THE EFFECTS OF STRUCTURED AND UNSTRUCTURED GROUP COUNSELING ON CERTAIN PERSONALITY DIMENSIONS OF MALE COLLEGE STUDENTS WHO UNDERACHIEVE

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Stuart H. Gilbreath

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#### ABSTRACT

## THE EFFECTS OF STRUCTURED AND UNSTRUCTURED GROUP COUNSELING ON CERTAIN PERSONALITY DIMENSIONS OF MALE COLLEGE STUDENTS WHO UNDERACHIEVE

by Stuart H. Gilbreath

The purpose of the study was to investigate the effects of two different methods of group counseling on certain personality characteristics that typify the male college academic underachiever i.e., a high need for dependence and affiliation, a concept of self that is inadequate and inferior, a high degree of anxiety and depression, an inability to overtly express feelings of anger, and an overall weakness in ego-strength.

The research hypotheses were based upon the theory that these underlying dynamics of the male underachiever must be brought to <u>awareness</u> and <u>faced</u> before effective alteration is possible. It was therefore believed that a direct leader-structured group counseling method which pointedly focussed on these characteristics and related them to scholastic difficulties would be more effective, as measured by degree and permanence of change, than a non-directive, group-structured method which focussed on them only when and if they spontaneously arose from within the group. It was also believed that students who experienced

either group counseling approach would improve significantly in these areas when compared to students who received no counseling at all.

The basic hypothesis of the study was therefore:

The positive change in those personality characteristics that typify the male college underachiever would be greater for those subjects who experienced the leaderstructured method of group counseling than for those who experienced the group-structured method and greater for those who experienced the group-structured method than for those who received no counseling at all.

The leader-structured method of group counseling placed emphasis on topics that were based upon a priori assumptions about the cause of academic underachievement.

These topics were presented by the counselor for group discussion. Purposes and goals, dependence-independence, expression of anger, anxiety and depression, and feelings about self are examples of the topics discussed by the group. The counselor presented each topic with a realistic example and, during the discussion, actively related personality patterns to scholastic skills in order to hasten group movement and increase awareness.

The group-structured method of group counseling placed emphasis on topics which spontaneously originated from within the group. The counselor was an active participant in the group discussion, as was true in the

leader-structured method, but topics to be discussed frequency and degree of digression, time spent on particular problems, etc., were determined by the group rather than by the counselor.

The design of the investigation was based upon a two factor treatment plan. Eight counseling groups were equally divided between two counselors who each led two groups in the leader-structured method of group counseling and two in the group-structured method. A third group, in addition to the two treatment groups was included in the experiment to serve as a control.

Freshmen or sophomore male students who had scored at or above the 50th percentile on the College Qualification Test and whose cumulative grade-point was below 2.00 were offered the opportunity to participate in this experiment.

Subjects who volunteered were randomly assigned to each counselor and to the three treatment groups i.e., leader-structured, group-structured and no treatment control.

The students in the control group received no counseling but did receive a one hour period of test interpretation after the completion of the experiment and assurance from the University College Dean that they would not be withdrawn from the university during either of the two terms. The same one hour period of test interpretation as well as the assurance from the University College Dean was given to the experimental subjects.

The eighty-one students in the analysis attended a minimum of six to a maximum of eight, 1 1/2 to 2 hour sessions of group counseling during the winter term of 1964.

All of the treatment groups met once a week in the Michigan State University Counseling Center.

Selected scales of the Minnesota Multiphasic Personality Inventory and the Stern's Activities Index were used to measure differences between the groups along the personality dimensions under study.

The two counselors met weekly to discuss objectives, review tape recordings of the sessions and compare notes as to uniformity of method.

In order to determine whether the different counseling methods were perceived differently by the respective groups, a yes - no check list was administered to the groups just prior to the last session. The results of this survey supported the contention that the two methods of counseling, were different.

A one-way analysis of variance was used to test the hypotheses that differences between the leader-structured, group-structured and control groups would occur as a result of experimental treatment.

A two by two analysis of variance was used to test the hypotheses that differences between the two counseled groups (leader-structured vs. group-structured) would occur as a result of different counseling methods rather than

different counselors or an interaction between counselor and type of counseling.

#### Conclusions

The analysis of the data permits the following conclusions:

- The subjects who experienced six to eight sessions
  of leader-structured group counseling achieved a
  greater degree of ego-strength than those who received no counseling.
- 2. No differences were found to exist between subjects who experienced the leader-structured method of group counseling and subjects who experienced the group-structured method on such dimensions as dependency, affiliation, abasement, anxiety, depression, aggression or ego-strength.
- 3. No differences were found to exist between subjects who experienced the group-structured method of group counseling and subjects who received no counseling on such dimensions as dependency, affiliation, abasement, anxiety, depression, aggression, or egostrength.
- 4. Subjects who experienced group counseling were more able to overtly express feelings of anger than subjects who received no counseling. (Subjects in the

leader-structured and group-structured methods were combined and compared with the no treatment control group).

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Ву

Stuart H. Gilbreath

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#### CHAPTER I

#### THE PROBLEM

In recent years numerous investigators have studied the effect of group counseling on the problem of academic underachievement. Almost invariably, in these programs, the predominant method of group counseling has been non-directive in orientation, a technique that is often used to alleviate a variety of emotional disorders and one in which the group itself, at its own discretion, spontaneously determines the topic for duscussion.

In spite of the fact that a number of such research projects have occurred, the results have not been encouraging. There is still a paucity of knowledge about the cause of academic underachievement and a pessimism about group counseling being a method which can significantly affect their emotional experience or their academic performance.

It is important to emphasize, in view of this pessimism, that a group counseling method which specifically examines the unique personal-social problems of the academic underachiever has never been tried, and an operational synthesis of these problems has never been made.

There is consequently a need to determine whether a group experience which is particularly designed to focus on

the personal-social dynamics of the academic underachiever would prove to be more effective than methods which have been used previously.

#### Statement of the Problem

This study is an investigation of the effects of two types of group counseling on certain feelings and needs of male college academic underachievers. One experience emphasizes material which the counselor determines to be important via a priori assumptions about the cause of academic underachievement. Thus the examination of what seems to be a significant area for exploration as well as the frequency and degree of digression is left to the decision of the counselor and not the group.

The second experience emphasizes material which spontaneously originates from within the group and allows the group to determine its own topic for discussion. Thus the examination of what seems to be a significant area for exploration as well as the frequency and degree of digression is left to the decision of the group and not the counselor.

#### Importance of the Study

Various moves by both public and private agencies

(National Defense Education Act of 1958, Merit Scholarships,
etc.) attest to the increasing national and local concern

about the nations failure to use its existing talent and to motivate those who are academically able.

The Educational Policies Commission has stated that the most critical waste of America's manpower resources are students of high ability who leave school early, who do not go to college, or who drop out of college prematurely. A primary goal of the nation's educational institutions, therefore, has been to discover methods that not only effectively identify high ability students who underachieve but that also will enable them to develop their potential to the fullest.<sup>2</sup>

Although numerous techniques have been tried, the information is still extremely sparse and, due to the rising enrollments in educational institutions and the inability of qualified personnel to keep pace with this growth in numbers, the problem is on the increase.

It is therefore of national importance to further experimental investigation in this area and discover methods which allow more students to be handled by fewer counselors in a manner which also produces significant and lasting results.

<sup>&</sup>lt;sup>1</sup>C. G. Wrenn, <u>The Counselor in a Changing World</u> (Washington, D.C.: APGA, 1962), p. 70.

<sup>&</sup>lt;sup>2</sup>Educational Policies Commission, <u>Manpower and Education</u> (Washington, D. C.: National Education Association of the United States of America Association of School Administration, 1956).

#### Theoretical Background

The first attempts to alleviate the problem of academic underachievement occurred during the 1920's and focussed on changing inappropriate study habits such as the inability to concentrate or read well, the inability to maintain a scholastic schedule, the inability to outline properly, and the failure to review for exams adequately. 3,4

The problem, as understood during this period, was due to a lack of training in academic skills. Consequently any attempt to alter the difficulty was aimed at improving those skills which were considered to be inadequate.

During the 1930's a more dynamic understanding of academic underachievement began to appear in the literature. <sup>5</sup> This approach hypothesized that internal conflict and "mental disabilities of the anxiety type" could account for the differences between normal achievers and underachievers. <sup>6</sup>

The two orientations have persisted until the present day and most research studies can be classified as tending toward one theoretical position or the other i.e., academic

<sup>&</sup>lt;sup>3</sup>C. G. Wrenn, op. cit.

Francis P. Robinson, <u>Effective Study</u> (Rev. Ed.; New York: Harper and Brothers, 1961).

Daniel Harris, "Factors Affecting College Grades: A Review of the Literature," Psychological Bulletin, XXXVII (1937).

<sup>&</sup>lt;sup>6</sup>H. P. J. White, "An Application of Mental Tests to University Students," <u>British Journal of Educational Psychology</u>, I (1931), 279-295 and II (1932), 53-70.

underachievement is due to inappropriate training in scholastic skills or it is due to more basic, underlying personal-social factors.

A variety of hypotheses derived from the latter orientation have been published during recent years.

One of the first was Kirk who suggested that an unconscious hostile motivation in the underachiever is in conflict with his conscious desire to achieve. She states that "the academic failure probably has meaning in terms of unconscious satisfaction of the hostility usually directed toward some member of the family who demands success."

Renaud, Chief Psychologist of the University of California Student Health Service, agrees with Kirk and writes that, "so far as the dynamics of such patients are concerned, they tend to be pervasively resistant on an unconscious level to any externally imposed task."

At about the same time, McClelland, et al., suggested that, as a child, the underachiever was dependent on his parents and had to subordinate his interests to those of the larger family group.

<sup>&</sup>lt;sup>7</sup>Barbara Kirk, "Test Versus Academic Performance in Malfunctioning Students," <u>Journal of Consulting Psychology</u>, XVI (1952), 213-216.

<sup>8</sup> Ibid.

<sup>&</sup>lt;sup>9</sup>D. C. McClelland, J. W. Atkinson, R. A. Clark and E. L. Dowel, <u>The Achievement Motive</u> (New York: Appleton-Century-Crofts, 1953).

Gebhart and Hoyt<sup>10</sup> concluded that there is a positive correlation between academic underachievement and a high internal need for variety and change.

One of the most extensive theoretical formulations was recently published by Roth and Meyersburg.  $^{11}$ 

It is their opinion that academic underachievement is the result of an early "choice for poor achievement" in which, within the phenomenal world of the student, it is the most appropriate alternative.

The origin of the need to choose this alternative involves a series of very subtle devaluations of the child by the parents e.g., the parent pays no attention at all to the accomplishments or failures of the child, or the parent attends only to the child's failures and rarely to his successes. Both lead to a process of self-devaluation on the part of the child who, in order to maintain some kind of identity with the parent, must view himself as a failure. He learns to inhibit his productivity and, during the early years, keeps his development of scholastic skills to a minimum. Later, when these skills are essential to new learning, his choice for failure is unavoidably maintained by their insufficiency.

<sup>&</sup>lt;sup>10</sup>G. G. Gebhart and D. P. Hoyt, "Personality Needs of Under- and Overachieving Freshmen," <u>Journal of Applied Psy-</u> <u>chology</u>, XLII (1958), 125-128.

<sup>11</sup> R. M. Roth and H. A. Meyersburg, "The Non-Achievement Syndrome," <u>Personnel and Guidance Journal</u>, XLI (1963), 535-546.

Roth and Meyersburg contend that these dynamic processes clearly lead to a consistent syndrome that characterizes academic underachievers:

- 1. Poor academic achievement.
- 2. General self-depreciation; lack of recognition or pleasure at "being."
- 3. No clear system of personal goals or values.
- 4. Vulnerability to disparagement by others.
- 5. Immature relations with parents.
- 6. Frequent depressions.
- 7. Lack of insight about self and others.
- 8. Free floating anxiety.

He states that there are "signs which seem to point to 'superego conflict,'" and that academic underachievers are unable to delay impulse gratification as a result of not having developed appropriate values of their own. They resent and repudiate the standards of others that are imposed on them but, at the same time, they are dependent on others for guidance and therefore exist in a state of perpetual conflict.

James D. McKenzie, Jr., "The Dynamics of Deviant Achievement," <u>Personnel and Guidance Journal</u>, XLII (March, 1964), 683-686.

It is interesting to note that Berger, <sup>13</sup> in conclusion to his earlier study, found that the most successful group of college students were those who scored high in intellectual capacity and low in emotional conflict. Those who scored as high in intellectual capacity, but who were also high in emotional conflict, did significantly worse in academic achievement and had a much higher dropout rate.

To summarize, two theoretical approaches have been taken in an attempt to understand the process that creates academic underachievement:

The first, believing that inadequate training in scholastic skills is the primary difficulty, has emphasized how-to-study courses and reading improvement programs.

The second, believing that psychological processes within the underachiever actually inhibit his ability to utilize scholastic skills effectively even if proper training is available, has emphasized general methods which have been found to alleviate other types of emotional maladjustment such as individual counseling or group counseling of a non-directive nature.

The theory adopted for this study is in agreement with the second position i.e., that academic underachievement is based upon underlying personal-social factors which result

<sup>13</sup> I. L. Berger and A. R. Sulker, "The Relationship of Emotional Adjustment and Intellectual Capacity to the Adademic Achievement of College Students," Mental Hygiene, XL (1956), 65-77.

in those symptoms characterized as inadequate scholastic skills.

The theoretical sophistication in this area is still in its infancy and although some hypotheses have been made, no one, as yet, has attempted to synthesize all the research data that has been published into operational dimensions that uniquely characterize the underachiever, nor has anyone attempted to develop a particular program of affective counseling (either group or individual) that is based upon these unique dimensions.

A complete listing of research findings as they relate to the personality characteristics of over- and underachievers was made by Taylor<sup>14</sup> in conjunction with the research project of Farquhar.<sup>15</sup>

A review of this material, as well as other subsequent literature, was undertaken by the present investigator in an attempt to synthesize the work that has been done into characteristic categories that describe the <a href="mailto:male">male</a> underachiever.

The following six categories are the result of this review and comprise the <u>male college</u> underachiever syndrome:

<sup>14</sup> Ronald G. Taylor, "Personality Traits and Descrepant Achievement: A Review," <u>Journal of Counseling Psychology</u>, I (1964), 76-82.

<sup>15</sup> W. W. Farquhar, Motivation Factors Related to Academic Achievement, Cooperative Research Project 846, January, 1963 (East Lansing: Office of Research and Publications, College of Education, Michigan State University).

#### <u>Characteristic Categories of the Male</u> <u>College Academic Underachiever</u>

#### Category 1. Academic Underachievement

This dimension would reflect not only underachievement as measured by ability and grade point average, but would also include such aspects as poor study habits and the lack of specific scholastic skills.

#### Category 2. Goals and Values

The male underachiever either has unrealistic or non-existent goals for his life. His parents are noted for the same and either have no expectations for the child or those they do have are beyond attainment. As a result, the opportunity for the child to internalize appropriate goals, values and purposes, is negligible.

