
<td>.08</td>
<td>1.33</td>
<td>-0.00</td>
<td>-1.54</td>
<td>.13</td>
<td>1.19</td>
</tr>
</tbody>
</table>

*.05 level of significance  
**.01 level of significance  
N = 136  
df (Quadratic) = 2, 133  
df (Linear) = 2, 134
to read Table 10. The relationship is best expressed by the linear equation. The $b_1$ coefficient is positive and significant (column $t_1$) at the .01 level of confidence. For the quadratic equation, the $b_2$ value is near zero and is non-significant (column $t_2$). The actual degree of relationship is shown by column "R"; this value (.21) is statistically significant at the .05 level (column $F$) for both quadratic and linear equations. However, since the $b_2$ value for the quadratic equation is not significant, then the relationship described is not curvilinear. In brief, the relationship between the two variables is statistically significant, positive, and linear. The lower the level of expectancy, the less the improvement; the higher the level of expectancy, the greater the improvement shown by the Brown-Holtzman.

The significance of the regression coefficients ($b_1$ and $b_2$) was tested with a $t$ test (Cornell, 1956, pp. 181-182) and is indicated in the columns in Table 10 by $t_1$ and $t_2$.

The next relationship shown in Table 10, the relationship between Tennessee Self Concept (2 - 1) and Robinson-Hall Reading Rate (2 - 1), is not significant in either a linear or a curvilinear manner. Neither the $b_2$ coefficient for the quadratic equation nor the $b_1$ coefficient for the linear equation is significant.

The relationship between the Tennessee Self Concept (2 - 1) and the Robinson-Hall Reading Comprehension (2 - 1) is best expressed by the quadratic equation. The $b_2$ coefficient is positive, and column $t_2$ shows that it is significant at the .05 level of confidence. The relationship between the two variables is curvilinear. Since the $b_2$ coefficient is positive and significant, the curve of best fit is a
parabola with its low point in the middle and its high points at either end. The students with low and high (extreme) levels of expectancy improved the most, while the students with a moderate level of expectancy improved the least, when improvement was measured by the Robinson-Hall Reading Comprehension measure. The F test of the correlation (column R) for the quadratic equation of Tennessee Self Concept (2 - 1) versus Robinson-Hall Reading Comprehension (2 - 1) is not significant. This suggests that though the relationship is curvilinear, it is not a strong relationship.

The relationship between Tennessee Self Concept (2 - 1) and Tennessee Self Concept (3 - 1) is best expressed by the linear equation. The $b_1$ coefficient is positive and is significant ($t_1$) at the .01 level of confidence. The degree of relationship ($R$) .30 is statistically significant at the .01 level (column F). The relationship between the two variables is statistically significant, positive, and linear. The lower the level of expectancy, the less the improvement; the higher the level of expectancy, the greater the improvement shown by the Tennessee Self Concept Scale.

Neither of the last two relationships shown in Table 10 (between TDMH 2 - 1 and Study Skills Self Rating 3 - 1, and between TDMH 2 - 1 and Instructor Rating Scale) is significant in either a linear or a curvilinear manner. The $b_2$ coefficients for the quadratic equations and the $b_1$ coefficients for the linear equations are not significant.

The second measure of expectancy level, Study Skills Self Rating Inventory (2 - 1), was paired with each of the six measures of
improvement in the course in the same manner which has just been described for the first measure of expectancy level. Table 11 shows the results of regression on Study Skills Self Rating Inventory (2 - 1) as a measure of level of expectancy versus the six dependent variables, or measures of improvement in the course.

The relationship between the Study Skills Self Rating Inventory (2 - 1) and the Brown-Holtzman (2 - 1) is best expressed by the linear equation. The $b_1$ coefficient is positive, and significant at the .05 level of confidence. The F test of the correlation is significant at the .05 level of confidence. The relationship between the two variables is significant, positive, and linear. The lower the level of expectancy, the less the improvement. The higher the level of expectancy, the greater the improvement shown by the Brown-Holtzman.

The next three measures of improvement (Robinson-Hall Reading Rate, Robinson-Hall Reading Comprehension, and Tennessee Self Concept Scale), and the last measure (Instructor Rating) are not significantly related to expectancy level as shown by Study Skills Self Rating Inventory (2 - 1).

