



## ABSTRACT

### GROUP COUNSELING WITH LOW-MOTIVATED MALE HIGH SCHOOL STUDENTS--COMPARATIVE EFFECTS OF TWO USES OF COUNSELOR TIME

by Joseph Mezzano Jr.

This study investigated the effects of two types of counseling treatments on certain attitudes, traits, and academic achievement of low-motivated male high school students.

The two types of counseling experiences used to test the hypotheses of this investigation were: (1) group counseling only, and (2) group counseling and individual counseling done in conjunction. All group sessions were conducted jointly by a male and a female counselor who were active participants in the group discussions. Because the answer has implications for the practicing counselor, counselor time was taken into account in such a way that each of the treatments required the same amount of counselor time.

Ninety-six male students who ranked in the lower half of their junior class on the Michigan M-Scales were invited to participate in a counseling program. The 74 who accepted the invitation became the subjects of the study.

Subjects were first grouped according to the period during the school day when they would be free to participate in group counseling. From each of these groups seven individuals were randomly selected to be members of the experimental groups and the rest were assigned to the control group. In this manner six experimental groups having seven members each were formed. Then, three of these groups were randomly assigned to the group-individual counseling treatment while the other three groups were assigned to the group counseling only treatment. Randomizing techniques were also used to assign the pairs of counselors to the various treatment groups. A third group, the control group, received no treatment. Change in counseled subjects was assessed by comparing them to the control subjects on four criterion: GPA, study habits and attitudes, self-concept, and behavior ratings.

In order for students to be included in the final analysis they must have attended 80 per cent of the group sessions. Thus, the minimum was 16 sessions for the group counseling treatment or eight sessions for the group-individual treatment. Since individual sessions were on a flexible schedule, attendance was not a problem. Eighteen students in each of the two experimental groups met the minimum requirements for post-treatment analysis. There were 28 students in the control group for the post-treatment analysis.

Although all students involved in the study were low-motivated as measured by the M-Scales, there were a number that could not be classified as typical underachievers. Since a good deal of the related research deals with studies involving underachievers, it was decided that a separate analysis of the data for certain underachievers in the experimental groups was desirable. For the purpose of this study, an underachiever was operationally defined as a student who scored at 100 or above on the Otis Test of Mental Ability, and whose grade point average for the first term was 5.00 or less (5.00 = C- on a 12 point scale). Using this criterion, nine of the group counseling only subjects, nine of the group-individual subjects, and 11 of the control group subjects could be classified as underachievers. In order to equalize the groups, two subjects from the control group were randomly excluded from the analysis.

A one-way analysis of variance was performed to test the nine null hypotheses of this study. The F statistic was used to test for significance at the .05 level.

The results of the study indicate that group counseling when conducted with low-motivated male high school students can produce a significant and positive change in grade point average when compared to a no-treatment control group. With subjects operationally defined as underachievers, both group and group-individual counseling can produce a significant and positive change in grade point average when compared to a no-treatment control group. However, the results are not



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immediate! It appears that the effects of group counseling are dependent on a period of incubation before newly gained insights are translated into action.

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STUDENTS--COMPARATIVE EFFECTS OF TWO USES OF  
COUNSELOR TIME

By

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## CHAPTER I

### THE PROBLEM

A two fold goal of modern educational institutions has been to discover methods that identify underachieving high ability students and to also find ways to develop their potential to the fullest.<sup>1</sup> In recent years many educators have become interested in the potential role of group counseling for assisting students' academic adjustment, educational-vocational planning and personal-social difficulties. Among the students receiving attention from the group counselors are the underachievers, those students who have a measured aptitude to achieve a certain level of academic success but who lack the motivation to do so.

Most research efforts investigating group counseling with underachievers have been expended in evaluating the effectiveness of the experience in terms of increased personal adjustment and academic achievement. But the type of counseling offered has received only limited attention. The variability of content in counseling experiences and the differential effect which it may have upon counseling outcomes

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<sup>1</sup>Educational Policies Commission, Manpower and Education (Washington, D.C.: National Education Association of the United States of America, Association of School Administration, 1956).



has by and large been neglected by researchers. Furthermore, although numerous techniques have been tried, information concerning the effectiveness of these techniques is sparse. Due to rising enrollment in educational institutions and a lack of trained personnel, the problem of wasted talents continues to grow.