#### Category 3. <u>Dependence-independence</u>

The male underachiever considers himself to be an independent person, but evidence supports the contention that, underlying this, there is a predominant desire for close, dependent relationships, characterized by a high need for affiliation.

#### Category 4. Self-feelings

a. <u>Self-concept</u>. The male underachiever believes himself to be inadequate, inferior and unimportant as a person, yet his parents are perceived as being quite the opposite. For example, the level of perfection seemingly attained by the distant and authoritarian father is virtually unapproachable.

b. <u>Self-experience</u>. The male underachiever generally experiences high degrees of anxiety and is prone toward frequent periods of depression. These feelings, however, tend not to be accurately identified or appropriately labeled when they are experienced.

#### Category 5. Expression of Anger and Hostility

The male underachiever has difficulty in <u>directly</u> expressing his feelings of anger and hostility, especially in relation to authority figures. He is usually characterized by the suppression if not total repression of such affect, and frequently intrapunitivly directs them against himself.

#### Category 6. <u>Impulses and Controls</u>

The male underachiever characteristically fears the strength of his impulses and consequently feels a need for greater control, whereas in fact he tends to over control. While this is particularly the case with aggressive impulses, it also entails other interpersonal factors, such as those of a sexual, dependent, and affiliative nature.

In summary, the underachieving, male college student is characterized by a lack of realistic goals and purposes, a high need for affiliative, dependent relationships (although consciously denied), a sense of self that is experienced as grossly inadequate and inferior, an inability to directly express anger, a fear of the loss of impulse control (leading to over-control, periodic displacement and/or

intrapunitive behavior), high degrees of anxiety, frequent moods of depression, as well as poor study habits, poor motivation and inappropriate attitudes relating to the same. As a result, he is unable to recognize and use his potential in academic situations.

Because this study has been a joint project, the six characteristic categories that describe the male academic underachiever are divided into two separate parts:

- Achievement and Attitude Factors. (Categories 1 and
   2)
- 2. Personality Factors. (Categories 3, 4, 5 and 6)

  It is the purpose of this study to test for differences between groups on those personality characteristics
  which are significantly related to academic underachievement,
  i.e.;
  - A high need for <u>dependence</u> and <u>affiliation</u>. (Category 3)
  - A concept of self that is seen as <u>inadequate</u> and <u>inferior</u>. (Category 4, part a.)
  - A high degree of <u>anxiety</u> and <u>depression</u>. (Category
     part b.)
  - An inability to overtly express <u>feelings of anger</u>
     (Category 5)
  - An overall weakness in eqo strength. (Categories 3, 4, 5 and 6)

The present research is based upon the assumption that these processes in the male underachiever must be brought to <u>awareness</u> and <u>faced</u> before effective alteration is possible. It is therefore important to ask, in view of the fact that academic institutions advocate short-term treatment, whether or not a direct, leader-structured group counseling approach which pointedly <u>focusses</u> upon these dimensions and <u>relates</u> them to scholastic difficulties will be more profitable, as measured by degree and permanence of change, than one that is indirect in orientation and focusses on these dimensions only when and if they <u>spontaneously</u> arise from within the group.

It is also important to discover whether students who receive either of these two approaches will more readily improve along these dimensions than those who receive no group counseling at all.

#### The Hypotheses

The following hypotheses will be tested in order to determine whether the leader-structured method of group counseling is more effective in producing positive personality change than the group-structured method and whether the group-structured method is more effective than no group-counseling at all. Furthermore, the hypotheses are developed to test the theoretical assumptions that are implied in the categories delineated on page ten. The number and subsections

of each category are included after each hypothesis in order to guide the reader in the relationship between theoretical categories and area to be tested.

- 1. Dependence and Affiliation (Category 3)\*

  The need for dependent and affiliative relationships will be less in those subjects who experience the leader-structured method of group counseling than in those who experience the group-structured method; and less in those who experience the group-structured method than in those who receive no counseling.
- 2. Inadequate Self-concept (Category 4, part a)

  The Self-concept will be more positive for those subjects who experience the leader-structured method of group counseling than for those who experience the group-structured method; and more positive for those who experience the group-structured method than for those who receive no counseling.
- 3. Anxiety and Depression (Category 4, part b)

  Anxiety and depression will be less in those subjects who experience the leader-structured method of group counseling than in those who experience the group-structured method; and less in those who experience the group-structured method than in those who receive no counseling.

<sup>\*</sup>Refer back to the six characteristic categories of the male college academic underachiever, (p. 10).

4. Expression of Anger (Category 5)

Those subjects who experience the leader-structured method of group counseling will be more able to overtly express feelings of anger than those who experience the group-structured method; and those who experience the group-structured method will be more able to overtly express feelings of anger than those who receive no counseling.

5. Ego-Strength (Categories 3, 4, 5 and 6)

The ego-strength will be greater for those subjects who experience the leader-structured method of group counseling than for those who experience the group-structured method; and greater for those who receive the group-structured method than for those who receive ceive no counseling.

#### Definition of Terms

The following terms need to be defined in order to facilitate communication.

- 1. <u>Underachiever</u>.--An individual who scores at or above the 50th percentile on the College Qualification

  Test and whose grade-point average is below a 2.00 on a 4.00 scale. 16
- 2. Group-structured Group Counseling. -- An experience, shared by a group of students and a counselor, which places emphasis on material which spontaneously

<sup>16</sup> W. W. Farquhar and David Payne, "A Classification and Comparison of Techniques Used in Selecting Under- and Over-achievers," Personnel and Guidance Journal, No. 9, XLII (May, 1964).

originates within the group. The counselor is an active participant in the group discussion. However, topics to be discussed, frequency and degree of digression, time spent on particular problems, etc., are determined by the group rather than by the counselor.

3. Leader-structured Group Counseling.—An experience, shared by a group of students and a counselor, which places emphasis on material that is based upon a priori diagnostic assumptions and that is presented by the counselor for discussion. Purposes and goals, dependence-independence, expression of anger, and feelings about self are examples of the topics presented by the counselor and discussed by the group. The counselor presents each topic with a realistic example, and the group freely discusses their experiences and feelings as they relate to the particular topic introduced. During the discussion the counselor actively relates personality patterns with scholastic skills in order to hasten group movement and increase awareness.

#### Organization of the Study

The research that is related to group counseling of academic underachievers will be reviewed in the following chapter. The design, sampling procedures, treatments and

null hypotheses will be described in Chapter III. The results of the analyses will be discussed in Chapter IV and the summary statement, discussion and concluding remarks will be presented in Chapter V.

#### CHAPTER II

#### REVIEW OF LITERATURE

The literature included in this review is organized under three subsections:

- 1. Studies which contrast group counseling of academic underachievers with those who receive no counseling.
- Studies which contrast group counseling of academic underachievers with those who receive individual counseling.
- 3. Studies which contrast two or more different methods of group counseling with academic underachievers.

### Studies Which Contrast Group Counseling of Academic Underachievers with Those Who Receive No Counseling

Caplan studied the effects of group counseling interviews in the self-concepts of a group of adolescent "problem" boys by use of the Q-technique. He used regular staff school counselors of a large junior high school in San Francisco. California.

The boys counseled were between 12-15 years of age and all had records of long-term conflict with school

<sup>&</sup>lt;sup>1</sup>S. W. Caplan, "The Effects of Group Counseling on Junior High School Boys' Concepts of Themselves in School," <u>Journal of Counseling Psychology</u>, IV (1957), 124-128.

authorities and regulations. Thirty-four such students were divided into six groups, three experimental and three control. The three experimental groups met separately with a school counselor weekly for ten 50-minute interviews. These counseling interviews were non-directive in orientation i.e., a permissive atmosphere in the group session was created so that the boys felt free to discuss whatever topic they desired, and the counselor tried to maintain a non-evaluative attitude toward any feelings the boys had.

The Q-technique was used to measure changes in self and ideal-self concepts and was administered before and after the treatment period to both experimental and control groups.

Caplan states that a significant change took place within each experimental group whereas it did not occur for any of the control groups. There was no difference between the three experimental groups or between the three control groups.

Any increase in academic achievement, as measured by Honor Point Ratio change, was not significant.

The following criticisms are relevant to the Caplan study:

- The method of placing students in either the treatment or control group is not mentioned.
- 2. Differences in motivation, if any, was not measured.
- 3. The control groups were able, if they so desired, to receive individual counseling at the school

Counseling Center. This was also available to the experimental groups, even though they were receiving group counseling. (No statement is made about whether any students received individual counseling). Thus, the effect of individual counseling was not likely controlled.

4. Although Caplan's research does not use "underachievers" in the strict sense of the word, since he did not select them on the basis of actual achievement versus a measure of potential ability, he does demonstrate that group counseling, within the limitations of his design, brings about a significant movement toward a more healthy self-concept in students who were considered to have marked psychological difficulties.

Broedel, Ohlsen, Proff and Southard<sup>2</sup> studied the effects of group counseling on 29 ninth grade students (male and female) who scored in the top ten percent of their class on the California Test of Mental Maturity but who achieved, at the ninth decile or below during the previous academic year.

The entire population was divided into four groups, two experimental and two control, and each student was assigned to a particular group by the use of random numbers.

<sup>&</sup>lt;sup>2</sup>John Broedel, Merle Ohlsen, Fred Proff and Charles Southard, "The Effects of Group Counseling on Gifted Underachieving Adolescents," <u>Journal of Counseling Psychology</u>, VII (1960), 163-170.

The students in the experimental groups received 16 sessions of counseling, meeting two class periods a week for 8 weeks, while the controls received no counseling. Both experimental and controls were tested prior to and immediately after the 8 week counseling period.

Immediately following this period the control groups also received the same amount of counseling and were tested at the conclusion.

The same counselor was used for all groups.

and compared with members of the control groups on three variables: (a) academic performance as measured by the California Achievement Test Battery and grade-point averages earned in high school; (b) acceptance of self and others as revealed in responses to the Picture Story Test and (c) behaviors in interpersonal relationships reported on the Behavior Inventory by the pupils themselves, parents and counselor.

The investigator's concluded that the experience in group counseling did positively change the acceptance of self and of others, but did not increase academic performance.

They also state that behavioral changes were manifested by those in counseling and that these changes were in a healthy direction.

Follow-up studies, four and eighteen months later, yielded no new information.

The following criticisms are relevant to the Broedel, et al. study:

- 1. Because the same person did all counseling, the counselor effect was not controlled. They cannot legitimately determine whether changes were due to group counseling as such or due to the unique personality of the counselor or both.
- No description of the counselor's orientation and technique was given so that treatment conditions are unknown.

Spielberger, Weitz and Denny<sup>3</sup> have published one of the best designed studies in this area when they investigated the effect of group counseling on students who experience high degrees of anxiety.

Of an entering class of 565 male liberal arts freshmen at Duke University, 112 met the combined criteria of high anxiety and high intellectual ability as measured by the ACE, Taylor Manifest Anxiety Scale and Welsh Factor A Scale.

Fifty-six students, out of the 112 selected, volunteered and were assigned to an experimental-counseled group and a non-counseled control group. Both experimental and control groups were matched on the following variables: ACE

<sup>&</sup>lt;sup>3</sup>C. D. Spielberger, H. Weitz and J. P. Denny, "Group Counseling and the Academic Performance of Anxious College Freshmen," <u>Journal of Counseling Psychology</u>, IX (1962), 195-204.

scores, type of high school attended, and declaration of a major field of study.

The controls were told that all available spaces had been filled for that semester but they would have first choice for counseling during the following semester.

Those in the experimental group were assigned to four sub-groups, composed of 6 to 8 students, and experienced from 8 to 11 counseling sessions during the term.

The two counselors were members of the university faculty and were both equally experienced in counseling and clinical work with college students. They attempted to stimulate discussion, provide relevant factual information, summarize, clarify, and allowed the students to discuss whatever topic they desired. Topics most favored by the students included methods of study, vocational goals, dorm life, professors, etc., and to a lesser extent non-academic difficulties and problems of personal identity.

Academic achievement was measured by changes in gradepoint average. Data was also collected on factors such as
study habits and attitudes, class attendance, and personality
patterns by use of the MMPI, Survey of Study Habits and Attitudes, and Kuder Preference Record, Vocational.

Statistical tests (Analysis of Variance) revealed that the counseled students showed greater progress in academic performance than the non-counseled students, and that a positive correlation existed between the number of sessions attended and grade-point improvement.

Since such factors as motivation, scholastic ability, study habits and attitudes, class attendance, type of high school attended and declaration of major, were controlled, the investigators had a particularly strong case for their conclusion that group counseling was effective in alleviating debilitating anxiety.

The following criticisms are relevant to the Spielberger, et al. study:

1. There was no attempt to determine whether the difference in academic achievement was maintained beyond the conclusion of the experimental period. It is possible that debilitating anxiety was only relieved temporarily during the experience of group counseling and that any increase in academic achievement was soon lost.

Winborn and Schmidt<sup>4</sup> studied the effect of short-term group counseling on freshmen academic underachievers at Indiana University.

Subjects were selected who had received a score at or above the 80th percentile on the ACE and who made a first semester grade-point of C or below. On the basis of these criteria a total of 135 students (male and female) were selected. Sixty-eight students from this group were randomly

<sup>&</sup>lt;sup>4</sup>B. Winborn and L. G. Schmidt, "The Effectiveness of Short-Term Group Counseling Upon the Academic Achievement of Potentially Superior But Underachieving College Freshmen," <u>Journal of Educational Research</u>, LV (1962), 169-173.

selected to serve as experimental subjects and the remaining 67 were left as controls.

The experimental subjects were randomly divided into 6 sub-groups. Three sub-groups were randomly assigned to one counselor and three to another. Both counselors had substantial prior experience in counseling and were considered to be capable and qualified to conduct the group sessions.

Students in the experimental groups participated in a short-term group counseling program consisting of six counseling sessions extending over approximately two months.

The sessions were non-directive in orientation with the content relatively unstructured.

The California Psychological Inventory was administered to both experimental and control groups prior to the initiation of counseling and after the conclusion of the two month period. Three selected scales, as well as gradepoint average, were used to measure changes due to the experience of counseling.

The investigators conclude that students who did not participate in group counseling made significantly higher grade-point averages than those who did participate. Scores on the CPI were not found to be significantly different.

The following criticisms are relevant to the Winborn and Schmidt study:

1. There is no statement as to the degree of motivation of students in this population, or how much

administrative pressure, if any, was used to have them participate.

- 2. There is no statement as to how the controls were told that counseling would not be available.
- 3. The description of the counseling experience is limited so we are not given an adequate picture of what occurred.
- 4. The reduction in GPA on the part of those who experienced treatment could possibly be due to an increase in anxiety as a result of counseling being spread out over such an extended period of time i.e., no closure was given to the problems the counseling process brought to awareness.

Maroney<sup>5</sup> attempted to determine whether group counseling would effect significant differences in transfer students who were admitted on academic probation as opposed to a similar group who received no counseling.