The relationship between the Study Skills Self Rating Inventory (2 - 1) and the Study Skills Self Rating Inventory (3 - 1) is best expressed by the linear equation. The $b_1$ coefficient is positive, and significant at the .01 level of confidence. The F test of the correlation is significant at the .01 level of confidence. The relationship between the two variables is statistically significant, positive, and linear. The lower the level of expectancy, the less
<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>b₀</th>
<th>b₁</th>
<th>t₁</th>
<th>b₂</th>
<th>t₂</th>
<th>R</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown-Holtzman SSHA, 2 - 1</td>
<td>-3.40</td>
<td>.15</td>
<td>2.43**</td>
<td>-0.00</td>
<td>-1.77</td>
<td>.24</td>
<td>4.00*</td>
</tr>
<tr>
<td>Robinson-Hall Reading Rate, 2 - 1</td>
<td>26.71</td>
<td>.00</td>
<td>.02</td>
<td>-0.00</td>
<td>-.37</td>
<td>.09</td>
<td>.51</td>
</tr>
<tr>
<td>Robinson-Hall Reading Comp., 2 - 1</td>
<td>21.57</td>
<td>-.16</td>
<td>-1.15</td>
<td>0.00</td>
<td>1.28</td>
<td>.11</td>
<td>.83</td>
</tr>
<tr>
<td>Tennessee Self Concept, Total P, 3 - 1</td>
<td>6.38</td>
<td>-.04</td>
<td>-.30</td>
<td>0.00</td>
<td>.59</td>
<td>.08</td>
<td>.44</td>
</tr>
<tr>
<td>Study Skills Self Rating, 3 - 1</td>
<td>15.86</td>
<td>.53</td>
<td>2.92**</td>
<td>-0.00</td>
<td>-.76</td>
<td>.48</td>
<td>20.17**</td>
</tr>
<tr>
<td>Instructor Rating</td>
<td>22.05</td>
<td>0.00</td>
<td>.01</td>
<td>-0.00</td>
<td>-.01</td>
<td>.00</td>
<td>.00</td>
</tr>
</tbody>
</table>

* .05 level of significance
** .01 level of significance

N = 136
df (Quadratic) = 2, 133
df (Linear) = 2, 134
the improvement. The higher the level of expectancy, the greater the improvement shown by the Study Skills Self Rating Inventory.

Tables 10 and 11 show five significant relationships out of 12 comparisons. Four of these were linear rather than curvilinear as predicted. With the Tennessee Self Concept Scale (2 - l) as the measure of level of expectancy, two measures of improvement (Brown-Holtzman 2 - 1, and Tennessee Self Concept 3 - l) have a significant linear relationship to level of expectancy. With the Study Skills Self Rating Inventory (2 - l) as the measure of level of expectancy, two measures of improvement (Brown-Holtzman 2 - l, and Study Skills Self Rating Inventory 3 - l) have a significant linear relationship to level of expectancy. All four of these linear relationships are positive such that low expectors improve the least, and high expectors improve the most.

With only one comparison was there a curvilinear relationship. With the Tennessee Self Concept Scale (2 - l) as the measure of level of expectancy, one measure of improvement (Robinson-Hall Reading Comprehension 2 - l) has a significant curvilinear relationship to level of expectancy. However the nature of this curvilinear relationship is the reverse of the hypothesized curvilinear relationship. According to the regression equation of this relationship, high and low expectors (extreme expectors) improved the most, and moderate expectors improved the least. The measure of level of expectancy here was a personality scale. Perhaps those students who did not expect to change greatly on personality variables were still able to improve in skill level, a reading comprehension skill. Those students who expected to change
moderately on personality variables improved the least on this skill measure. But those students who expected to change greatly on personality variables changed greatly on the skill variable. Though this was the trend for this curvilinear relationship, it was a weak curvilinear relationship and not a strong one.

$H_3$ was not supported by the results of the regression. The line of best fit was not the hypothesized parabola, or a curvilinear relationship. Moderate expectors did not show more improvement in the course than did extreme (either high or low) expectors.

Some evidence has been found, however, to show that level of expectancy is related to gain in skill level. Further, the self-concept measure of level of expectancy seems more related to gain on personality variables; the skill level measure of level of expectancy seems more related to gain on study skills. Thus expectancies may be rather specific. In addition, similar or identical measures are more apt to be related.

It could be possible that $H_3$ would hold if subjects with more extreme expectancy levels were included in the population studied. For example, if the educational skills course were compulsory for all students on academic probation, then there might be subjects with extremely high expectancy levels. But subjects for this study were all college students who were more or less within the normal range for college students, and the population did not include extreme or unusual cases.

$H_4$. **Those students (who are clients in a counseling relationship) with a moderate expectancy level will show a greater improvement**
in counseling than will clients with an extreme (either high or low) expectancy level.

The first measure of expectancy level (Tennessee Self Concept Scale, Total P Score, 2 - 1) was paired with each of the two measures of improvement in counseling to find the equation for the line or curve of best fit. Table 12 shows the two measures of client improvement in counseling (Counselor Rating, and Tennessee Self Concept Scale, Total P Score, 3 - 1) versus the measure of level of expectancy, Tennessee Self Concept Scale, Total P Score, 2 - 1.