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

#### Statement of the Problem

This study investigates the effects of two types of counseling on self-concept, study habits and attitudes, behavior, and academic achievement of low-motivated male high school students. One treatment is group counseling. The second treatment is group counseling and individual counseling done in conjunction. In both treatments the group counseling is conducted by a team consisting of a male counselor and a female counselor.

The question arising is whether or not a counseling approach that uses both individual counseling and group counseling in conjunction is relatively more effective than a more conventional approach which uses only group counseling. Because the answer has implications for the practicing counselor, counselor time has been taken into account in such a

way that each of the treatments requires the same amount of counselor time.

Will low-motivated males benefit more from an approach that provides individual counseling and group counseling in conjunction or from an approach which uses only group counseling? Will low-motivated students receiving either of these treatments benefit more than a group which has received no comparable experience? In this investigation, answers to these questions will be sought in a counseling design which provides for a comparison of the effects of two different treatments and a comparison of the effect of either treatment with a control group receiving no treatment, on certain personality traits and academic achievement of low-motivated male students.

### Theoretical Background

The etiology of academic underachievement has caused wide speculation and considerable research and theorizing. A review of the literature suggests two general areas which have been explored as possibly relating to underachievement: (1) scholastic factors like aptitude, study habits, reading ability, part-time work schedules, and curriculum choice; and (2) personal and social factors such as self-concept, relationship to parents, expression of impulses, social adjustment, academic motivation, and anxiety level.<sup>2,3,4</sup>

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<sup>2</sup>Charles L. Diener, "Similarities and Differences between Overachieving and Underachieving Students," Personnel

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

An example of the study-skills approach is the focus on developing study habits inventories which reflect characteristics of achievers and aid in predicting academic success. The importance of study mechanics and adequate planning has been suggested by the findings of Carter<sup>5</sup> and Chahbazi<sup>6</sup> in their work with study habit inventories. Also, the increasing tendency in the past ten years for colleges to offer courses in study techniques further attests to the theory that there is a relationship between academic achievement and study

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and Guidance Journal, XXXVIII (1960), 396-400.

<sup>3</sup>Charles D. Spielberger, "The Effects of Manifest Anxiety on the Academic Achievement of College Students," Mental Hygiene, XLVI (1962), 420-426.

<sup>4</sup>William 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).

<sup>5</sup>H. D. Carter, "Mechanics of Study Procedure," California Journal of Educational Research, IX (1958), 8-13.

<sup>6</sup>P. Chahbazi, "Analysis of Cornell Orientation Inventory Items of Study Habits and Their Relative Value in Prediction of College Achievement," Journal of Educational Research, LI (1957), 117-128.

skills. For example, a survey conducted in 1953 by Blake<sup>7</sup> indicated that over 90 percent of the colleges in the United States offered some kind of study-skill approach.

The second general approach to the etiology of underachievement is that which contends that personal and social variables may be related to underachievement. Kirk's<sup>8</sup> study suggested that an unconscious hostile motivation in the underachiever is in conflict with his conscious desire to achieve. She states: "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." In agreement with Kirk, Renaud,<sup>9</sup> Chief Psychologist of the University of California Student Health Service, writes: sofar as the dynamics of such patients are concerned, they tend to be pervasively resistant on an unconscious level to any externally imposed task. Similarly, 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.

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<sup>7</sup>W. S. Blake, Jr., "Study-Skills Program," Journal of Higher Education, XXVI (1955), 97-99.

<sup>8</sup>Barbara Kirk, "Test Versus Academic Performance in Malfunctioning Students," Journal of Consulting Psychology, XVI (1952), 213-216.

<sup>9</sup>Ibid.

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

Taking a somewhat different tack, but still within the personal-social orientation, Roth and Meyersburg<sup>11</sup> have postulated a "non-achievement syndrome" which is revealed through the following symptoms: poor academic achievement, general self-deprecation, lack of recognition of pleasure at "being," no clear systems of personal goals or values, immature relations with parents, frequent depressions, lack of insight about self and others, and free-floating anxiety. In their formulation poor achievement does not arise from an incapacity to achieve but is an expression of the student's choice. It results from an early "choice for poor achievement" which relates back to inadequate parent-child relationships where parents either paid no attention to the accomplishments of the child or attended to only his failures and rarely to his successes.