Fifty-two transfer students on academic probation were randomly assigned to an experimental and a control group. The experimentals were divided into four sub-groups who then experienced 13 sessions of group discussion that focussed on study techniques and educational and vocational

<sup>&</sup>lt;sup>5</sup>K. A. Maroney, "Effectiveness of Short-term Group Guidance with a Group of Transfer Students Admitted on Academic Probation" (Unpublished Ed.D. dissertation, North Texas State University, 1962).

information. The length of treatment was six weeks and all groups were led by the same counselor.

Grade-point average and the Edwards Personal Preference Schedule (EPPS) was used to determine differences in academic achievement and personality needs. The EPPS was administered before and after the group counseling experience to both experimentals and controls.

Maroney concluded that significant changes in gradepoint average and on the EPPS did not occur as a result of the group guidance experience.

The following criticisms are relevant to the Maroney study:

- Although students participated in thirteen group sessions, the range of individual attendance was broad.
- 2. Both experimental and control subjects were informed of the purpose of the research prior to its beginning. Knowing that their grade-point averages were under scrutiny, it is possible that the controls worked more enthusiastically toward academic achievement than they would have otherwise. Thus, differences that would have normally taken place between the two groups, did not occur.

Duncan<sup>6</sup> selected students being supported on probation for an additional semester beyond the normal four semesters of the University College program at the University of Florida. Fifty-six such students were chosen and randomly assigned to experimental and control groups. The experimental subjects were divided into three sub-groups and each randomly assigned to a Ph.D. candidate as counselor. Each group then experienced twelve sessions of group counseling.

Both experimentals and controls were compared on grade-point average and the Index of Adjustment and Values.

Duncan concludes that no significant differences on either measure occurred as a result of group counseling.

The following criticisms are relevant to the Duncan study:

- No description of the counseling sessions is given nor to the particular orientation of the counselors.
- 2. No statement is made as to differences between experimental groups, if any. The negative effect of one more counselor, for example, could have lowered the total mean of the experimental group from significance to non-significance.
- 3. Homogeniety in motivation was not considered.

<sup>&</sup>lt;sup>6</sup>D. R. Duncan, "Effects of Required Group Counseling with College Students in Academic Difficulty" (Unpublished Ed.D. dissertation, University of Florida, 1962).

McCarthy studied the effects of non-directive counseling on freshmen high school boys who were academic underachievers.

Twenty-four such students from 17 high schools in the area were chosen on the basis of high scores on the California Test of Personality and low grade-point average. These were then divided into four sub-groups of 6 members each. Two groups served as experimental subjects and two served as controls. All groups were found to be homogeneous on the factors of aptitude and achievement.

The experimental subjects met one hour a week for a period of six weeks. At each session the counselor had the students read (to themselves) a disguised case history of one of the students in the group. They were then told that "in another part of the country a teen-age jury was successfully resolving court cases and that similar confidence was being placed in their ability to resolve school problems."

The case, and the attempt to find solutions to the boys' problem, became the focus of group attention during the ensuing counseling hour.

Grade-point average was used to measure changes in academic achievement and attitudinal change was measured by use of the Sentence Completion Test and the miniature

<sup>7</sup>M. V. McCarthy, <u>The Effectiveness of a Modified Counseling Procedure in Promoting Learning Among Bright Underachieving Adolescents</u>, Research Project ASE-6401 (Washington, D.C.: Department of Health, Education, and Welfare, 1959).

Q-sorts. Testing occurred before and after the six-week period of counseling to both experimental and control subjects.

The investigator concluded that counseling treatment did not significantly improve the attitudes or academic achievement of the experimental students as compared to those who received no counseling.

The following criticisms are relevant to the McCarthy study:

- 1. The focus of the group sessions was on the disguised case history and seldom on the immediate feeling, experiences, attitudes, etc., of the group members. This cannot be legitimately considered "non-directive counseling" and thus, was not an experiment designed to test the effectiveness of non-directive counseling.
- Conclusions are also questionable since the sample is extremely small.
- 3. The negative results may have been due to counselor effect and not group counseling. The unique influence of the one counselor was not controlled in this design.

## Studies Which Contrast Group Counseling of Academic Underachievers With Those Who Receive Individual Counseling

Marx<sup>8</sup> attempted to determine if counseling per se is effective in improving the grade-point average of a group of academic underachievers who entered the College of Liberal Arts as freshmen. He also desired to contrast the effectiveness of group and individual methods of counseling.

A group of 181 individuals was identified on the basis of discrepancy between composite score on the <u>Iowa College Scholarship and Placement Test Battery</u> and attained first semester grade-point average. These individuals were classified as either severe (N64) or moderate (N117) underachievers according to the extent of this discrepancy.

A control group (Control Group I) of 24 was selected proportionally in a random manner from the severe and moderate classifications. The remaining 157 individuals were contacted by one or more letters from University Counseling Service Personnel suggesting they make an appointment for counseling.

Individuals responding for counseling (N104) were assigned at random to individual or group counseling. The counselors, to whom clients were randomly assigned, were advanced graduate students in education or psychology.

<sup>&</sup>lt;sup>8</sup>G. L. Marx, "A Comparison of the Effectiveness of Two Methods of Counseling with Academic Underachievers" (Unpublished Ph.D. dissertation, Iowa State University, 1959).

Forty-six persons were seen in groups of three to seven; fifty-eight students were seen as individual clients. The fifty-three individuals who did not respond to any letter constituted Control Group II.

Counseling undertaken as part of this study was of an educational-vocational nature and consisted of two to four sessions. The criteria of counseling effectiveness were improvement in grade-point average and number of hours successfully completed. An analysis of variance design was used to determine if significant differences existed on either criterion between the control and two experimental groups.

Counselor estimates of the client benefit from counseling were determined by use of a Post-Counseling Rating Scale. A chi-square test was used to test the significance of the difference between the percentage of students in the control and experimental groups who persisted in school through the second semester.

Marx states in conclusion that there was a significant increase between the mean grade-point of those in individual counseling and those in Control Group II, and between those in individual counseling and those in group counseling.

There were no differences in grade-point found between students who experienced group counseling and either control group, nor between those who received individual counseling and those who were in Control Group I.

There was no correlation between Counselor Ratings and grade-point improvement.

The following criticisms are relevant to the Marx study:

- 1. Differences in motivation were not controlled.

  Those in the Control Groups expressed no desire to participate and yet were compared with experimental subjects who had given evidence of strong motivation by response to a letter and by calling in for an appointment. It is highly possible that differences between controls and experimentals would have occurred without treatment as a result of the latters' greater motivation to achieve.
- 2. There is no statement about comparable attendance between groups.
- 3. Differences were noted between individual and group methods of counseling but neither was shown to differ from students in Control Group I. These differences, when judging whether group or individual counseling is effective, should be considered inconclusive, due to the limited number of counseling interviews.

Speegle<sup>9</sup> attempted to analyze the effectiveness of group counseling versus individual counseling college students who are on academic probation.

<sup>&</sup>lt;sup>9</sup>P. T. Speegle, "The Effectiveness of Two Techniques of Counseling with Students on Academic Probation" (Unpublished Ed.D. dissertation, North Texas State University, 1962).

The subjects of the study were 180 second-semester college freshmen at North Texas State University who had been placed on academic probation during the fall semester of 1961. These students were assigned at random within two aptitude levels to three groups as follows: high aptitude students who were to receive group counseling; low aptitude who were to receive group counseling; high aptitude with individual counseling; low aptitude with individual counseling; high aptitude with no counseling; and low aptitude with no counseling. It is important to note that the experimental subjects gave evidence of a desire to participate whereas the controls did not. The counselors were two doctoral candidates with good records who were majoring in guidance and personnel administration.

The group guidance and individual counseling sessions had three major emphases. The first was to non-directively determine the source of the student's difficulty, the second was to teach study skill and other facts to aid the students in overcoming their problems, and the last was to motivate the students toward achieving academic success in college. Each student attended two to five sessions.

An analysis of the data was made at the end of the semester in which the counseling occurred. A significant relationship was found between group membership and the number of students scholastically eligible to return to college during the next semester. Those students who participated

in the group guidance sessions had a significantly greater number who were eligible to return than did those students who participated in individual counseling and those students who did not receive any counseling. No other significant relationships were found among the three groups on such variables as number of class absences and number of students dropping courses in the semester in which the counseling took place.

The following criticisms are relevant to the Speegle study:

- 1. There is no evidence that the groups were homogeneous before treatment began.
- 2. There is no statement as to counselor differences, if any, in the statistical analyses.
- 3. The important variable of motivation was not controlled in this design i.e., controls had not given evidence of a desire to participate.
- 4. The number of interviews held was extremely small.

  Clements 10 sought to determine whether group or individual counseling with academic underachievers was an effective means of modifying their self-concept, and also to determine whether group counseling was a more efficient use of counselor time than individual counseling.

<sup>10</sup>T. H. Clements, "A Study to Compare the Effectiveness of Individual and Group Counseling Approaches with Able Underachievers when Counselor Time is Held Constant" (Unpublished Ph.D. dissertation, University of Southern California, 1963).

All fifth, eighth, and tenth grade male students of the Santa Ana Unified School District were screened to ascertain if they met the criteria of able underachievers based on group test results. These criteria were a group intelligence test score of 110 or above and a grade-point average of C or less. Those boys who passed the initial screening were tested by a school psychologist. Students were accepted on the basis of Wechsler full-scale scores of 110 or higher.

The investigator matched two group-counseling groups, two individual-counseling groups, and two control groups of eight students each on each grade level in the study, using eleven factors. One hundred and forty-four project members were selected and given the initial Butler Self-Concept Q-Sort prior to treatment.

The group-counseling groups met one hour per week with a school psychologist for sixteen weeks. During this period of time each group counselee received two half-hour adjunctive counseling interviews. In the same period of time individual counselees received three one-hour counseling interviews with another school psychologist and the control group received no counseling. The sixteen one-hour meetings of the group counselees plus their two half-hour interviews equaled the three hours of counselor time received by the individual counselees. Comparable topics were covered in the group and individual counseling.

At the conclusion of the experiment all subjects were again given the Butler Self-Concept Q-Sort. Grade-point averages of students were compared to determine whether academic achievement had been significantly affected by counseling.

Clements concluded that self-concept changes did not occur between experimental subjects and controls; that grade-point averages did not change as a result of counseling; and that no significant difference in self-concept occurred between those who received group counseling and those who received individual counseling.

The following criticisms are relevant to the Clement study:

- 1. Differences in counselor effects were not controlled.

  One school psychologist counseled the groups and another the individuals. It is possible that any significant changes that might have occurred between group counselees and individual counselees as a result of different treatment, were offset by differences in counselor effectiveness.
- The question of homogeneous motivation between groups was not assessed.
- 3. There was no follow-up study to determine if changes occurred later in time.

Baymur and Patterson studied the differential effects of group counseling, individual counseling, onesession motivational counseling and no counseling, on underachieving high school students.

A student was designated as an underachiever if his percentile rank based on grades was 25 or more points below his percentile rank on the DAT score.

The subjects were matched four at a time on the following variables: discrepancy between grades and DAT score, potential scholastic capacity (DAT score), academic achievement (grades), sex, chronological age and socio-economic status. Pre-treatment analysis of variance indicated no significant differences between groups on these variables. The groups, each composed of eight students (male and female), were randomly assigned to the following treatment conditions:

Group I: Individually counseled experimentals.

This group was provided individual counseling at weekly intervals for a maximum of twelve weeks. All interviews were "client-centered" in orientation and lasted from 35 to 55 minutes each.

Group II: Group counseled experimentals.

Nine weekly sessions of group counseling were held.

These were also "client-centered" in orientation and conducted by the same counselor.

<sup>11</sup> F. B. Baymur and C. H. Patterson, "A Comparison of Three Methods of Assisting Underachieving High School Students," Journal of Counseling Psychology, II (1960), 83-88.

Group III: One-session motivational counseled experimentals.

This group met only once and were encouraged to reduce the gap between academic potential and academic achievement.

Group IV: Non-counseled controls.

This group was not seen by any counselor.

Three different measures were used to detect differences between the groups as a result of treatment effects i.e., a specially prepared Q-sort of 45 items from Hildens pool, the Brown-Holtzmann Survey of Study Habits and Attitudes, and grade-point average.

The authors used a two-way analysis of variance and concluded that the four groups did not differ significantly on any of the criteria.

A comparison of the two counseled groups with the two non-counseled groups indicated that they differed significantly in Q-sort adjustment score change (attributed to the change in group one) and in increase in grade-point average.

The following criticisms are relevant to the Baymur and Patterson study:

- The small sample size consisted of only 8 in each cell.
- 2. There is no indication that the groups were matched in terms of motivation to succeed academically.

- 3. All interviews were conducted by the same counselor, who was also the author of the study. It is possible that differences between the client-centered groups and the one-session plus control groups were due to counselor bias.
- 4. There was no follow-up beyond the immediate end of the experimental period. It is possible that differences between groups, although not occurring immediately, did so later.

# Studies Which Contrast Two or More Different Methods of Group Counseling With Academic Underachievers

Sheldon and Landsman<sup>12</sup> attempted to determine whether a lecture-study approach toward students in academic difficulty was more or less effective than one that predominantly utilized non-directive group counseling.

A group of twenty-eight freshmen, whose performance during their first semester of college was below expectation, were selected to participate in a course in Academic Methods. They were then divided into two classes using the matched pair technique and were paired according to intelligence as measured by the Ohio State Psychological Examination, general adjustment as measured by the California Test of

<sup>12</sup>W. D. Sheldon and T. Landsman, "An Investigation of Non-directive Group Therapy with Students in Academic Difficulty," <u>Journal of Consulting Psychology</u>, XIV (1950), 210-215.

Personality, reading ability as measured by the Iowa Silent Reading Test, and grade-point average.

Pre-test analysis of variance indicated that the two groups were homogeneous on the above dimensions.

The twenty-eight students met three times a week in Academic Methods. The two groups met together each Monday and were lectured on such subjects as the use of time, comprehension, and rate of reading, memorization, concentration, notetaking, and studying for examinations. The lecture was followed by a question and answer period, demonstrations, experiments, and tests. At this joint weekly meeting the conventional method of instruction, lecture, and discussion was used.

The total group was then divided into two separate groups which met two additional times each week. Group A, the control group, was taught in the conventional lecture and discussion manner by the instructor of the joint sessions. The methods included lectures and directed group discussions by the instructor, required reports made by students, supervised practice in reading and study skills.

Group B, the experimental group, spent its two periods in non-directive group therapy sessions led by a competent non-directive therapist.

At the end of the semester, all students in the study were retested with the California Test of Personality, and the Iowa Silent Reading Test. Grade-point averages were

compared to determine if there were significant differences in academic improvement.

The investigators found no differences on either the CPT or the ISRT, but did conclude that the non-directive group received a significantly higher grade-point average (.01 level) as a result of treatment conditions.