**TABLE 12**

**RELATIONSHIP BETWEEN LEVEL OF EXPECTANCY AS MEASURED BY TENNESSEE SELF CONCEPT SCALE (2 - 1) AND THE TWO MEASURES OF CLIENT IMPROVEMENT**

<table>
<thead>
<tr>
<th></th>
<th>Quadratic</th>
<th>Linear</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Counselor Rating</strong></td>
<td>( Y = b_0 + b_1X + b_2X^2 )</td>
<td>( Y = b_0 + b_1X )</td>
</tr>
<tr>
<td>( df = 2, 59 )</td>
<td>( t ) for ( b_1 = 1.83 ) ( R = .26 )</td>
<td>( t ) for ( b_1 = -0.07 ) ( R = .01 )</td>
</tr>
<tr>
<td><strong>Tennessee Self Concept, Total P, 3 - 1</strong></td>
<td>( Y = -1.75 + .47X + .12X^2 )</td>
<td>( Y = -5.86 + .54X )</td>
</tr>
<tr>
<td>( df = 2, 59 )</td>
<td>( t ) for ( b_1 = 3.03^{**} ) ( R = .45 )</td>
<td>( t ) for ( b_1 = 3.43^{**} ) ( R = .40 )</td>
</tr>
<tr>
<td>( df = 1, 60 )</td>
<td>( t ) for ( b_2 = 1.81 ) ( F = 7.75^{**} )</td>
<td>( t ) for ( b_1 = 3.43^{<strong>} ) ( R = 11.76^{</strong>} )</td>
</tr>
</tbody>
</table>

* .05 level of significance
** .01 level of significance

\( N = 62 \)
Table 12 shows a significant curvilinear relationship between level of expectancy (TDMH, 2 - 1) and client improvement in counseling (Counselor rating). The $b_2$ coefficient is positive and significant at the .05 level. Thus the curve is a parabola, and the relationship is curvilinear, but not in the hypothesized direction. Clients with extreme (either high or low) level of expectancy showed more improvement than did clients with moderate level of expectancy. The relationship is weak, however, since the F test of R is not significant.

Table 12 shows also that there is a significant linear relationship between level of expectancy (TDMH, 2 - 1) and client improvement in counseling (TDMH, 3 - 1). The $b_1$ coefficient is positive and significant at the .01 level. The F test of the correlation is significant also at the .01 level. The line of best fit, or the line which best describes the data is a straight line sloping upward. Clients with a low level of expectancy improved the least; clients with a high level of expectancy improved the most. (When the quadratic equation was attempted with this relationship, the $b_2$ term was not significant. Therefore it is determined that the relationship is not a curvilinear one.)

Though there are two significant relationships between the TDMH, 2 - 1, level of expectancy measure and two measures of client improvement in counseling, neither relationship is exactly as predicted. When counselor rating is used as a measure of improvement, the relationship is curvilinear but not in the hypothesized direction.
When TDMH, 3 - 1, is used as a measure of improvement, the relationship is found to be linear and positive in nature.

Table 13 shows the two measures of client improvement in counseling versus the second measure of level of expectancy, the Study Skills Self Rating Inventory, 2 - 1.

**TABLE 13**

**RELATIONSHIP BETWEEN LEVEL OF EXPECTANCY AS MEASURED BY STUDY SKILLS SELF RATING (2 - 1) AND THE TWO MEASURES OF CLIENT IMPROVEMENT**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Quadratic</th>
<th>Linear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counselor Rating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quadratic</td>
<td>( Y = 109.92 - 0.09X + 0.00X^2 )</td>
<td>( Y = 104.02 + 0.05X )</td>
</tr>
<tr>
<td>( df = 2, 59 )</td>
<td>( t \text{ for } b_1 = -0.24 )</td>
<td>( t \text{ for } b_1 = 0.50 )</td>
</tr>
<tr>
<td>( t \text{ for } b_2 = 0.40 )</td>
<td>( t \text{ for } b_2 = 0.59 )</td>
<td>( R = 0.06 )</td>
</tr>
<tr>
<td>Linear</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( Y = 104.02 + 0.05X )</td>
<td>( R = 0.20 )</td>
<td>( F = 0.24 )</td>
</tr>
<tr>
<td>( df = 1, 60 )</td>
<td>( R = 0.06 )</td>
<td>( F = 0.24 )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure</th>
<th>Quadratic</th>
<th>Linear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tennessee Self Concept, Total P, 3 - 1</td>
<td>( Y = 6.38 - .04 X + 0.00X^2 )</td>
<td>( Y = -10.57 + .16X )</td>
</tr>
<tr>
<td>( df = 2, 59 )</td>
<td>( t \text{ for } b_1 = -0.30 )</td>
<td>( t \text{ for } b_1 = 2.35^* )</td>
</tr>
<tr>
<td>( t \text{ for } b_2 = 0.59 )</td>
<td>( t \text{ for } b_2 = 0.59 )</td>
<td>( R = 0.29 )</td>
</tr>
<tr>
<td>Linear</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( Y = -10.57 + .16X )</td>
<td>( R = 0.29 )</td>
<td>( F = 5.54^* )</td>
</tr>
<tr>
<td>( df = 1, 60 )</td>
<td>( R = 0.29 )</td>
<td>( F = 5.54^* )</td>
</tr>
</tbody>
</table>