In an exhaustive review of the general personality characteristics of over and under achievers, Taylor<sup>12</sup> concluded that the underachiever might be characterized by a lack of realistic purpose and goals, a high need for affiliation, a sense of self that is experienced as grossly inadequate and inferior, and an inability to directly express anger. In addition, a fear of the loss of impulse control,

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<sup>11</sup>R. M. Roth and H. A. Meyersburg, "The Non-Achievement Syndrome," Personnel and Guidance Journal, XLI (1963), 535-536.

<sup>12</sup>Ronald C. Taylor, "Personality Traits and Discrepant Achievement: A Review," Journal of Counseling Psychology, 1 (1964), 76-82.

a high degree of anxiety, frequent moods of depression, poor study habits, poor motivation, and inappropriate attitudes relating to academic endeavors were also typical.

It is interesting to note that Berger<sup>13</sup> found that the most successful group of college students scored high in intellectual capacity and low in emotional conflict while those who scored high in intellectual capacity and in emotional conflict did significantly worse academically and had a much higher dropout rate.

In summary, the relationship between underachievement and such factors as scholastic skills and personality variables has been the subject of numerous studies. The literature suggests two general approaches used to provide constructive aid for the underachieving student: the study skills or orientation course which emphasizes specific intellectual problem areas related to academic achievement; and individual and group counseling procedures designed to provide help with the underlying personality dynamics associated with underachievement. Of course, overlapping material may occur within each approach.

The theory adopted for this study is more clearly related to the personal-social factors approach to academic underachievement.

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

### The Hypotheses

This study will test the following basic research hypotheses:

1. The academic achievement of low-motivated students who received both group counseling and individual counseling in conjunction will be greater at the completion of the experiment and ten weeks following the completion of the experiment than that of low-motivated students who had either group counseling or no group counseling.
2. The study habits and attitude scores of low-motivated students who have received both group counseling and individual counseling in conjunction will be greater at the completion of the experiment than those of low-motivated students who had either group counseling or no group counseling.
3. The self-concept scores of low-motivated students who have received both group counseling and individual counseling in conjunction will be greater at the completion of the experiment than the self-concept scores of low-motivated students who had either group counseling or no group counseling.
4. The behavior rating scores of low-motivated students who have received both group counseling and individual counseling in conjunction will be greater at the completion of the experiment than the behavior

rating scores of low-motivated students who had either group counseling or no group counseling.

### Definition of Terms

For purposes of this research, three terms frequently used throughout the report are defined as follows:

1. Low-motivated student: An individual in his junior year at Mona Shores High School who ranks in the lower half of his class on the Michigan M-Scales.
2. Group counseling: An experience shared by a group of students and a male and a female counselor. The counselors are active participants in the group discussion determining topics to be discussed and time spent on particular topics by giving certain types of leads and responding to certain leads given by group members. Feelings about self, attitudes toward school and teachers, expressions of anger, purposes and goals, are examples of leads that are used and responded to by the counselors. Members of the group are encouraged to freely discuss their experiences and feelings as they relate to these topics.\*
3. Group-individual counseling: An experience, defined the same as number 2 except that the group meets as a group every other week. On alternate weeks the counselors spend the hour counseling with members of their group on an individual basis.

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\*See Appendix A.



### Organization of the Study

The general plan of the study is to present in the following chapter a review of research which is related to the problem of aiding underachievers through group procedures. In Chapter III the design of the study will be described with reference to sampling procedure, method of treatment, the null hypotheses, and the type of analysis. The results of the analysis are reported in Chapter IV. Chapter V will include the summary, conclusions, discussion, and recommendations.

## CHAPTER II

### REVIEW OF THE LITERATURE

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

1. Factors associated with academic motivation.
2. Outcome studies that have investigated the effects of group counseling on underachievers.
3. Comparative studies that have investigated the differential effects of different methods and/or techniques of counseling on underachievers.
4. Team counseling.