The following criticisms are relevant to the Sheldon and Landsman study:

- 1. The non-directive Group B, as stated, was counseled by a skilled psychotherapist. The competency of the lecturer in Group A is not mentioned. There is thus, no statement as to equivalence between counselors. It is possible that positive changes in Group B came as a result of the particular counselor's influence i.e., if he had been the lecturer rather than non-directive counselor he would have caused significant changes in Group A.
- 2. Since Group B received both types of counseling it is possible that differences came as a result of lecture-counseling interaction and not as a result of non-directive counseling alone.
- 3. The important variable of motivation was not considered. No mention is made as to differences, if any, in motivation between groups.
- 4. The method used to select the students was not mentioned. We have no information as to how the category "underachiever" was operationally defined.

DeWeese 13 compared the effects of non-directive group counseling with a remedial reading course on first semester college underachievers at the University of Illinois.

Sixty students were selected for a pilot study.

Fifty-one students participated in a similar study one year later. The selection criterion, previously established as being the best available in this college for predicting low-achievement, was a score on Part III of the Ohio State Psychological Examination sufficiently low to place the student below the 34th percentile rank. Three groups were formed in each of these studies. One group experienced group counseling for their first semester. A second was given remedial reading instruction. A third served as a control group. All subjects were volunteers, were randomly assigned to their respective groups, and were found to be homogeneous on ability and grades before treatment.

Group counseling consisted of weekly meetings, one hour in length, for 10 weeks. The subjects met in a room in the student center during their normal college day. The remedial program consisted of semi-weekly meetings, 45 minutes in length, for 14 weeks. All subjects had taken the OSPE, the short group form of the Minnesota Multiphasic Personality Inventory and the Cooperative English

<sup>13</sup>H. L. DeWeese, "The Extent to Which Group Counseling Influences the Academic Achievement, Academic Potential, and Personal Adjustment of Predicted Low-Achieving First Semester College Freshmen" (Unpublished Ed.D. dissertation, University of Illinois, 1959).

Examination, C-2, Reading Comprehension (Higher Level) Test, before experimentation. An alternate form of this test was administered at the end of the semester. The OSPE and MMPI were administered to the subjects of the second study, at the end of the semester. In the pilot study, an alternate form of the OSPE was used in post-testing. The MMPI was not used in the pilot study.

Group counseling, focusing on permissive, free discussion of topics emanating from the subjects own wishes and needs, was adhered to. (Non-directive)

The results of this study were inconclusive. counseled group escaped academic casualty or near-casualty more often than either of the other groups. The difference between the counseled and control groups was significant whereas that between the counseled and remedially instructed was not. The grade-point averages of the counseled students were not superior to those of the other groups. The remedially instructed students improved their academic potential, as measured by the OSPE, more than did the other two groups. This improvement was significant when compared to the control subjects but not when compared with the counseled. None of the groups experienced significant improvements in personal adjustment, as measured by the maladjustment scale of the MMPI.

The following criticisms are relevant to the DeWeese study:

- The factor of time was not adequately controlled. The counseling subjects met for approximately 10 hours in all whereas the reading subjects met approximately 21 hours. The extra time for the reading subjects could have offset any significant differences that would have been evident as a result of counseling.
- 2. There is no statement as to the competence of the group counselor or his equivalence to those who conducted the remedial reading program. Dissimilarity between leaders could account for the lack of significant differences between groups.

Hart<sup>14</sup> investigated the differences in effect between a cognitive group counseling approach in which the focus was on academic skills, study habits, reading, schedule problems, etc., and an affective approach in which the focus was on feelings, attitudes, and emotional experiences.

"Academic underachievers" were designated as firstterm freshmen students (both male and female) who scored at
the 50th percentile on the College Qualification Test but received a fall term grade-point average of below a 2.00 on a
4.00 scale.

Ninety-six volunteers, who met the above criteria, were randomly divided into three treatment categories:

<sup>14</sup>D. Hart, "A Study of the Effects of Two Types of Group Experiences on the Academic Achievement of College Underachievers" (Unpublished Ph.D. dissertation, Michigan State University, 1963).

Cognitive Counseling, Affective Counseling and Control. Subjects in the two experimental treatment groups were then randomly subdivided into six groups with three being randomly assigned to one counselor and three to another of equal competence.

The Control group was informed that due to the large number of students who desired to participate and the limited staff available, it was impossible to include them but plans would be made to see them in the future.

All groups met for one hour a week for a period of five to seven weeks.

The cognitive treatment was concerned with providing information and developing special academic skills which were deemed necessary for adequate performance in school. Topics in these groups included examination of vocational objectives, study schedules, reading habits, techniques in taking exams, etc.

The affective groups focussed on such areas as unconscious motivation, feelings of depression, feelings of hostility, pressures from outside sources, etc.

The cognitive groups were leader-centered while the affective groups tended toward a more non-directive, permissive atmosphere.

Grade-point averages were compared for all treatment and control subjects at the conclusion of the experiment and three months following.

Hart concludes that:

- 1. The students who received affective group counseling earned significantly higher grade-point averages during the term than students who received no counseling. This difference did not exist at the follow-up period three months later.
- 2. There were no differences between the Cognitive Groups or Affective Groups at the conclusion of the experiment or three months later.

Hart's study was one of the best in terms of sample size, control for motivation, replication and follow-up.

The following criticisms are relevant to the Hart study:

- The number of sessions held, 5 to 7, was possibly too small for the essential differences in counseling methods to have significant effect.
- 2. The Control subjects were invited to participate in the group experience but were then told that room was no longer available. Nothing else was done for them. It is possible that this could have had an adverse effect on their academic performance.
- 3. Spielberger demonstrated that high anxiety freshmen were able to accomplish more academically when group counseling was available. It is possible, since Hart worked only with first-term freshmen, that non-directive, affective counseling alleviates this

anxiety to a greater extent than the Cognitive emphasis. The controls then, by the end of the freshman year, would have learned to handle this first-term anxiety and would have lessened its debilitating effect. This could account for the fact that no differences occurred at the end of the follow-up period. It would have helped if Hart had obtained some measure of anxiety level at the conclusion of the treatment, when differences occurred, and at the follow-up period, when differences had disappeared.

## Summary

The results of the research reviewed in this chapter are summarized in Table 2.1.

Only two studies have demonstrated that group counseling has a measureable effect upon the personality of academic underachievers i.e., Caplan and Broedel, et al. Both of these studies had serious limitations in their designs and only used subjects who were between 12-15 years of age.

All the research programs to date that were designed to determine whether or not group counseling can be effective

<sup>15</sup> Caplan, op. cit.

<sup>16</sup> Broedel, et al., op. cit.

A summary of the results of previous group counseling research on male academic underachievers. Table 2.1.

Name	Subjects	Instruments	No. of Sessions	Results
1. Studies wl received 1	Studies which contrasted group counseling of academic underachievers with those who received no counseling:	unseling of academic u	nderachievers wi	th those who
Caplan	34 high school male problem students	Q-Sort (Self- ideal-self)	10 weeks, 10-50 " sessions	Sig.*
Broedel, et al.	29 ninth grade students (male and femmale), high ability, low achievement	<pre>CAT, * PST (accept- ance of self and others), BI</pre>	8 weeks, 16-50 " sessions	CAT, N.S. BI, N.S. PST, Sig.
Spielberger, et al.	112 male, liberal arts college freshmen, high anxiety high ability. (These students were not considered to be underachievers)	GPA	12 weeks, 8 to 11-50" sessions	Sig.*
Winborn, et al.	135 college freshmen (male and female), high ability, low achievement	CPI, GPA	8 weeks, 6-50 " sessions	CPI, N.S.* GPA, <u>Sig.</u> in opposite direction.

Maroney	52 college transfers on academic proba- tion	EPPS, GPA	6 weeks, 13-50 " sessions	EPPS, N.S. GPA, N.S.
Duncan	56 junior college students on proba- tion	GPA, IAV	12-50 " sessions	GPA, N.S. IAV, N.S.
McCarthy	24 high school males, high ability, low achievement	GPA, SCT, Q-Sort	6 weeks, 6 - 1 hr. sessions	GPA, N.S. SCT, N.S. Q-Sort, N.S.
2. Studies whi ceive indiv	Studies which contrast group counseling ceive individual counseling.	of academic	underachievers with	those who re-
Marx	128 first term college freshmen, high ability, low achievement	GPA	No statement about length of time is given	Individual counseling vs controls, Sig.*
Speegle	180 college freshmen (male and female) high ability, low achievement, on aca- demic probation	Removal from probation	Range from 2- 5, 1 hr. sessions equally	Groups had more people significantly off probation than indivdual counseling or controls
Clements	144 junior high males, high ability, low achievement	BSC-Q-Sort, GPA	Groups = 16 weeks, 1 hr. per week individual = 3 - 1 hr. sessions controls = nothing	Q-Sort, N.S. GPA, N.S.

Table 2.1. continued

		_	
Results	Q-Sort, N.S. B-HSSHA, N.S. GPA, N.S.	academic	CPI, N.S. ISRT, N.S. GPA, Sig.*
No. of Sessions	Group A = 12 (weeks, 9 50 "sessions 1 Group B (Individual counsers) 12 weeks, 12 - 35-55 "session Group C, one 1 hr. session Group D, no counseling	counseling with ac	Group A = 3 CP hrs. per week in lecture on IS study skills Group B = 1 hr. per week GP on study skills, 2 hrs. per week in non-directive counseling (Both Groups for 10-12 weeks)
Instruments	Q-Sort, B-H SSHA, GPA	or more methods of group cou	CPI, ISRT, GPA
Subjects	32 high school students (male and female), high ability, low achievement	ontrasted two	28 college fresh- men, high ability, low achievement
Name	Baymur, et al.	3. Studies which cunderachievers.	Sheldon and Landsman

hr. group counseling per week for 10 MMPI, N.S. weeks Group B = 2 GPA, N.S. hrs. per week, 14 weeks of remedial reading Group C = nothing	Group A = 1 hr.  per week for 5 weeks (affective focus) Group B = 1 hr. per week for 5 weeks (cognitive GPA, focus) III Sig.* at Group C = end of treat- nothing ment but not 3 months later		<ul> <li>'S: Edwards Personal Preference Schedule</li> <li>': Index of Adjustment and Values</li> <li>'T: Iowa Silent Reading Test</li> <li>'I: Minnesota Multiphasic Personality</li></ul>
MMRT,		Legend	EPPS: IAV: ISRT: MMPI: OSPE: SCT:
OSPE, GPA	<b>GPA</b>	Lec	rey of Attitudes t nent Test lity
lll first semester college students (male and female) high ability, low achievement	96 college second term freshmen, high ability, low achievement	Refer to Legend.	Behavior Inventory Brown-Holtzman Survey of Study Habits and Attit Butler Self-Concept California Achievement T California Personality Inventory
DeWeese	Hart	* Ref	B-I: B-HSSHA: BSC Q-Sort: CAT: CPI:

in altering the personality patterns of college underachievers, have yielded non-significant results. But this is no reason to judge group counseling per se as ineffective.

The experiments discussed in this review were frequently handicapped by weaknesses in design and methodology that would lead to a rejection of their research hypotheses.

The most common of these were the failure to control for the effect of differences in motivation, sample sizes that were too small, failure to control for counselor bias or training, non-random selection of subjects, and particularly the failure to adequately isolate the important treatment variables.

The predominant method of group counseling has been of a non-directive, permissive nature in which the group itself spontaneously determines the topic of discussion. It is possible that this particular method, although effective in other areas, is not appropriate for the unique factors which comprise the underachiever syndrome.

The present study is, therefore designed to do the following:

- 1. Select an adequate number of subjects.
- 2. Control for motivation.
- Establish greater homogeneity by using only male academic underachievers.
- 4. Provide longer counseling sessions—at least 1 1/2 hours in length in order to increase the intensity of the group interaction.

- 5. Clarify the unique dimensions of the male, college underachiever syndrome through synthesis of previous descriptive research.
- 6. Develop a method of group counseling which specifically focusses on these dimensions and relates them to academic difficulties.

#### CHAPTER III

#### DESIGN AND METHODOLOGY

This experiment is designed to test the differences in effect of two types of group counseling on male college academic underachievers, as measured by selected scales of the Stern's Activities Index (hereinafter referred to by the letters SAI) and selected scales of the Minnesota Multiphasic Personality Inventory (hereinafter referred to by the letters MMPI).

## Design

The eight counseling groups were randomly divided between the two counselors and the two types of counseling i.e., Leader-structured and Group-structured. All subjects were assigned on a random basis to the various treatment groups. Each counselor replicated the other. The third level of the design, the Control group, received no treatment other than a one hour period of test interpretation (after the conclusion of the experimental period). They were therefore similar to the treatment subjects in every way except they did not participate in the counseling experience. The effect of group counseling could then be

determined by comparison with the control subjects. The design of this study is summarized in Table 3.1.

Table 3.1. Summary of the basic design of the experiment.

	Leader- structured method	Group- structured method	No counseling control
Counselor A	2 groups	2 groups	
Counselor B	2 groups	2 groups	
TOTAL	4 groups	4 groups	Control group

### Instrumentation

Criteria used to measure the immediate effects of experimental treatment were selected scales of the SAI and MMPI.

The SAI was developed from a pool of over a thousand items describing commonplace daily activities and feelings which appeared to represent manifestations of need processes. Eight psychologists independently coded these items, and the SAI was assembled from those items which were unanimously considered to be diagnostic of specific need patterns. In its original form the SAI consisted of 400 items, distributed unequally among forty-one need categories. Through subsequent revisions the scales were reduced in number, with overlapping items being eliminated, and made equal in length so that the present SAI is composed of thirty subscales with ten items

in each scale. Subjects are required to respond to these items by indicating their preference or rejection of the activity mentioned. Stern states that the assumptions underlying the rationale for this procedure are (a) "characteristic classes of interactions, as conceptualized by need constructs, are reflected in specific activities and (b) the degree of interest in these activities is an index to actual participation in such interactions."

The most convincing proof of the validity of the SAI has been from (a) positive recognition of unidentified descriptions of subjects by psychiatrists, supervisors and colleagues, 1,2 from comparisons with other known tests, 3,4,5 and from its ability to discriminate between different

N. G. Haring, G. G. Stern and W. M. Cruickshank Attitudes of Educators Toward Exceptional Children (Syracuse: Syracuse University Press, 1958).

<sup>&</sup>lt;sup>2</sup>J. Scanlon, "The Activities Index: An Inquiry Into Validity" (Unpublished Ph.D. dissertation, Syracuse University, 1958).

<sup>&</sup>lt;sup>3</sup>G. G. Stern, M. I. Stein and B. S. Bloom, <u>Methods</u>
<u>In Personality Assessment</u> (Glencoe: Free Press, 1956).

<sup>&</sup>lt;sup>4</sup>H. Pane, An unpublished study in which the SAI and Strong Vocational Interest Blank are compared (Examiners Office, University of Chicago, 1953).

<sup>&</sup>lt;sup>5</sup>G. Stern and J. Masling, An unpublished study in which the SAI and independent analyses of Thematic Apperception Test protocols are compared (Dept. of Psychology, Syracuse University, 1958).

student populations. 6,7,8,9 The results of these as well as other research projects support the use of the SAI as an adequate instrument to test the hypotheses in this study.

The MMPI was developed by Hathaway and McKinley (1940) at the University of Minnesota as a clinical instrument for use in psychiatric diagnosis but, since that time, has become popular in many counseling centers and consulting services.