\(^* .05 \text{ level of significance} \)

\( N = 62 \)

Table 13 shows no significant quadratic or linear relationship between the level of expectancy measure, Study Skills Self Rating Inventory 2 - 1, and the Counselor Rating measure of client improvement in counseling. There was, however, a significant linear relationship...
between the measure of level of expectancy (Study Skills Self Rating, 2 - l) and TDMH, 3 - l, as the measure of client improvement. The $b_1$ term is significant at the .05 level of confidence; the F test of the correlation is significant at the same level. The line of best fit is a straight line with a positive slope. Clients with low level of expectancy improved the least; clients with high level of expectancy improved the most. This relationship between the measure of level of expectancy and the measure of client improvement, though significant, was not exactly as predicted.

The data presented in Tables 12 and 13, while showing several significant relationships between level of client expectancy and client improvement in counseling, do not support $H_4$. Tables 12 and 13 show three significant relationships out of four comparisons. Two of these were linear rather than curvilinear as predicted. With the Tennessee Self Concept Scale (2 - l) as the measure of level of expectancy, one of the measures of improvement (Tennessee Self Concept Scale, 3 - l) had a significant linear relationship to level of expectancy. With the Study Skills Self Rating (2 - l) as the measure of level of expectancy, one of the measures of improvement (again, the Tennessee Self Concept Scale, 3 - l) had a significant linear relationship to level of expectancy. The same measure of client improvement had a linear relationship to both measures of level of expectancy. Both linear relationships are positive such that low expectors improve the least, and high expectors improve the most.

With only one comparison was there a curvilinear relationship. With the Tennessee Self Concept Scale (2 - l) as the measure of level
of expectancy, one measure of client improvement (Counselor Rating) has a significant curvilinear relationship to level of expectancy. However, the nature of this curvilinear relationship is the reverse of the hypothesized curvilinear relationship. According to the regression equation for this relationship, high and low (extreme) expectors improved the most, and moderate expectors improved the least, according to counselor judgment of improvement. Though this was the trend for this curvilinear relationship, it was a weak curvilinear relationship and not a strong one.

Though H4 was not supported by the results of the regression, some evidence has been found to show that level of expectancy may be related to client improvement in counseling. It is possible that H4 would hold if clients with more extreme expectancy levels were included in the population studied. The sample studied did not include extremely distressed or highly anxious individuals, so there were no extremely high expectancy levels.

H5. Those students who express a greater degree of distress will have a higher level of expectancy than will those students who express a lesser degree of distress.

Each of the two measures of the independent variable, degree of distress (Tennessee Self Concept Scale, Total P Score 1; and Study Skills Self Rating Inventory 1) was paired separately with each of the two measures of the dependent variable, level of expectancy (Tennessee Self Concept Scale, Total P Score, 2 - 1; and Study Skills Self Rating Inventory, 2 - 1). In order to find the line of best fit, a linear
equation was derived from the data. Results of the regression are presented in Tables 14 and 15.

**TABLE 14**

RELATIONSHIP BETWEEN DEGREE OF DISTRESS AS MEASURED BY TENNESSEE SELF CONCEPT SCALE (1) AND THE TWO MEASURES OF LEVEL OF EXPECTANCY

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Equation</th>
<th>R</th>
<th>F</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSC 2 - 1 vs TSC 1</td>
<td>( Y = 104.22 - 0.24X )</td>
<td>0.32</td>
<td>15.68**</td>
<td>1, 134</td>
</tr>
<tr>
<td>SSRSI 2 - 1 vs TSC 1</td>
<td>( Y = 80.94 + 0.07X )</td>
<td>0.04</td>
<td>0.24</td>
<td>1, 134</td>
</tr>
</tbody>
</table>