#### Factors Associated with Academic Motivation

In the simplest terms, motivation is what lies behind our behavior--the reasons we do what we do.

Psychologists have a somewhat more precise definition. Lindsley<sup>1</sup> defines motivation as a combination of forces which initiate, direct and sustain behavior toward a goal.

Different psychologists have different concepts as to the nature of these forces that initiate and sustain

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<sup>1</sup>D. B. Lindsley, "Psychophysiology and Motivation," Nebraska Symposium on Motivation (Lincoln, Nebraska: University of Nebraska Press, 1957).

behavior. Combs and Snygg<sup>2</sup> see behavior as powered by a continuing attempt to preserve and enhance one's concept of oneself. For Guthrie<sup>3</sup> motivation is simply "the condition which increases the vigor of responses."

Farquhar<sup>4</sup> defines academic motivation as a combination of forces which initiate, direct and sustain behavior toward a scholarly goal. In an attempt to determine factors associated with academic motivation an extensive review of studies and theories which related parental attitudes, self-concept and personality traits to academic motivation was undertaken by Farquhar.<sup>5</sup> Those factors which appeared as recurring themes of parental child rearing practices were:

1. Achievement pressure; the parental concern for a child to achieve, compete, or attain success by conformity.
2. Permissiveness; allowing or encouraging to act freely and make decisions without parental consent.
3. Possessiveness; excessive parental concern, especially on the part of the mother, for the child to be dependent upon the parents.
4. Democratic guidance; consultation with child in making policy decisions and family rules.

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<sup>2</sup>A. W. Combs and S. Snygg, Individual Behavior (New York: Harper and Brothers, 1959).

<sup>3</sup>E. R. Guthrie, The Psychology of Learning (New York: Harper and Brothers, 1952).

<sup>4</sup>Farquhar, op. cit.

<sup>5</sup>Ibid.

5. Discipline; the frequency and the nature of discipline administered by the parents.
6. Acceptance; overt disregard for child's wishes, individuality, attention needs, and fallibility.
7. Interaction; a general factor describing the tone of the family emotional and conceptual exchanges.

Drawing upon the symbolic interaction framework of social psychology and phenomenological field theory, Brookover<sup>6</sup> has presented these theoretical tenets, which have been substantiated by later research.<sup>7</sup>

1. The student learns what he perceives he is able to learn, and
2. significant others, particularly teachers, have important influences on the development of a student's self concept. Influences take the form of expectancies, which in turn affect the student's ability to perform in the academic setting. The self concept may be considered an intervening variable affecting scholarship.

In Farquhar's study,<sup>8</sup> a summary of personality traits associated with academic achievement are presented.

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<sup>6</sup>W. B. Brookover, "A Social Psychological Conception of Classroom Learning," School and Society, 1959, Vol. 8, 84-87.

<sup>7</sup>W. B. Brookover, et. al., Self-Concept of Ability and School Achievement, II, Cooperative Research Project 1636, October, 1965 (East Lansing: Office of Research and Publication, College of Education, Michigan State University).

<sup>8</sup>Farquhar, op. cit.

They are: (1) academic anxiety; tension expressed as fear of failure, denial of shortcomings, and excessive concern with problems of control. (2) Self valuation; the attitude held toward self. (3) Authority relations; acceptance or resistance to externally imposed controls by a responsible agent. (4) Interpersonal relations. (5) Dependence-independence; the reliance on self or others for direction and decision making. (6) Activity patterns; the area in which satisfaction is pursued, academic or social, individual or group. (7) Goal orientation; the flexibility and persistence exhibited in pursuing immediate, short-term or long-term objectives.

Of special interest to this study are the forces associated with academic low-motivation. Farquhar and Stewart<sup>9</sup> state that low motivation is a symptom generated from and associated with many forces. They see the more important dimensions as:

1. Hostility; the low-motivated--adequate ability student uses his underachievement as a device to punish significant adults.
2. Intolerance of Delayed Rewards; the low-motivated student has little desire or tolerance for delayed academic rewards.

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<sup>9</sup>W. W. Farquhar and N. R. Stewart, "Counseling the Low Motivated Male: A Working Paper" (mimeo., Michigan State University, 1966).