The MMPI consists of 550 affirmative items which the subject designates as either being a true or false statement about himself. The items range widely in content, covering such areas as health, family, habits, occupation, sex, phobias, morale, political and social attitudes, delusions, ideas of reference and the like.

Since its publication in 1940, a vast amount of research about its validity and reliability has been completed.

<sup>&</sup>lt;sup>6</sup>D. A. Briggs, "The Stern's Activities Index as a Means of Predicting Social Acceptability and Improvement in Reading Skills" (Unpublished Ph.D. dissertation, Syracuse University, 1958).

<sup>&</sup>lt;sup>7</sup>D. F. Tatham, W. Stellwagen and G. G. Stern, "The Stern's Activities Index as a Measure of Differences Among Vocational and Academic Groups," <u>American Psychologist</u>, XII, 7 (1957), 457.

<sup>&</sup>lt;sup>8</sup>F. W. Naugle, J. Ager, D. Harvey and G. G. Stern, "Relationships Between Student Self-descriptions and Faculty-Student Stereotypes of the Ideal Student," <u>American Psychologist</u>, XII, 7 (1957), 391.

<sup>&</sup>lt;sup>9</sup>M. Siegelman, "Distinctive Personality Patterns in Three Vocational Groups as Measured by the Stern's Activities Index" (Unpublished Ph.D. dissertation, University of Texas, 1957).

"It can be confidently stated," one reviewer writes, "that in the whole history of modern psychology there has been no other personality inventory on which so much theoretical and practical work has been done." In a survey published in 1956, for example, Welsh and Dahlstrom brought together 66 of the most important articles and included a bibliography of 689 titles. In 1959 The Fifth Mental Measurements Year-book listed 779 references and the 1960 handbook by Dahlstrom and Welsh contains over 1200 references.

The clinical validity of the MMPI has been amply supported by many of these research programs to the extent that it is generally conceded to be "more valid than the average personality inventory" and is certainly sufficient in this respect to test the hypotheses of the present study.

For further information the reader is referred to the excellent summary of MMPI validity research by Cottle. 15

<sup>100.</sup> K. Buros (ed.), The Fifth Mental Measurements
Yearbook (Highland Park, New Jersey: Gryphon Press, 1959),
p. 166.

<sup>11</sup>G. S. Welsh and W. G. Dahlstrom (eds.), <u>Basic Readings on the MMPI in Psychology and Medicine</u> (Minneapolis: University of Minnesota Press, 1956).

<sup>&</sup>lt;sup>12</sup>O. K. Buros, <u>op. cit</u>.

W. G. Dahlstrom and G. S. Welsh, <u>An MMPI Handbook</u>:

<u>A Guide to Use in Clinical Practice and Research</u> (Minneapolis: University of Minnesota Press, 1960).

<sup>&</sup>lt;sup>14</sup>O. K. Buros, <u>op. cit</u>., p. 106.

<sup>15</sup>W. C. Cottle, <u>The MMPI: A Review</u> (Lawrence, Kansas: University of Kansas Press, 1953).

## The Population

A male underachiever, as operationally defined in this study, is a freshman or sophomore student who was attending Michigan State University during the academic year 1963-1964; who scored at the 50th percentile or higher on the College Qualification Test (hereinafter referred to as CQT) and whose cumulative grade-point average at the end of fall term, 1963, was <u>below</u> a 2.00 (2.00 is a C average on a 4.00 grading scale).

Six hundred and eighty-three students, who according to the above criteria could be classified as academic underachievers, received, during the four-day winter term registration period, mailed invitations to participate in a group program at the University Counseling Center. The letter (a copy of which is included in Appendix A) stated that group sessions would occur once a week and last throughout the term. It also mentioned that the program was designed to help them improve academically and had demonstrated its effectiveness in other major universities.

Ninety-five students returned an enclosed reply form and thus indicated their desire to participate in the counseling program.

### Random Assignment

All subjects were first separated into common meeting times. This was made possible by having them mark on the reply form, all hours during the week in which they would be free to participate.

Four of these twelve groups were randomly selected as control groups.

The remaining eight groups were randomly divided between the leader-structured treatment and the group-structured treatment by the flip of a coin. The same method was used in randomly assigning two groups within each treatment to each counselor.

Within a few days a personal letter was sent to each control subject stating that they could not be seen this term, due to the large number of responses and the limited staff available, but would receive testing near the end of the winter term and an interpretation of these tests shortly after the beginning of the spring term. It also stated that the University College Dean, in view of the motivation to better themselves academically, would not remove them from the University during the academic year if by any chance they fell within the automatic withdrawal range during the ensuing winter term. (A copy of the letter sent to the control group is included in the Appendix).

The experimental subjects, in order to properly control for these variables, also received a period of test interpretation, during the beginning weeks of the spring term, as well as the assurances from the University College

Dean that they would not be withdrawn from school for academic reasons.

### Sample

Of the ninety-six students who were originally included in the sample, fifteen were not able to be used in the experimental analyses.

The experiment was designed to include eight group sessions of 1 1/2 hours each. The students included in the analyses attended a minimum of six sessions. This acceptable range of attendance was chosen as a base line in order to allow for the possibility of missing sessions due to illness, exams, and other such events that could not be helped by the student.

Counselor A received a total of 15 students in the two leader-structured groups at the beginning of the experiment. Three failed to attend the minimum number of six sessions and one did not report for the first session. This left a total of 11 subjects for analysis who completed treatment.

Counselor B received 14 subjects in his two leader-structured groups at the beginning of the experiment. Two did not attend the six session minimum and one was asked to withdraw from the University by the Office of Vocational Rehabilitation before testing could be undertaken. This left a total of 11 subjects for analysis.

Counselor A received 16 students in his two groupstructured groups. Three failed to attend the six session minimum so that 13 subjects were left for analysis.

Counselor B received 14 subjects in his groupstructured groups. One, for statistical reasons, was removed after the treatment period. The mean grade-point
average of the fall term within this group was computed and
then the person who was closest to the mean was selected.
The mean of the group was therefore unchanged even though
one individual was taken out in order to facilitate the
analysis.

The control group was composed of 37 subjects at the beginning of the experiment. Two students dropped out of school before the term ended, one was in a special "Methods of Study" class and another was receiving individual counseling. Thirty-three students were thus available for analyses at the conclusion of the treatment period.

Out of the 96 subjects, therefore, 81 were left for statistical analyses at the conclusion of the experimental period.

As mentioned, subjects were placed with counselor, treatment vs. control and type of treatment on a random basis and are therefore considered to be homogeneous in terms of selection criteria.

Table 3.2. Number of male students in each treatment group who are included in the analysis.

	·····		N=81
	Leader- structured method	Group- structured method	No counseling control
Counselor A	11	13	
Counselor B	11	13	
TOTAL	22	26	33

### Leader-Structured Group Counseling

During the beginning of each of the initial sessions (the first six sessions) each counselor presented a clear and uniform description of one of the characteristic categories of the male underachiever. (Refer to Chapter I in which the characteristic categories were summarized).

It was unambiguously stated that evidence of previous research supports the view that the characteristic was related to their behavioral pattern and that the group purpose for that session was to focus upon this topic.

The Counselor consistently attempted to relate the discussion of the dynamic characteristic to practical aspects of academic difficulty.

Each group was then given the opportunity to freely discuss their feelings and experiences as they related to

the particular characteristic mentioned and each member was encouraged to become as involved as possible in the discussion.

Movement away from the specific category under discussion was allowed only if the <u>counselor</u> perceived it as necessary and important.

The remaining two sessions commenced in an open manner and the content of discussion was left to the groups' discretion.

### Group-Structured Group Counseling

This approach was group-centered in the sense that the group itself determined spontaneously at each session what its topic for discussion would be rather than the group counselor doing so via a priori diagnostic assumptions.

The frequency and degree of digression and the examination of what seemed to be a significant area for exploration was left to the decision of the group--not the counselor.

## Counseling Setting

Four of the 8 groups met in a spacious office in the Counseling Center at Michigan State University. These four sat facing each other in a circle.

Two groups met in one conference room at the Counseling Center of the University while two met in another. The

two in the first sat facing each other in a circle while the latter sat around a small table.

Seats were not assigned at any session although the counselor sat in the same seat in the leader-structured groups.

During five of the eight counseling sessions for each group a tape recording was made in order for the counselors to detect any differences in counseling method within the same treatment.

All rooms were free from distraction.

### The Counselors

Both counselors were Ph.D. candidates in Counseling Psychology and second-year assistant Instructors at the Counseling Center. Both have similar backgrounds in counseling and were judged to be essentially equal in ability by those who have supervised them.

### Consistency and Verification of Counseling

The two counselors met weekly to discuss objectives, review tape recordings of the sessions and compare notes as to uniformity of method.

In order to determine whether the different counseling methods were perceived differently by the respective groups, a yes-no check list was prepared and administered to all groups just prior to the last session. (A copy of this check list is in Appendix B).

The check list was composed of 22 items, 11 of which represented the leader-structured method of group counseling and 11 of which represented the group-structured method.

Each group was asked to answer the items in a manner that best described the role of the counselor as experienced in his group.

A t-test was computed to determine whether or not the two groups actually differed in their perception of the counseling methods. This test yielded a t value of 2.25, which is greater than 1.95 at the .05 level of confidence, and therefore supported the contention that differences in treatment did exist and were maintained throughout the experimental period.

### The Null Hypotheses

The basic research hypotheses of the investigation are broadly stated in Chapter I. A more specific formulation of these hypotheses as they relate to the design of the experiment considers also counselor differences as well as any interaction between counselor and counseling method.

# One-way Analysis of Variance of Dependence

Mean differences in the need to be dependent between subjects in the leader-structured, group-structured and control groups will be analyzed by a one-way analysis of variance.

The intensity of the need to be dependent will be measured by the <u>Dependency</u> scale (Navran, 1954) of the Minnesota Multiphasic Personality Inventory (MMPI).

<u>Null Hypothesis One</u>.--There are no differences in the mean Dependency scores on the MMPI between subjects who experienced different methods of group counseling and subjects who received no counseling.

Alternate Hypothesis One. -- The mean Dependency score on the MMPI is less for those subjects who experienced the leader-structured (LS) method of group counseling than for those who experienced the group-structured (GS) method and less for those who experienced the group-structured method than for those who received no counseling (C).\*

Symbol: 
$$Ho_1$$
:  $LS = GS = C$ 
 $H_1$ :  $LS < GS < C$ 

# Two by Two Analysis of Variance of Dependence

Mean differences in dependence due to two different methods of counseling, two counselors, and an interaction between type of counseling and counselors will be analyzed by a  $2 \times 2$  analysis of variance.

<sup>\*</sup>Henceforth Leader-structured = LS, Group-structured = GS and Control = C.

<u>Null Hypothesis Two.</u>—There are no differences in the mean Dependency scores on the MMPI attributable to different methods of counseling.

Null Hypothesis Three. -- There are no differences in the mean Dependency scores on the MMPI attributable to different counselors.

Null Hypothesis Four. -- There are no differences in the mean Dependency scores on the MMPI attributable to an interaction between counselor and method of counseling.

## One-way Analysis of Variance of Affiliation

Mean differences in the need for affiliation between subjects in the leader-structured, group-structured and control groups will be analyzed by a one-way analysis of variance.

The need for affiliation will be measured by the Affiliation scale of the Stern's Activities Index (SAI).
This scale is defined as measuring the need for "close, friendly and reciprocal associations."

Null Hypothesis Five. -- There are no differences in the mean Affiliation scores on the SAI between subjects who experienced different methods of group counseling and subjects who did not experience group counseling.

Alternate Hypothesis Five. -- The mean Affiliation score on the SAI is less for those subjects who experienced the leader-structured method of group counseling than for

those who experienced the group-structured method and less for those who experienced the group-structured method than for those who received no counseling.

Symbol: 
$$Ho_5$$
: LS = GS = C

# Two by Two Analysis of Variance of Affiliation

Mean differences in affiliation due to two different methods of counseling, two counselors, and an interaction between type of counseling and counselor will be analyzed by a two by two analysis of variance.

Null Hypothesis Six. -- There are no differences in the mean Affiliation scores on the SAI attributable to different methods of counseling.

Null Hypothesis Seven. -- There are no differences in the mean Affiliation scores on the SAI attributed to different counselors.

Null Hypothesis Eight. -- There are no differences in the mean Affiliation scores on the SAI attributable to an interaction between counselors and method of counseling.

# One-way Analysis of Variance of Positive Self-Concept

Mean differences in self-concept between subjects in the leader-structured, group-structured and control groups will be analyzed by a one-way analysis of variance. 71

Positive Self-Concept will be measured by the SAI

Abasement scale. This scale is defined as measuring the degree of "self-depreciation and devaluation," or conversely, the degree to which a person values and accepts himself.

<u>Null Hypothesis Nine</u>.--There are no differences in the mean Abasement scores on the SAI between subjects who experienced different methods of group counseling and subjects who did not experience group counseling.

Alternate Hypothesis Nine. -- The mean Abasement score on the SAI is less for those subjects who experienced the leader-structured method of group counseling than for those who experienced the group-structured method and less for those who experienced the group-structured method than for those who received no counseling.

Symbol:  $Ho_9$ : LS = GS = C

 $H_9: Ls < Gs < C$ 

# Two by Two Analysis of Variance of Positive Self-Concept

Mean differences in self-concept due to the effects of two different methods of counseling, two counselors and an interaction between type of counseling and counselor will be analyzed by a two by two analysis of variance.

Null Hypothesis Ten. -- There are no differences in the mean Abasement scores on the SAI attributable to different methods of counseling.

Null Hypothesis Eleven. -- There are no differences in mean abasement scores on the SAI attributable to different counselors.

Null Hypothesis Twelve. -- There are no differences in mean abasement scores on the SAI attributable to an interaction between method of counseling and counselor.

# One-way Analysis of Variance of Anxiety

Mean differences in anxiety between subjects in the leader-structured, group-structured and control groups will be analyzed by a one-way analysis of variance.

Anxiety will be measured by the Taylor Manifest Anxiety Scale, (TMAS).\*

Null Hypothesis Thirteen.--There are no differences in the mean TMAS scores between subjects who experienced different methods of group counseling and subjects who received no counseling.

Alternate Hypothesis Thirteen. -- The mean TMAS score is less for those subjects who experienced the leader-structured method of group counseling than for those who experienced the group-structured method and less for those who experienced the group-structured method than for those who received no counseling.

<sup>\*</sup>Henceforth the Taylor Manifest Anxiety Scale will be referred to as TMAS.

Symbol:  $Ho_{13}$ : LS = GS = C

H<sub>13</sub>: LS < GS < C

# Two by Two Analysis of Variance of Anxiety

Mean differences in anxiety due to the effects of two different methods of counseling, two counselors and an interaction between type of counseling and counselor will be analyzed by a two by two analysis of variance.

Null Hypothesis Fourteen. -- There are no differences in the mean TMAS scores attributable to different methods of counseling.

Null Hypothesis Fifteen. -- There are no differences in the mean TMAS scores attributable to different counselors.