**.01 level of significance**

Table 14 shows a significant linear relationship between the Tennessee Self Concept Scale 2 - 1 (level of expectancy) and Tennessee Self Concept Scale 1 (degree of distress). The \( b_1 \) coefficient is negative and significant at the .01 level of significance. The higher TDMH 2 - 1, the lower TDMH 1 (or the greater the degree of distress). The F test of the correlation was significant at the .01 level, indicating a strong linear relationship. It will be noticed that since the \( b_1 \) term is negative and significant, the slope of the regression line is a negative one. In this case, however, the relationship shown is in the predicted direction since the lower the score on TDMH 1 (i.e. the greater the degree of distress indicated), the higher the expectancy level (TDMH 2 - 1).
If a subject had a low Total P Score on the first administration of the Tennessee Self Concept Scale, and thus as defined by this study indicated that he felt a great degree of distress, he was likely to have a high difference score between the first and the second administrations of the Tennessee Self Concept Scale.

This relationship did not hold when the TDMH 1 (degree of distress) measure was related to level of expectancy as measured by Study Skills Self Rating Inventory 2 - 1, as shown by the second part of Table 14. The relationship between these variables was not significantly linear.

### TABLE 15

**RELATIONSHIP BETWEEN DEGREE OF DISTRESS AS MEASURED BY STUDY SKILLS SELF RATING (1) AND THE TWO MEASURES OF LEVEL OF EXPECTANCY**

<table>
<thead>
<tr>
<th>Relation</th>
<th>Equation</th>
<th>R</th>
<th>t for b₁</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tennessee Self Concept 2 - 1 vs. Study Skills Self Rating 1</td>
<td>$Y = 18.40 + 0.02 X$</td>
<td>.04</td>
<td>0.44</td>
<td>0.19</td>
</tr>
<tr>
<td>Study Skills Self Rating 2 - 1 vs. Study Skills Self Rating 1</td>
<td>$Y = 215.45 - 0.60 X$</td>
<td>.57</td>
<td>-7.98**</td>
<td>63.71**</td>
</tr>
</tbody>
</table>

**.01 level of significance**

$N = 136$  
$df = 1, 134$

Table 15 shows a significant linear relationship between the Study Skills Self Rating Inventory 1 (degree of distress) and the Study Skills Self Rating Inventory 2 - 1 (level of expectancy).
The $b_1$ coefficient is negative, and significant at the .01 level of confidence. The higher Study Skills Self Rating 2 - 1, the lower Study Skills Self Rating 1 (or the greater the degree of distress). The F test of the correlation coefficient was significant at the .01 level, indicating a strong linear relationship. Since the $b_1$ term is negative and significant, the slope of the regression line is negative. But again, the relationship shown is in the predicted direction since the lower the score on the first administration of the Study Skills Self Rating Inventory (i.e. the greater the degree of distress indicated as defined by this study) the greater the difference score.

If a subject had a low self rating on the first administration of the Study Skills Self Rating Inventory, indicating a high degree of distress, he was likely to have a high difference score between the first and the second administrations of the same instrument indicating a high level of expectancy.

This relationship did not hold when the Study Skills Self Rating Inventory 1 as the measure of degree of distress was paired with the Tennessee Self Concept Scale 2 - 1 as the measure of level of expectancy. This relationship was not significantly linear, as shown in the first part of Table 15.

Thus $H_5$ is only one-half supported. It is supported when degree of distress is related to level of expectancy and they are measured by the same instrument. Then it can be stated that those students who expressed a greater degree of distress did have a higher expectancy level than those students who expressed a lesser degree of distress.
When the instruments measuring degree of distress and level of expectancy are cross-compared, however, no significant linear relationship occurs. Apparently degree of distress as measured by a personality instrument is not related in the predicted direction to level of expectancy as measured by a study skill rating instrument. Or when degree of distress is measured by a study skill rating instrument, it is not related in the predicted direction to level of expectancy as measured by a personality instrument.

It does seem reasonable to conclude, however, that if one feels uncomfortable about himself related to personality factors, then he has a high expectancy of changing so that he will be able to feel better about himself. If, on the other hand, one feels insecure or uncomfortable about his study skill level, then he has a high expectancy of changing in this area so that he will be able to feel better about his level of competence in study skills. These conclusions appear to be supported by the data for H₅.

However, there is also the factor of a statistical artifact which may be operating here. An accidentally low score on Test 1 (present-self orientation) causes both Test 1 to be low, and also the difference score between Test 1 (present-self) and Test 2 (expected-self) to be great. If the linear relationship had held up on cross-comparison of tests (i.e., if degree of distress measured by one instrument had a linear relationship to level of expectancy as measured by a different instrument), then one would have less reason to suspect the operation of a statistical artifact.
Following is a summary of results for each hypothesis:

H₁. Participation in the educational skills course leads to improvement in the course.