3. Negative Reflected Self Concept; The low-motivated student feels that teachers view him in negative terms.
4. Persistent syndrome of underachievement; the syndrome extends way back into their school history.
5. Low Job-Task Involvement; the low-motivated student's lack of involvement extends to other commitments of life.
6. Low academic involvement; the lowly motivated student either rejects the goals of the school or passively endures their intrusion into his life.
7. Unique Versus Common Accomplishment; Doing the unusual, standing out from the crowd, and identifying with the teacher are rejected by the low motivated male.

#### The Effects of Group Counseling on Underachievers

Caplan<sup>10</sup> reported an investigation of the effects of group counseling on the self-concept and academic achievement of junior high boys who had long-term records of frequent conflict with school authorities and regulations. Thirty-four students were divided into six groups, three experimental and three control. The three experimental groups met with regular school counselors weekly for ten 50-minute sessions.

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<sup>10</sup>S. A. Caplan, "The Effects of Group Counseling on Junior High School Boys' Concepts of Themselves in School," Journal of Counseling Psychology, IV (1957), 124-28.

In these sessions the counselor was a non-evaluating sounding board for feelings of hostility against school in general, particular teachers, and parents.

Changes in the self-concept and ideal self-concept were assessed by pre- and post-administration of Q-sorts. Honor point ratios were used in evaluating the academic performance. Caplan reports that changes between the self-concept and the ideal self-concept were highly significant for each experimental sub-group and within the total experimental group; no such changes took place within any control sub-group nor within the total control group. After an analysis of the post-treatment grades of the experimental and control groups, Caplan states that no conclusion can be made regarding the effectiveness of group counseling on academic achievement.

The following criticisms are made of Caplan's study: he does not report how his subjects were selected or that they were assigned randomly to treatment groups, no pre-treatment assessment of the homogeneity of the groups on ability and previous grades was made, and the subjects were allowed to participate in other experiences such as individual counseling during the experimental period.

Broedel<sup>11</sup> and associates, in another study, investigated the effects of group counseling on 29 freshmen high

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<sup>11</sup>J. Broedel, et. al., "The Effects of Group Counseling on Gifted Underachieving Adolescents," Journal of Counseling Psychology, VII (1960), 163-70.

school underachievers. The students were selected on the basis of high ability for scholastic work as measured by the California Test of Mental Maturity and low grade point averages. The students were assigned to two experimental and two control groups by use of random numbers. During the experimental period, the treatment groups received 16 sessions of group counseling and the control group received no treatment. At the completion of the experimental period, the control groups were counseled for 16 sessions.

The criteria for evaluating the effects of the group counseling were grade point averages, scores on the California Achievement Test, and personal adjustment as assessed by a special picture story test and the Mooney Problems Check List. It was concluded from an analysis of these criteria after treatment that group counseling did not improve academic achievement. However, the experience did aid the students in acceptance of self and others.

Broedel's investigation controls for both treatment and time effects. The study did not, however, apply rigorous sampling techniques in the selection of subjects by including some students in the experiment who objected to the experience.

McCarthy<sup>12</sup> studied the effects of non-directive

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<sup>12</sup>M. V. McCarthy, The Effectiveness of a Modified Counseling Procedure in Promotion Learning Among Bright Underachieving Adolescents, Research Project ASE-6401 (Washington, D.C.: Department of Health, Education, and Welfare, 1959).



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 a large discrepancy between ability and academic achievement. These were then divided into four sub-groups of six 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 subject 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. Once the material was presented, the counselor assumed a non-directive role and left most of the direction of the sessions to the students.

Grade point average was used to measure changes in academic achievement and attitudinal change was measured by use of the Sentence Completion Test and a Q-sort. Testing occurred before and immediately 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 are criticisms of the McCarthy study: 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 approach may not

be an effective method of counseling. Conclusions are also questionable since the sample is extremely small. In addition, the unique influence of the one counselor was not controlled for.