<u>Null Hypothesis Sixteen.--</u>There are no differences in the TMAS scores attributable to an interaction between method of counseling and counselor.

## One-way Analysis of Variance of Depression

Mean differences in a Depression between the leaderstructured, group-structured and control groups will be analyzed by a one-way analysis of variance.

Depression will be measured by the MMPI <u>Depression</u> scale.

Null Hypothesis Seventeen.--There are no differences in the mean Depression scores on the MMPI between subjects

who experienced different methods of group-counseling and subjects who did not experience group-counseling.

Alternate Hypothesis Seventeen. -- The mean Depression scores on the MMPI is less for those subjects who experienced the leader-structured method of group counseling than for those who experienced the group structured method and less for those who experienced the group-structured method than for those who received no counseling.

Symbol: 
$$Ho_{17}$$
: LS = GS = C  
 $H_{17}$ : LS  $\leq$  GS  $\leq$  C

# Two by Two Analysis of Variance of Depression

Mean differences in Depression due to the effects of two different methods of counseling, two counselors and an interaction between type of counseling and counselor will be analyzed by a two by two analysis of variance.

Null Hypothesis Eighteen. -- There are no differences in the mean Depression scores on the MMPI attributable to different methods of counseling.

Null Hypothesis Nineteen. -- There are no differences in mean Depression scores on the MMPI attributable to different counselors.

Null Hypothesis Twenty. -- There are no differences in mean Depression scores on the MMPI attributable to an interaction between method of counseling and counselor.

## One-way Analysis of Variance of Aggression

Mean differences in the ability to overtly express feelings of anger between subjects in the leader-structured, group-structured and control groups will be analyzed by a one-way analysis of variance.

Aggression will be measured by the SAI scale that is labeled Aggression. This scale is defined as measuring the degree to which a person can "overtly and directly express hostile feelings."

Null Hypothesis Twenty-One. -- There are no differences in the mean Aggression scores on the SAI between subjects who experienced different methods of group counseling and subjects who received no counseling.

Alternate Hypothesis Twenty-One. -- The mean Aggression score on the SAI is higher for those subjects who experienced the leader-structured method of group counseling than for those who experienced the group-structured method and higher for those who experienced the group-structured method than for those who received no counseling.

Symbol:  $Ho_{21}$ : LS = GS = C

 $H_{21}: LS > GS > C$ 

# Two by Two Analysis of Variance of Aggression

Mean differences in aggression due to the effects of two different methods of counseling, two counselors, and an interaction between type of counseling and counselor will be analyzed by a two by two analysis of variance.

<u>Null Hypothesis Twenty-Two</u>.--There are no differences in the mean Aggression scores on the SAI attributable to different methods of counseling.

Null Hypothesis Twenty-Three. -- There are no differences in the mean Aggression scores on the SAI attributable to different counselors.

Null Hypothesis Twenty-Four. -- There are no differences in the mean Aggression scores on the SAI attributable to an interaction between counselor and method of counseling.

# One-way Analysis of Variance of Ego-Strength

Mean differences in ego-strength between subjects in the leader-structured, group-structured and control groups will be analyzed by a one-way analysis of variance.

Ego-strength will be measured by the SAI <u>Diffidence-Egoism</u> scale. This scale is defined as measuring the strength of such ego functions as good contact and adequate reality testing. High scores, with reference to national norms for college males, indicate a "tenuous, underdeveloped ego structure and a vague or obscurely defined self-concept."

Null Hypothesis Twenty-Five. -- There are no differences in the mean Diffidence-Eogism scores on the SAI between subjects who experienced different methods of group counseling and subjects who received no counseling.

Alternate Hypothesis Twenty-Five. -- The mean
Diffidence-Egoism score on the SAI is less (i.e., EgoStrength will be greater) for those subjects who experienced
the leader-structured method of group counseling than for
those who experienced the group-structured method and less
for those who experienced the group-structured method than
for those who received no counseling.

Symbol: 
$$Ho_{25}$$
: LS = GS = C  
 $H_{25}$ : LS < GS < C

# Two by Two Analysis of Variance of Ego-Strength

Mean differences in Ego-strength due to the effects of two different methods of counseling, two counselors and an interaction between type of counseling and counselor will be analyzed by a two by two analysis of variance.

Null Hypothesis Twenty-Six. -- There are no differences in the mean Diffidence-Egoism scores on the SAI attributable to different methods of counseling.

Null Hypothesis Twenty-Seven. -- There are no differences in the mean Diffidence-Egoism scores on the SAI attributable to different counselors.

Null Hypothesis Twenty-Eight. -- There are no differences in the mean Diffidence-Egoism scores on the SAI attributable to an interaction between counselor and method of counseling.

### Statistical Treatment

The analysis of variance will be an appropriate statistic for the design of the study. This will allow the isolation of the sum of squares associated with each experimental variable and test its significance statistically. The statistic used is F, the ratio of the mean square for means to the mean square for within groups.

The use of these tools involves the following assumptions:

- Observations should be randomly selected from a population that is normally distributed.
- Observations should be normally distributed within each cell.
- An interval scale of measurement should be used to test for differences on any variable under consideration.

Theoretically, except for chance factors, the observations in each cell should be normally distributed since all subjects were randomly assigned to treatment, groups within treatment and to counselor. In view of this and since all variables under study are measureable along an interval scale, the foregoing assumptions are considered satisfied.

The level of significance for rejecting the null hypotheses is arbitrarily set at five percent.

A one-way analysis of variance will be used to analyze the mean differences between the three treatment groups i.e., the leader-structured, group-structured and control groups.

A two by two analysis of variance will be used to test for differences between the two counseled groups i.e., leader-structured vs. group-structured. This factorial method will analyze differences that do occur into those that are due to different methods of counseling, different counselors and an interaction between counselor and type of counseling. The control group will not be included in this analysis.

Therefore: null hypotheses 1, 5, 9, 13, 17, 21, and 25 will be tested by a one-way analysis of variance, and null hypotheses 2, 3, 4, 6, 7, 8, 10, 11, 12, 14, 15, 16, 18, 19, 20, 22, 23, 24, 26, 27 and 28 will be tested by a two-by-two analysis of variance.

#### Summary

Eight groups of male, academic underachievers were equally divided between two counselors who each led two groups according to the leader-structured group counseling method and two groups according to the group-structured method. Four groups that were randomly selected from the

original twelve homogeneous groups were designated as controls and did not receive group counseling.

The design contains randomization, replication and control.

A one-way analysis of variance is used to analyze the mean differences between the three treatment groups and a two by two analysis of variance is used to analyze mean differences due to the effects of different methods of counseling, different counselors and an interaction between counselor and type of counseling.

The five percent level of significance is arbitrarily selected for accepting or rejecting the null hypotheses.

### CHAPTER IV

### ANALYSIS OF EXPERIMENTAL RESULTS

In Chapter IV the results of the tests on the null hypotheses are reported. Each of the 28 null hypotheses were tested by either the one-way or the two by two analysis of variance technique as described in Chapter III.

### Analysis of Variance of Dependency

The first four null hypotheses are tested by the analysis of variance of scores on the MMPI Dependency scale.

### Hypothesis One

Hypothesis one is restated in null form:

 There are no differences in the mean Dependency scores on the MMPI between subjects who experienced different methods of group counseling and subjects who received no counseling.

A one-way analysis of variance was computed to determine whether a significant difference in means existed between the leader-structured, group-structured and control groups on the MMPI Dependency scale. The results of the analysis are summarized in Table 4.1.

Table 4.1. Analysis of variance of MMPI Dependency Scores for the leader-structured, group-structured and control groups.

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Hypothesis Tested
Between Treatment	77.48	2	38.74	.531	Accepted
Within Treatment	5690.52	78	72.95		
TOTAL	5768.00	80			

Necessary:  $F.05 \ge 3.114$  to reject  $Ho_1$ : LS = GS = C

An F value of 3.114 is necessary for 2,78 degrees of freedom before significant differences between groups can be concluded at the .05 level of confidence.

Inspection of Table 4.1 reveals an F value of .531 and therefore null hypothesis one (LS = GS = C) must be accepted. Differences between groups are attributed to chance variation within a common population and not to the effects of experimental treatment.

## Hypothesis Two, Three and Four

These hypotheses are restated in null form:

2. There are no differences in the mean Dependency scores on the MMPI attributable to different methods of counseling.

- 3. There are no differences in the mean Dependency scores on the MMPI attributable to different counselors.
- 4. There are no differences in the mean Dependency scores on the MMPI attributable to an interaction between counselor and method of counseling.

A two by two analysis of variance was computed to determine whether there was a significant difference in means between treatment groups (leader-structured vs. group-structured), between counselors, and whether an interaction between counselor and type of counseling occurred. The results of the analysis of variance are summarized in Table 4.2.

Table 4.2. Analysis of variance of MMPI Dependency Scores for treatment, counselor and interaction effects.

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Hypothesis Tested
Between Treatment	55.63	1	55.63	.604	Accepted
Between Counselor	114.07	1	114.07	1.239	Accepted
Interaction	16.33	1	16.33	.177	Accepted
Error	4050.72	44	92.06		
TOTAL	4236.75	47			

Necessary: F.05 > 4.06

An F value of 4.06 is necessary for 1,44 degrees of freedom before significant differences can be concluded at the .05 level of confidence.

Inspection of Table 4.2 reveals the highest F value to be 1.23. This leads to the conclusion that differences in Dependency between the treatment groups must be attributed to chance variation within a common population and not to different methods of group counseling, different counselors or an interaction between counselor and method of counseling.

Null hypotheses two, three and four are therefore accepted.

### Analysis of Variance of Affiliation

Hypotheses five, six, seven and eight are tested by the analysis of variance of scores on the SAI Affiliation Scale.

### Hypothesis Five

Hypothesis five is restated in null form:

5. There are no differences in the mean Affiliation scores on the SAI between subjects who experienced different methods of group counseling and subjects who received no counseling.

A one-way analysis of variance was computed to determine whether a significant difference in means existed between the leader-structured, group structured and control

groups on the SAI Affiliation Scale. The results of the analysis are summarized in Table 4.3.

Table 4.3. Analysis of variance of SAI Affiliation Scores for the leader-structured, group-structured and control groups.

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Hypothesis Tested
Between Treatment	21.38	2	10.69	1.567	Accepted
Within Treatment	532.42	78	6.82		
TOTAL	553.80	80			

Necessary:  $F.05 \ge 3.114$  to reject  $Ho_5$ : LS = GS = C

The data in Table 4.3 reveals an F value of 1.56 and therefore null hypothesis five (LS = GS = C) is accepted. The differences between the treatment groups in their need for affiliation can only be attributed to chance variation within a common population and not to the effects of experimental treatment.

## Hypotheses Six, Seven and Eight

These hypotheses are restated in null form:

6. There are no differences in the mean Affiliation scores on the SAI attributable to different methods of counseling.

- 7. There are no differences in the mean Affiliation Scores on the SAI attributable to different counselors.
- 8. There are no differences in the mean Affiliation

  Scores on the SAI attributable to an interaction be
  tween counselor and method of counseling.

A two by two analysis of variance was computed to determine whether there was a significant difference in means between treatment groups (leader-structured vs. groupstructured), between counselors, and whether an interaction between counselor and type of counseling occurred. The results of the analysis of variance are summarized in Table 4.4.

Table 4.4. Analysis of variance of SAI Affiliation Scores for treatment, counselor and interaction effects.

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Hypothesis Tested
Between Treatment	19.30	1	19.30	2.855	Accepted
Between Counselor	.75	1	.75	.110	Accepted
Interaction	.33	1	.33	.048	Accepted
Error	297.85	44	6.76		
TOTAL	318.23	47			

Necessary:  $F.05 \ge 4.06$ 

Inspection of Table 4.4 reveals the highest F value to be 2.85 which is not significant at the .05 level of confidence.

Differences in affiliation between the treatment groups are attributed to chance variation within a common population and not to different methods of counseling, different counselors or an interaction between counselor and method of counseling.

Null hypotheses six, seven and eight are therefore accepted.

## Analysis of Variance of Positive Self-Concept

Hypotheses nine, ten, eleven and twelve are tested by the analysis of variance of scores on the SAI Abasement Scale.

### Hypothesis Nine

9. There are no differences in the mean Abasement Scores on the SAI between subjects who experienced different methods of group counseling and subjects who did not experience group counseling.

A one-way analysis of variance was computed to determine whether a significant difference in means existed between the leader-structured, group-structured and control groups on the SAI Abasement Scale. The results of the analysis are summarized in Table 4.5.

Table 4.5. Analysis of variance of SAI Abasement Scores for the leader-structured, group-structured and control groups.

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Hypothesis Tested
Between Treatment	.89	2	.445	.147	Accepted
Within Treatment	1377.23	78	3.024		
TOTAL	1378.12	80			

Necessary:  $F.05 \ge 3.114$  to reject  $Ho_0$ : LS = GS = C

Inspection of Table 4.5 reveals an F value of .147 which is not significant at the .05 level of confidence.

This would indicate that the differences in positive self-concept between the three treatment groups are due to the chance variation that can occur within a common population and not to the effects of experimental treatment.

Null hypothesis nine is therefore accepted and LS = GS = C in positive self-concept.

## Hypotheses Ten, Eleven and Twelve

These hypotheses are restated in null form:

10. There are no differences in the mean Abasement Scores on the SAI attributable to different methods of counseling.

- 11. There are no differences in mean Abasement scores on the SAI attributable to different counselors.
- 12. There are no differences in mean Abasement Scores on the SAI attributable to an interaction between counselor and method of counseling.

A two by two analysis of variance was computed to determine whether there was a significant difference in means between treatment groups (leader-structured vs. groupstructured), between counselors, and whether an interaction between counselor and type of counseling occurred. The results of the analysis of variance are summarized in Table 4.6.

Table 4.6. Analysis of variance of SAI Abasement Scores for treatment, counselor and interaction effects.

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Hypothesis Tested
Between Treatment	.88	1	.88	.301	Accepted
Between Counselor	2.07	1	2.07	.708	Accepted
Interaction	.08	1	.08	.027	Accepted
Error	124.22	44	2.92		
TOTAL	127.25	47			

Necessary:  $F.05 \ge 4.06$ 

Inspection of the data in Table 4.6 reveals the highest F value to be .708 which is not significant at the .05 level of confidence.

Differences in positive self-concept (as measured by the SAI Abasement Scale) that occur can only be attributed to chance variation within a common population, and not to the effects of different methods of counseling, different counselors or an interaction between methods of counseling and counselor.

Hypotheses ten, eleven and twelve must therefore be accepted on this basis.

## Analysis of Variance of Anxiety

Hypotheses thirteen, fourteen, fifteen and sixteen are tested by the analysis of variance of scores on the Taylor Manifest Anxiety Scale.

### Hypothesis Thirteen

Hypothesis thirteen is restated in null form:

13. There are no differences in the mean TMAS scores between subjects who experienced different methods of counseling and subjects who received no counseling.

A one-way analysis of variance was computed to determine whether a significant difference in means existed between the leader-structured, group-structured, and control groups on the TMAS. The results of the analysis are summarized in Table 4.7.