H₁ is accepted. Participation in the educational skills course did lead to improvement in the course, when improvement was measured by the six measures of improvement in the course used in this study. This finding is consistent with Entwisle's (1960) review of evaluations of study skill courses, when, after a survey of 22 evaluations he pointed out that a study skills course will usually be followed by improvement.

H₂. Client participation in counseling leads to client improvement in counseling.

H₂ is accepted. Client participation in counseling did lead to client improvement in counseling when improvement was measured by the two measures of client improvement used in this study. This finding is consistent with many studies, e.g. Williams (1962) who found that counseled clients showed an increase in adjustment level and over-all concept congruence during counseling.

H₃. Those students with a moderate expectancy level will show a greater improvement in the educational skills course than will students with an extreme (either high or low) level of expectancy.

H₃ is not accepted. The predicted positive curvilinear relationship between expectancy level and improvement in the course was not found. Moderate expectors did not show more improvement in the course than did extreme expectors. Several significant relationships between level of expectancy and improvement in the course were found, however. The four significant linear relationships found suggest that low
expectors improved the least, and high expectors improved the most.
One significant, but inverse, curvilinear relationship was found. This
relationship indicated that high and low expectors improved the most,
and moderate expectors improved the least.

$H_4$. Those students (who are clients in a counseling relationship) with
a moderate expectancy level will show a greater improvement in
counseling than will clients with an extreme (either high or low)
expectancy level.

$H_4$ is not accepted. The predicted positive curvilinear rela-
tionship between expectancy level and improvement in counseling was
not found. Moderate expectors did not show more improvement in counsel-
ing than did extreme expectors. Three significant relationships were
found, however, between the variables of client expectancy level and
client improvement in counseling. One relationship (which was curvi-
linear, weak, and inverse) was found between level of expectancy and
client improvement; clients with either high or low expectancy levels
showed more improvement than did clients with moderate expectancy
levels. Part of the difficulty here might have been that the level of
expectancy measures were not measuring specific expectancies.

Cartwright and Cartwright (1958) suggest that there are four differ-
ent beliefs regarding psychotherapy that clients may hold. If the
client is believing in techniques as a source of help, for example,
the relationship between belief and improvement may be weak, curvi-
linear, and possibly inverse.

In two instances a significant linear relationship between
level of expectancy and client improvement was found. These findings
indicate that clients with a low level of expectancy improved the least, and clients with a high level of expectancy improved the most. Cartwright and Cartwright (1960) suggest that if a client enters psychotherapy with an unspecified belief in the therapy itself, then the relationship between the strength of this belief and the degree of improvement will be strong, positive, and essentially linear. Rosenthal and Frank (1956) feel that the relationship between degree of belief that certain effects will result and degree of improvement in psychotherapy will be strong, positive, and linear.

\[ H_5. \textbf{Those students who express a greater degree of distress will have a higher level of expectancy than will those students who express a lesser degree of distress.} \]

\[ H_5 \] is partially accepted; it is one-half supported, and one-half not supported by the data. Out of four comparisons (two measures of level of expectancy and two measures of degree of distress), two comparisons are in the predicted direction such that those students who expressed a greater degree of distress did have a higher expectancy level than those students who expressed a lesser degree of distress. This finding is consistent with one of the findings by Goldstein and Shipman (1961) when they found that patient expectation for symptom reduction due to psychotherapy was related positively and linearly to degree of patient pre-therapy symptom intensity. Frank (1959) suggested that degree of distress is positively related to hope for relief. Lipkin (1954) found that the more successful clients in his study seemed to be more keenly distressed and thus more eager for change than did the less successful clients. The other two comparisons of
degree of distress with level of expectancy in this investigation showed no significant relationships.

Suggestions for further research

Some evidence was found in the present study to show that level of expectancy is related to gain in skill level. Several significant linear and positive relationships were found between level of expectancy and improvement in study skills. It would be interesting to test this finding, using different measures for level of expectancy.

Other findings of this study suggested that expectancies may be rather specific. Level of expectancy on personality variables had a relationship to change on personality variables, and level of expectancy on skill variables had a relationship to change on skill variables. It would perhaps be interesting to construct an instrument to measure level of expectancy which would combine several kinds of expectancies into one instrument providing an overall level of expectancy score, but which would also provide "sub-test" measures of more specific expectancies. Then level of expectancy could be related to several different kinds of change variables to determine if expectancies are specific or generalized.

It might be interesting to repeat a study similar to the present study with a population which would include more extreme cases than a college student population includes.

Some evidence was found to suggest that level of expectancy may be related to client change in counseling. The findings indicated a positive linear relationship between level of expectancy and amount
of client change. This finding could be tested with a different type of client population in order to determine if the relationship between level of expectancy and client change is curvilinear rather than linear.

This study did find a positive relationship between degree of distress and level of expectancy when the same instruments were used to measure the two variables. It would be desirable to test this finding using different instruments in order to find if the relationship would hold.
CHAPTER V

SUMMARY AND CONCLUSIONS

The variable level of expectancy has relevance for the complex area of research in counseling as well as for the area of research in study skill improvement. Expectancy has been viewed as a significant dimension of human behavior in several theoretical frameworks since expectation theory offers a promising access to problems of social learning and behavior. Since expectancy has an important effect upon human behavior, expectancy research should be relevant for both counseling and educational skills programs. It was the purpose of this study to investigate the effects of students' level of expectancy on the degree of improvement which takes place in a study skills course, and on the degree of improvement which takes place in counseling. This study asked questions regarding the nature of the expectational influence on improvement in learning study skills and on client improvement in counseling, and regarding the nature of the relationship between degree of distress and level of expectancy.

Research studies related to level of expectancy, improvement in study skills, client improvement in counseling, degree of distress, and instruments used in the study were reviewed, and a summary of major research findings in each area was presented. Goldstein (1962) reviewed research in the area of patient expectancies for psychotherapy.
and concluded that expected and perceived improvement in psychotherapy have been found not to relate in a linear manner, that moderate expectation of improvement in psychotherapy logically appears to be the most realistic range of possible prognostic expectancies, that patients with moderate prognostic expectancies should change the most in therapy and those with either high or low (extreme) prognostic expectancy levels should change the least in therapy, and that the greater the degree of patient distress, the greater will be his expectation for relief.

A review of research related to study skill improvement suggested the following conclusions: that courses in how-to-study methods have usually been successful, both with probationary students as well as with average and superior students; that non-intellective factors, factors of motivation and personality, probably do have an influence on academic performance and improvement; and that the variable level of expectancy may be important in the study and understanding of academic achievement.

A review of research related to the outcome of counseling and psychotherapy suggested that though the criterion problem has not yet been adequately resolved, investigators are continuing to examine the problem critically. Though no criteria were seen as completely satisfactory, the present study utilized two measures of client improvement in counseling which were considered to be reasonable in light of research findings: counselor judgment of whether or not the client had shown improvement on several dimensions, and a before-and-after measure of self-concept evaluation.
A review of research in the area of the effect of degree of distress on level of expectancy suggested that the greater the need for relief, the greater the expectancy that such relief will be forthcoming (Frank, 1959), or the greater the degree of patient distress, the greater will be his expectation for relief.

A review of research relating to instruments used in the study was presented, along with a review of research relating to the topic of self-evaluation instruments in general.

The purpose of this study was to investigate the nature of the relationship between students' level of expectancy and improvement which takes place in a study skills course, the relationship between level of expectancy and improvement which takes place in counseling, and the relationship between degree of distress and level of expectancy.

Subjects for this study were 136 students enrolled in Psychology 411 at The Ohio State University during the summer quarter, 1965. Client-subjects were 62 of the 136 subjects who were clients in a counseling relationship during the quarter. Counselors were 30 college counselors enrolled as graduate students in a Counseling and Guidance Institute (NDEA) at The Ohio State University during the summer quarter, 1965. Instructors for the Psychology 411 classes were all advanced graduate students studying for the Ph.D. degree in Counseling Psychology.

Six separate instruments provided data on four variables: level of expectancy, improvement in the course, client improvement in counseling, and degree of distress. The Tennessee Self Concept Scale and the Study Skills Self Rating Inventory were administered twice.
during the first week of the course. The differences between the total score for each instrument under present-self orientation (the first administration) and under expected-self orientation (the second administration) were the two measures of level of expectancy.

Five instruments were administered at the beginning of the course and again at the end of the course: the Brown-Holtzman SSHA, the Robinson-Hall Reading Test (reading rate), the Robinson-Hall Reading Test (reading comprehension), the Tennessee Self Concept Scale, and the Study Skills Self Rating Inventory. Change in score from beginning of quarter to end of quarter provided five measures of improvement in the course. An additional measure of improvement in the course was provided by the Instructor Rating Scale which the instructors completed at the end of the quarter.

Two instruments provided data on client improvement in counseling. Counselors completed a Counselor Rating Scale for each client at the end of counseling. The other measure of client improvement was change in Total P Score of the Tennessee Self Concept Scale from the beginning of the quarter to the end of the quarter.

Data on degree of distress was provided by two instruments: Total P Score of the Tennessee Self Concept Scale administered at the beginning of the quarter under present-self administration, and total rating score on the Study Skills Self Rating Inventory administered at the beginning of the quarter under present-self administration.