Table 4.7. Analysis of variance of TMAS Scores for the leader-structured, group-structured and control groups.

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Hypothesis Tested
Between Treatment	72.36	2	36.18	.647	Accepted
Within Treatment	4360.59	78	55.90		
TOTAL	443 <b>2.</b> 95	80			

Necessary: F.05  $\geq$  3.114 to reject Ho<sub>13</sub>: LS = GS = C

The data in Table 4.7 reveals an F value of .647 which is not significant at the .05 level of confidence.

The difference that did occur between the treatment groups is attributed to chance variation within a common population and not to the effects of experimental treatment as hypothesized.

Null hypothesis thirteen is therefore accepted and it cannot be stated that group counseling significantly affected anxiety as measured by the TMAS.

## <u>Hypotheses Fourteen, Fifteen</u> <u>and Sixteen</u>

These hypotheses are restated in null form:

14. There are no differences in the mean TMAS scores attributable to different methods of counseling.

- 15. There are no differences in the mean TMAS scores attributable to different counselors.
- 16. There are no differences in the mean TMAS scores attributable to an interaction between counselor and method of counseling.

A two by two analysis of variance was computed to determine whether there was a significant difference in means between treatment groups (leader-structured vs. group-structured), between counselors, and whether an interaction between counselor and type of counseling occurred. The results of the analysis of variance are summarized in Table 4.8.

Table 4.8. Analysis of variance of TMAS Scores for treatment, counselor and interaction effects.

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Hypothesis Tested
Between Treatment	63.46	1	63.46	.787	Accepted
Between Counselor	14.08	1	14.08	.174	Accepted
Interaction	27.00	1	27.00	.335	Accepted
Error	3544.67	44	80.56		
TOTAL	3649.21	47			

Necessary:  $F.05 \ge 4.06$ 

Inspection of Table 4.8 indicates that none of the F values were significant at the .05 level of confidence.

Differences in anxiety between the leader-structured and group-structured subjects are thus due to the variation that can occur by chance within a common population and not to the effects of different methods of counseling, different counselors or an interaction between counselor and type of counseling.

Null hypotheses fourteen, fifteen and sixteen are therefore accepted.

### Analysis of Variance of Depression

Null hypotheses seventeen, eighteen, nineteen and twenty are tested by the analysis of variance of scores on the MMPI Depression Scale.

## Hypothesis Seventeen

Hypothesis seventeen is restated in null form:

17. There are no differences in the mean Depression

Scores on the MMPI between subjects who experienced different methods of group counseling and subjects who did not experience group counseling.

A one-way analysis of variance was computed to determine whether a significant difference in means existed between the leader-structured, group-structured and control groups on the MMPI Depression Scale. The results of the analysis are summarized in Table 4.9.

Table 4.9. Analysis of variance of MMPI Depression Scores for the leader-structured, group-structured and control groups.

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Hypothesis Tested
Between Treatment	10.61	2	5.30	.215	Accepted
Within Treatment	1923.41	78	24.65		
TOTAL	1934.02	80			

Necessary: F.05  $\geq$  3.114 to reject Ho<sub>17</sub>: LS = GS = C

The data in Table 4.9 leads to the conclusion that differences in MMPI Depression Scores between the treatment groups are the result of chance variation rather than the effects of experimental treatment.

Null hypothesis seventeen must therefore be accepted and it cannot be stated with confidence that the different methods of group counseling significantly affected depression in the male underachiever.

# <u>Hypotheses Eighteen, Nine-teen and Twenty</u>

Hypotheses eighteen, nineteen and twenty are restated in null form:

- 18. There are no differences in the mean Depression Scores on the MMPI attributable to different methods of counseling.
- 19. There are no differences in the mean Depression Scores on the MMPI attributable to different counselors.
- 20. There are no differences in the mean Depression

  Scores on the MMPI attributable to an interaction
  between counselor and method of counseling.

A two by two analysis of variance was computed to determine whether there was a significant difference in means between treatment groups (leader-structured vs. group-structured), between counselors, and whether an interaction between counselor and type of counseling occurred. The results of the analysis of variance are summarized in Table 4.10.

Differences in Depression Scores on the MMPI, as indicated by Table 4.10, are so small that they must be attributed to chance variation within a common population rather than to the effects of different methods of counseling, different counselors or an interaction between counselor and method of counseling.

Null hypotheses eighteen, nineteen and twenty are therefore accepted.

Table 4.10. Analysis of variance of MMPI Depression Scores for treatment, counselor and interaction effects.

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Hypothesis Tested
Between Treatment	7.37	1	7.37	. 288′	Accepted
Between Counselor	22.69	1	22.69	.889	Accepted
Interaction	6.02	1	6.02	.235	Accepted
Error	1122.67	44	25.51		
TOTAL	1158.75	47			

Necessary:  $F.05 \ge 4.06$ 

### Analysis of Variance of Aggression

Null hypotheses twenty-one, twenty-two, twentythree and twenty-four are tested by the analysis of variance of scores on the SAI Aggression Scale.

### Hypothesis Twenty-One

Hypothesis twenty-one is restated in null form:

21. There are no differences on the mean Aggression

Scores of the SAI between subjects who experienced

different methods of group counseling and subjects

who did not experience group counseling.

A one-way analysis of variance was computed to determine whether a significant difference in means existed

between the leader-structured, group-structured and control groups on the SAI Aggression Scale. The results of the analysis are summarized in Table 4.11.

Table 4.11. Analysis of variance of SAI Aggression Scores for the leader-structured, group-structured and control groups.

Source of Variation	Sum of Squares	đ.f.	Mean Square	F	Hypothesis Tested
Between Treatment	23.55	2	11.77	2.650	Accepted
Within Treatment	346.11	78	4.44		
TOTAL	396.66	80			

Necessary: F.05  $\geq$  3.114 to reject Ho<sub>21</sub>: LS = GS = C

Inspection of Table 4.11 reveals an F value of 2.65 which is not large enough to be considered significant at the .05 level of confidence. Variation between the group means on the SAI Aggression Scale must be attributed to chance variation within a common population rather than to the effects of treatment.

Null hypotheses twenty-one must therefore be accepted, although evidence will be presented in the discussion section of Chapter V which supports the view that group counseling per se does enable subjects to more overtly express their feelings of anger.

# Hypotheses Twenty-Two, Twenty-Three and Twenty-Four

Hypotheses twenty-two, twenty-three and twenty-four are restated in null form:

- 22. There are no differences in the mean Aggression , Scores on the SAI attributable to different methods of counseling.
- 23. There are no differences in the mean Aggression Scores on the SAI attributable to different counselors.
- 24. There are no differences on the mean Aggression

  Scores of the SAI attributable to an interaction between counselor and method of counseling.

A two by two analysis of variance was computed to determine whether there was a significant difference in means between treatment groups (leader-structured vs. groupstructured), between counselors, and whether an interaction between counselor and type of counseling occurred. The results of the analysis of variance are summarized in Table 4.12.

Inspection of Table 4.12 reveals the highest F value to be .742 which is not large enough to be significant at the .05 level of confidence.

We cannot conclude anything but that differences between means which do occur are probably the result of chance variation within a common population rather than the result

of different methods of counseling, different counselors or an interaction between counselor and method of counseling.

Table 4.12. Analysis of variance of SAI Aggression Scores for treatment, counselor and interaction effects.

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Hypothesis Tested
Between Treatment	.12	1	.12	.025	Accepted
Between Counselor	.75	1	.75	.158	Accepted
Interaction	3.52	1	3.52	.742	Accepted
Error	208.63	44	4.74		
TOTAL	220.16	47			

Necessary:  $F.05 \ge 4.06$ 

Null hypotheses twenty-two, twenty-three and twenty-four are therefore accepted.

# One-Way Analysis of Variance of Ego-Strength

Hypotheses twenty-five, twenty-six, twenty-seven and twenty-eight are tested by the analysis of variance of scores on the SAI Diffidence-Egoism Scale.

### Hypothesis Twenty-Five

Hypothesis twenty-five is restated in the null form:

25. There are no differences in the mean Diffidence-Egoism Scores on the SAI between subjects who experienced different methods of counseling and subjects who received no counseling.

A one-way analysis of variance was computed to determine whether a significant difference in means existed between leader-structured, group-structured and control groups on the SAI Diffidence-Eogism Scale. The results of this analysis are summarized in Table 4.13.

Table 4.13. Analysis of variance of SAI Diffidence-Egoism Scores for the leader-structured, groupstructured and control groups.

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Hypothesis Tested
Between Treatment	109.00	2	54.50	3.116	Rejected
Within Treatment	1364.96	78	17.49		
TOTAL	1473.96	80			

Necessary:  $F.05 \ge 3.114$  to reject  $Ho_{25}$ : LS = GS = C

Inspection of the table reveals an F value of 3.116 which is significant at the .05 level of confidence. The

hypothesis that there are no differences in ego-strength (as measured by the SAI Diffidence-Egoism Scale) between subjects who experienced different methods of group counseling and subjects who received no group counseling is rejected. Differences as large as those revealed in Table 4.13 would occur by chance less than five times in one hundred.

Alternate hypothesis twenty-five is restated:

H<sub>25</sub>: The mean Diffidence-Egoism Score on the SAI will be less (i.e., Ego-Strength will be greater) for those subjects who experienced the leader-structured method of group counseling than for those who experienced the group-structured method and less for those who experienced the group-structured method than for those who received no counseling.

 $H_{25}$ : LS < GS < C

In order to determine how the three groups differ an extension to group means with unequal numbers of Duncan's New Multiple Range Test was used. This test is used to determine which of the differences between group means are significant and which are not. The .05 level of confidence was again used as the criterion for evaluating the

<sup>&</sup>lt;sup>1</sup>C. Y. Kramer, "Extension of Multiple Range Tests to Group Means with Unequal Numbers of Replications," <u>Biometrics</u> (September, 1956), pp. 307-310.

differences. The results of Kramer's extension of Duncan's New Multiple Range Test are summarized in Table 4.14.

Table 4.14. Kramer's extension of Duncan's New Multiple Range Test of SAI Diffidence-Egoism Scores for the leader-structured, group-structured and control groups.

Means	A Leader- structured 19.81	B Group- structured 20.19	C Control 22.36	Shortest Significant Ranges
A,LS - 19.81		1.82	13.00*	$R_2 = 12.17$
B,GS - 20.19			11.69	$R_3 = 11.78$
C,C - 22.36				

<sup>&</sup>quot;significant at the .05 level.

An examination of the means in Table 4.14 indicates that the mean for the leader-structured group is less than the mean for the group-structured group and the latter is less than the mean for the control group. The difference between the leader-structured group and the control group is large enough to be significant at the .05 level of confidence. No other differences are significant.

The results of the analysis of variance and the extension of Duncan's test therefore indicate that the egostrength of subjects who experienced the leader-structured method of group counseling was significantly greater than

the ego-strength of subjects who received no counseling, whereas the ego-strength of those who experienced the group-structured method was not significantly greater than the ego-strength of subjects who received no counseling.

It will also be demonstrated in the discussion section of Chapter V that the ego-strength of the control group is significantly different from the national norms for college males and in the direction of an underdeveloped and tenuous ego structure.

### <u>Hypotheses Twenty-Six, Twenty-</u> Seven and Twenty-Eight

Hypotheses twenty-six, twenty-seven and twenty-eight are restated in null form:

- 26. There are no differences in the mean Diffidence-Egoism scores on the SAI attributable to different methods of counseling.
- 27. There are no differences in the mean DiffidenceEgoism scores on the SAI attributable to different
  counselors.
- 28. There are no differences in the mean Diffidence-Egoism scores on the SAI attributable to an interaction between counselor and method of counseling.

A two by two analysis of variance was computed to determine whether there was a significant difference in means between treatment groups (leader-structured vs. group-structured), between counselors, and whether an interaction between counselor and type of counseling occurred. The

results of the analysis of variance are summarized in Table 4.15.

Table 4.15. Analysis of variance of SAI Diffidence-Egoism Scores for treatment, counselor and interaction effects.

Source of Variation	Sum of Squares	d.f.	Mean Square	F	Hypothesis Tested
Between Treatment	1.66	1	1.66	.073	Accepted
Between Counselor	22.68	1	22.68	.999	Accepted
Interaction	2.52	1	2.52	.111	Accepted
Error	999.96	44	22.70		
TOTAL	1025.82	47			

Necessary:  $F.05 \ge 4.06$ 

Since the highest F value in Table 4.15 is .999, the differences between the leader-structured and group-structured subjects is attributed to chance variation within a common population and to the effects of treatment.

Null hypotheses twenty-six, twenty-seven and twenty-eight are therefore accepted.

### Summary

The analysis of variance technique was used to test the twenty-eight null hypotheses that were stated in Chapter

III. All hypotheses except null hypothesis twenty-five were accepted.

Kramer's extension of Duncan's New Multiple Range
Test was employed to further test null hypothesis twentyfive. It was concluded that the subjects who experienced the
leader-structured method of group counseling achieved a
greater degree of ego-strength than those who received no
counseling, whereas differences in ego-strength between the
subjects who experienced the group-structured method and
those who received no counseling were not significant.

### CHAPTER V

# SUMMARY, CONCLUSIONS, DISCUSSIONS, AND RECOMMENDATIONS

### Summary

The problem of this study was to investigate the effects of two different methods of group counseling on certain personality characteristics of male, college academic underachievers.

The basic hypothesis of the study was:

Hypothesis I: The positive change in those personality characteristics that typify the male college underachiever will be greater for those subjects who experience the leader-structured method of group counseling than for those who experience the group-structured method and greater for those who experience the group-structured method than for those who receive no counseling at all.

The leader-structured method of group counseling placed emphasis on those personality dimensions of the academic underachiever which seem to underlie his unique syndrome. Thus the examination of what seemed to be a significant area for exploration as well as the frequency and

degree of digression was left to the decision of the counselor and not the group.

The group-structured method of group counseling, the type predominantly used in previous research, placed emphasis on material which spontaneously originated from within the group rather than from the counselor. Thus the examination of what seemed to be a significant area for exploration, as well as the frequency and degree of digression, was determined by the group in its own time and discretion.

The design of the investigation was based upon a two factor treatment plan. Eight counseling groups were equally divided between two counselors who each led two groups in the leader-structured method of group counseling and two in the group-structured method. A third group, in addition to the two treatment groups, was included in the experiment to serve as a control.

Freshmen or sophomore male students who had scored at or above the 50th percentile on the CQT and whose cumulative grade-point was below 2.00 were offered the opportunity to participate in the experiment.

Subjects who volunteered were assigned to the three treatment groups, i.e., leader-structured, group-structured and control, in the following manner:

All subjects were first separated into common meeting times according to the free hours they designated on a reply form.

Four of these twelve groups were then randomly selected as control groups. The remaining eight groups were randomly divided between either the leader-structured treatment or the group-structured treatment. The same method was used in assigning two groups within each treatment to each counselor.

The students in the control group received no counseling but did receive a one hour period of test interpretation after the completion of the experiment and assurance from the University College Dean that they would not be withdrawn from the university during either of the two terms. The same one hour period of test interpretation as well as the assurance from the University College Dean was given to the experimental subjects.