Five hypotheses were tested. Following is a summary of results for each hypothesis:
$H_1$. Participation in the educational skills course leads to improvement in the course.

A $t$ test for the difference between correlated pairs of means was used to find if there was a statistically significant difference between the means of the five before-and-after measures of improvement. For the sixth measure of improvement, given only at the end of the quarter, a $t$ test for the significance of a sample mean was done.

$H_1$ was accepted. Participation in the educational skills course did lead to improvement when improvement was measured by the six measures used in this study.

$H_2$. Client participation in counseling leads to client improvement in counseling.

For the first measure of client improvement, a $t$ test for the significance of a sample mean was done. For the second measure of client improvement, a $t$ test for the difference between correlated pairs of means was done to find if the change in mean scores from beginning of quarter to end of quarter was statistically significant.

$H_2$ was accepted. Client participation in counseling did lead to client improvement when improvement was measured by the two measures of client improvement used in this study.

$H_3$. Those students with a moderate expectancy level will show a greater improvement in the educational skills course than will students with an extreme (either high or low) level of expectancy.

Each of the two measures of expectancy level was paired separately with each of the six measures of improvement to determine whether the relationship between improvement and expectancy level was linear.
or nonlinear. Both a linear and a quadratic regression equation was
derived for each relationship, \( t \) tests of the regression coefficients
were done, correlation between the variables was computed, and a \( F \) test
of each correlation was done.

\( H_3 \) was not accepted. A positive curvilinear relationship between
expectancy level and improvement was not found. Four significant linear
relationships were found, however, which indicated that low expectors
improved the least and high expectors improved the most. One signifi-
cant, but inverse, curvilinear relationship was found which indicated
that high and low expectors improved the most, and moderate expectors
improved the least.

\( H_4 \). Those students (who are clients in a counseling relationship)
with a moderate expectancy level will show a greater improvement
in counseling than will clients with an extreme (either high or
low) expectancy level.

This hypothesis was tested in the same manner as \( H_3 \) to deter-
mine whether the relationship between improvement in counseling and
level of expectancy was linear or non-linear in nature.

\( H_4 \) was not accepted. A positive curvilinear relationship
between expectancy level and improvement in counseling was not found.
Three significant relationships were found, however, between the two
variables. A weak, inverse curvilinear relationship was found between
level of expectancy and client improvement which suggested that clients
with extreme expectancy levels showed more improvement than did clients
with moderate expectancy levels. Two significant linear relationships
were found which suggested that clients with a low level of expectancy
improved the least, and clients with a high level of expectancy improved
the most.

H$_5$: Those students who express a greater degree of distress will have
a higher expectancy level than will those students who express a
lesser degree of distress.

Each of the two measures of degree of distress was paired
separately with each of the two measures of level of expectancy to
determine the nature of the relationship between the two variables.
A linear regression equation was derived for each relationship and
t tests of the regression coefficients were done.

H$_5$ was partially accepted; it was one-half supported by the
data. Out of four comparisons, two comparisons were in the predicted
direction. Students who expressed a greater degree of distress did
have a higher expectancy level than those students who expressed a
lesser degree of distress.
This information will not be used by your instructor.

We would like for you to estimate the level of skill you now have, comparing yourself with other college freshmen. Put a check mark on the line at a point which most accurately describes your skill at the present time.

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<th>Skill</th>
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Your name _______________________________ 4:11 class hour __
This information will not be used by your instructor.

We would like for you to estimate the level of skill, comparing yourself with other college freshmen, which you expect to reach by the end of this quarter.

Put a check mark on the line at a point which most accurately describes the level of skill you expect to reach.

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Your name____________________________________________________ 4th class hour____
This information will not be used by your instructor.

We would like for you to estimate the level of skill you have now at the end of the quarter, comparing yourself with other college freshmen. Put a check mark on the line at a point which most accurately describes your skill at this time.

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Your name ____________________________ 411 class hour ______
Instructor: Please put a check mark on the line at a point which most accurately describes the improvement (e.g., in concentration, motivation, SQ3R, examination and classroom skills) of each student in Psychology 411.

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Name of Instructor ___________________________ 411 class hour ___
This information is for research purposes and will not be used in NDEA grading.

Counselor: Please put a check mark on each line at a point which most accurately describes your client's improvement (both from work in counseling and in 4ill class), taking into account the six weeks period.

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<th>Much improvement</th>
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Name of client ____________________________ 4ill class hour ___

Number of interviews ________________

Name of counselor ____________________________
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Lipkin, S. The client evaluates non-directive counseling. J. consult. Psychol., 1948, 12, 137-146.


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