The students in the analysis attended a minimum of six to a maximum of eight, 1 1/2 to 2 hour sessions of group counseling during the winter term of 1964. All of the treatment groups met once a week in the Michigan State University Counseling Center.

There were 15 subjects from the original 96 who were not included in the analysis. Eight failed to attend the minimum number of sessions, one did not report for the first session, one was asked to withdraw from the university by

the Office of Vocational Rehabilitation before testing could be completed, one was dropped for statistical reasons, two in the control group dropped out of school before completion of the experiment, one control subject was participating in a special "Methods of Study" class and one was receiving individual counseling. Consequently, there were 81 subjects included in the analysis, 22 in the leader-structured group, 26 in the group-structured group and 33 in the no treatment control group.

Selected scales of the MMPI and the SAI were used to measure differences between the groups along the personality dimensions under study.

The two counselors met weekly to discuss objectives, review tape recordings of the sessions and compare notes as to uniformity of method.

In order to determine whether the different counseling methods were perceived differently by the respective groups, a yes - no check list was administered to the groups just prior to the last session. The results of this survey supported the contention that the two methods of counseling were different.

A one-way analysis of variance was used to test the hypotheses that differences between the leader-structured, group-structured and control groups would occur as a result of experimental treatment.

A two by two analysis of variance was used to test the hypotheses that differences between the two counseled groups (leader-structured vs. group-structured) would occur as a result of different counseling methods rather than different counselors or an interaction between counselor and type of counseling.

All hypotheses except null hypothesis twenty-five (relating to ego-strength) were accepted. As a result, differences which did exist between the underachieving groups on such dimensions as dependence, affiliation, abasement, anxiety, depression and aggression could only be attributed to the chance variation that may occur within common population and not to the effects of experimental treatment.

Null hypothesis twenty-five was rejected at the .05 level of confidence and a significant difference in ego-strength between the leader-structured, group-structured and control groups was concluded.

Kramer's extension of Duncan's New Multiple Range

Test to groups with unequal numbers was used to determine

which groups actually differed significantly (.05) and which

did not. The results of this test indicated that subjects

who experienced the leader-structured method of group

counseling achieved a degree of ego-strength which was

greater than those who received no counseling. No other dif
ferences were found to exist.

### Conclusions

The analysis of the data permits the following conclusions:

- The subjects who experienced six to eight sessions
  of leader-structured group counseling achieved a
  greater degree of ego-strength than those who received no counseling.
- 2. No differences were found to exist between subjects who experienced the leader-structured method of group counseling and subjects who experienced the group-structured method on such dimensions as dependency, affiliation, abasement, anxiety, depression, aggression or ego-strength.
- 3. No differences were found to exist between subjects who experienced the group-structured method of group counseling and subjects who received no counseling on such dimensions as dependency, affiliation, abasement, anxiety, depression, aggression, or egostrength.

### Discussion

This study was designed to answer questions about the effectiveness of two different methods of group counseling on the personality of the male college academic underachiever. The use of the leader-structured approach was based on the theory that the underlying emotional dynamics

that cause underachievement must be brought to awareness and faced before effective alteration is possible. It was therefore believed that a method of group counseling which pointedly focussed upon these dynamics would achieve greater results in the same amount of time than one which allowed the group to choose whatever topic it desired at its own discretion.

The results of the study would seem to indicate that a method of group counseling which does focus upon the underlying, emotional syndrome of the male underachiever will produce a significant and positive change in ego-strength when compared to a no treatment control group. This cannot be said for the predominant group-structured method used in previous research.

The data in the Stern's Activities Index manual includes the scores for a sample of 558 college males who were randomly selected from 21 colleges and universities across the nation.

At test (t = 2.63 > p.005) between the mean score for the no treatment control group, on the Diffidence-Egoism Scale, and the mean score for the SAI college sample indicate that the controls differ significantly and in the direction of an underdeveloped and tenuous ego structure.

Tests between the leader-structured group and the normal sample, as well as the group-structured group and the normal sample, did not indicate significant differences.

All of this information seems to imply that both treatment groups improved in the direction of healthier ego functioning; with differences between the leader-structured and control groups large enough to be significant, while differences between the group-structured and control groups were not.

The results of this study do not seem to indicate that either method of group counseling significantly affected any of the other personality dimensions under study although there is evidence that group counseling per se (in contrast to either method) does enable subjects to more overtly express their feelings of anger.

The research hypothesis relating to aggression predicted that the leader-structured group would be more able to <u>overtly</u> express feelings of anger than would the groupstructured subjects, and those who experienced the groupstructured method would be more able to overtly express aggressive feelings than would the controls.

It was found, in studying the analysis of variance data that both the leader-structured and group-structured subjects were significantly higher, according to t-test comparisons, in their ability to overtly express hostile feelings than were the controls, but not different from each other.

The analysis of variance is a test which determines how much true variance exists between groups and how much is

due to chance variation within a common population. The mean square within is an estimate of the population variance. The mean square between is an estimate of the population variance as well, but also includes any true variance  $\sigma \, \overline{X}_{\infty}^{\,\,2}$  that may exist between the groups. The between variance must therefore be larger than the within variance and large enough to occur only 5 times or less out of a hundred, if the p. 05 level of confidence is used in rejecting the null hypothesis.

The analysis of variance technique is a conservative test and does not always reveal the fact that some differences between groups may actually exist even though the F value is not large enough to reject the null hypothesis.

It can be statistically demonstrated, for example, that two out of three groups may significantly differ from a third and still a significant F value would not be achieved. This is due to the fact that two group means which are almost identical, even though they differ from a third, will drastically lower the between mean square by pulling the grand mean in their direction. This process occurred in the analysis of variance of the SAI Aggression Scores and therefore yielded a non-significant F value.

Although it is not appropriate to compute three different t-tests and separately compare each treatment group, because this procedure increases the probability of getting significant t-values, it is appropriate for the sake of further research to combine the counseled groups into one group and compare the effects of group counseling per se with those of no counseling.

Such a comparison was made and a significant difference on the SAI Aggression Scale between subjects who received group counseling and subjects who did not was concluded (t = 2.31 > p.015). This high t value indicates that the experience of group counseling does allow the male underachiever to express his feelings of anger in a more direct and overt manner.

Kirk<sup>1</sup> it will be remembered, contends that the academic underachiever is unable to overtly express hostile feelings and consequently indirectly conveys them through the media of academic failure.

The increase in ego-strength, which was previously discussed, could be related to the increase in ability to overtly express feelings of anger. The data in the following table gives support to this possibility. In Table 5.1 the mean scores on aggression and ego-strength are compared across all three groups in order of rank.

A number of questions are raised by the results of this study and in criticism of its design.

The length of treatment may have been too short to basically alter characteristics that have developed over a

Barbara Kirk, op. cit.

period of years. Perhaps if group sessions were continued for at least a period of two academic terms, the effect of the leader-structured method would be significantly greater.

Table 5.1 Mean SAI Aggression and Diffidence-Egoism Scores for leader-structured, group-structured and control groups.

	Control	Group- Structure	Leader- Structure	
Low Aggression	4.08	5.08	5.18	High <b>A</b> ggression
Low Ego- Strength	22.36 <sup>a</sup>	20.19	19.81	High Ego- Strength

a Underlined values are significantly different from each other at the .05 level of confidence.

Both counselors concluded that the 1 1/2 to 2 hour sessions were more helpful than the more usual period of 1 hour. Often, according to their experience, the most productive times came during the last hour when the intensity of the group interaction during that period measureably increased. It is their opinion that this should be retained if not extended in any future study.

The subjects involved in this study were volunteers and in that respect were motivated toward higher academic achievement. It is possible that there is a basic difference between male underachievers who are motivated to seek help and those who are not. If so, the topics discussed in the

leader-structured sessions may be questioned. They were, it will be recalled based upon a synthesis of the male underachievers emotional characteristics as described in previous research; descriptive research which does not make a distinction between motivated and non-motivated students. If these are in fact two separate populations, then the categories used in this study for group discussion may at times have been inappropriate to volunteer subjects, thus lowering the effectiveness of the leader-structured method.

A replication of this study, but with non-motivated subjects, would help answer the question.

Students were selected to participate in this study who had scored at or above the 50th percentile on the CQTTotal and who were achieving below a 2.00 G.P.A. on a 4-point scale. This method of selection may be too gross because it is possible that students who score high, for example above the 80th percentile, are different from those who score below. If so, the homogeneity of the sample would be reduced and the effectiveness of experimental treatment would be hindered. The main problem in selecting a homogeneous population above the 80th percentile lies in the reduced numbers of subjects who are available and the increased difficulty in attracting a large enough sample. Nevertheless, the problem does exist and should be considered in future studies.

It is also possible that different methods of identifying the underachievers actually produce different populations. 1 If this is true, then the data derived from a study using one method of selection would not be applicable to a study using another method of selection and any synthesis of information across such groups would not be appropriate.

Counselor bias is always a factor to take into account in group counseling research. An attempt was made to control bias as much as possible but it cannot be denied that some bias of this sort probably occurred in the direction of the leader-structured method because both counselors personally favor this approach and predicted its success. A replication of the experiment, but with at least one counselor who is client-centered in orientation, would be advisable in the future.

### Recommendations

It is suggested that this study be replicated to further test the effectiveness of the leader-structured and group-structured approaches in altering the personality patterns of male college underachievers. Additions to the present study which are suggested for inclusion in the design of future research are:

1. A treatment period which exceeds the six to eight session maximum of this study in order to evaluate

Farquhar and Payne, op. cit.

- the effect of the leader-structured method over a longer period of time.
- 2. Follow-up examinations of three months to one year after the termination of counseling in order to evaluate the permanence of any change that exists at the completion of counseling and to detect change that may occur after counseling.
- 3. A counselor who favors the non-directive method in order to more adequately control for counselor bias.
- 4. The selection of subjects who earn below a C average in grades but who score at or above the 80th percentile on the CQT-Total, in order to create a more homogeneous population.



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APPENDIX A

LETTERS

### MICHIGAN STATE UNIVERSITY EAST LANSING

COUNSELING CENTER

January 6, 1964

### Dear Student:

The Counseling Center is initiating a special program to help students whose academic performance has not reached the level which would seem possible, judging from past performance and test scores. Many factors could account for this less-than-expected performance. Some of the reasons mentioned by other students in similar circumstances are: poor study techniques, inadequate reading skills, personal problems, and family relationships, to mention just a few. We at the Counseling Center believe we can be of significant aid in helping you alter these problem areas. We have therefore arranged to provide experiences which have been of value to students, not only at M.S.U., but at a number of other universities around the country.

The experience we are suggesting entails attending a small discussion group once a week during Winter term. Your group, composed of students having similar difficulties, will meet at the Counseling Center and will be led by one of our counselors.

If you would like to participate in a group experience of this kind, please indicate on the enclosed form the hours you would not be available, and return it as soon as possible after you have completed registration. For those who live on campus the return envelope needs no postage; just hand it to the receptionist in your residence hall and have it placed in the 'Campus Mail'.

You will be contacted by us as to the hours which best meet both of our schedules.

If you have any questions concerning this program, please contact either Mr. Stuart Gilbreath or Mr. William Chestnut at the Counseling Center.

Sincerely yours,

Donald L. Grummon Director

Name		Student Nu	mber
Campus Addre	ess	Campus	Telephone

Please draw an X through the hours that you would not be available for an appointment at the Counseling Center.

	8-9	9-10	10-11	11-12	1-2	2-3	3-4	4-5
M								
т								
W								
T								
F								

Due to the difficulties that may arise in scheduling, would you please indicate those evenings which would be free for group meetings. These will be used only in the event that other appropriate times during the day are not available.

Monday

Tuesday

Wednesday

Thursday

Friday

### MICHIGAN STATE UNIVERSITY EAST LANSING

COUNSELING CENTER

January 29, 1964

Dear

We are pleased that you are interested in our program of group discussion for those having academic difficulties. So many of you have expressed this interest that we cannot accommodate all of you in the group sessions; however, we have arranged to have you participate in a testing program designed to reveal areas of difficulty for individuals having academic difficulties.

This program will involve an extensive period of testing, lasting approximately two hours. Following this, arrangements will be made for an interview with you to discuss the test results and to suggest areas for improvement or change. We feel that this program will be of significant aid to you in working out your academic problems.

I think that you will be interested to learn that the University College Office is interested in this program and has decided that those of you who are participating will not be asked to withdraw from school for academic reasons, even if your grade should fall below the point where this is usually the procedure. This will apply until the end of Spring term so that you will have time to profit from the potential benefits of the program.

If you have any questions concerning this change in program, please contact either Mr. Stuart Gilbreath or Mr. William Chestnut at the Counseling Center.

Sincerely yours,

Donald L. Grummon Director

DLG/snl

# APPENDIX B

TYPE OF TREATMENT QUESTIONNAIRE

1.	The counselor determines the topics to be discussed for each meeting.	Yes	No
2.	The counselor would often remain silent until a group member would bring up a problem area to discuss.	Yes	No
3.	The things we discuss in the group meetings are clearly related to the academic difficulties I am experiencing.	Yes	No
4.	The counselor waited for the group to initiate its own topic of discussion.	Yes	No
5.	We talk often about problem areas not directly related to academic difficulties.	Yes	No
6.	The counselor seldom presented a topic for discussion at the beginning of the meeting.	Yes	No
7.	The group meetings seem organized around specific topics of discussion which the counselor initiates.	Yes	No
8.	The group meetings seem to start right off with something the counselor wants us to talk about.	Yes	No
9.	At times it was difficult for the meeting to get started because it was hard to find a topic to discuss.	Yes	No
10.	The counselor believes that the topics to be discussed should be brought up by the group members themselves.	Yes	No
11.	Each of the group meetings seems to have had a different subject for discussion.	Yes	No
12.	The counselor seems to believe that it is important for the group to bring up the problems we feel are important in causing our academic difficulties.	Yes	No
13.	The group meetings often seem very similar to one another in the things we discuss.	Yes	No
14.	Each meeting the counselor presented certain topics that he felt were possible causes of academic difficulty.	Yes	No

15.	The counselor believes there are certain problem areas that are important to my academic difficulties. He presents one of these as a topic for discussion at each meeting.	Yes	No
16.	The group meetings generally seem to take a while to get started as the counselor waits for us to bring up the problem we want to discuss.	Yes	No
17.	There was always something to talk about in the group meetings.	Yes	No
18.	The group meetings do not seem to have any particular organization about a central topic.	Yes	No
19.	The counselor usually described an area for discussion at the beginning of the meeting.	Yes	No
20.	We most often discuss study habits and attitudes in the group meetings.	Yes	No
21.	Sometimes the things discussed in the group meetings don't seem to have anything to do with my not doing well in school.	Yes	No
22.	The counselor usually initiated a topic for discussion in the group meetings.	Yes	No
23.	If the group was silent the counselor would often bring in new problem areas to discuss.	Yes	No
24.	The topics we discuss in the group just seem to come up as we talk.	Yes	No

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