Winborn and Schmidt<sup>13</sup> reported an investigation of the effectiveness of short-term group counseling on the academic achievement of potentially superior but underachieving college freshmen. They selected a population of 135 students on the basis of high aptitude scores but low first semester grade point averages. From this population a random sample of 68 students was drawn and then randomly assigned to experimental and control groups. The groups were found to be homogeneous prior to treatment. The experimental group was then divided into six sub-groups and each group of the experimental section then received six counseling sessions by two counselors who were considered skilled in the techniques of counseling.

Criteria for evaluating the effectiveness were grade point averages and selected scales of the Psychological Inventory. After treatment, differences in mean grade point averages between the experimental and control groups were found to be significant. The subjects in the control group, however, were found to have higher grade point averages than

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<sup>13</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," Journal of Educational Research, LV (1962), 169-73.

those in the experimental group. There were no differences between the experimental and control groups on any of the scales measuring personality change.

To understand these negative findings, a careful description of the nature of the treatment if provided, might help. Some questions might also be raised about the motivation of the students participating in the experiment.

A doctoral study conducted by Duncan<sup>14</sup> assessed the effects of required group counseling on academic achievement. He selected 62 students who were on academic probation at the University of Florida and randomly assigned them to experimental and control groups. The students were required to attend 12 sessions which were conducted by three doctoral students. The criteria for improvement were increases in grade point average and attitude change on a self-rating scale.

In analyzing his data, Duncan found no differences between his two groups in either of the two criteria and concluded that there was little effect from requiring group counseling with students in academic difficulty. Duncan's efforts suggest that in order for counseling to be effective, the student must desire to participate in the experiment.

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<sup>14</sup>D. R. Duncan, Effects of Required Group Counseling with College Students in Academic Difficulty (unpublished Ed.D. dissertation, University of Florida, 1962).

Maroney<sup>15</sup> attempted to determine whether group counseling would effect significant differences in transfer students 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 focused on study techniques and educational and vocational information. All groups were led by the same counselor.

Grade point average and the Edwards Personal Preference Schedule (EPPS) were 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 grade point average and on the EPPS did not occur as a result of the group guidance experience.

Criticisms relevant to the Maroney study are: Although students participated in thirteen group sessions, the range of individual attendance was broad. Another problem encountered in this study was the level of competency of a single counselor was not taken into account in interpreting the results.

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<sup>15</sup>K. A. Maroney, Effectiveness of Short-Term Group Guidance with a Group of Transfer Students Admitted on Probation (unpublished Ed.D. dissertation, North Texas State University, 1962).

Spielberger, Weitz and Denny<sup>16</sup> conducted an elaborate study of the effects of group counseling on the academic performance of anxious college freshmen at Duke University. From a population of 565 male liberal arts freshmen, 112 met the selection criteria of high anxiety as determined by standardized personality tests. Fifty-six of these 112 students volunteered for group counseling. They were matched on factors, such as ability, major field of study, and type of high school attended, and then assigned to an experimental and control group. The experimental group was broken down into four sub-groups.

The groups were conducted by two faculty members experienced in counseling and clinical work. The treatment ranged from eight to 11 sessions. Academic achievement as assessed by grade point average provided the principle objective criterion for evaluating the effects of counseling. Data were also collected on factors which might relate to academic performance and thereby provide alternative explanations for any obtained effects of group counseling. Measures of these factors were class attendance, results of the survey of Study Habits and Attitudes, and personality patterns determined by the Minnesota Multiphasic Personality Inventory.

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<sup>16</sup>C. D. Spielberger, et. al., "Group Counseling and the Academic Performance of Anxious College Freshmen," Journal of Counseling Psychology, 9, 1962, 54-61.

The Duke investigation revealed that the counseled students showed greater improvement in academic performance than the non-counseled students. They also found that there was a positive relationship between the number of sessions attended and grade improvement. Although it was possible to isolate a personality pattern which characterized the students who attended the counseling session regularly, those with the same personality pattern in the control group did not show comparable academic improvement.

An examination of the Spielberger, Weitz and Denny study reveals three experimental procedures seldom found in the research of group counseling. Motivation was controlled by including volunteers in both experimental and control groups, an analysis was conducted on the length of treatment variable, and the influence of personality patterns which may have influenced the results were examined.

#### The Effects of Different Methods of Counseling on Underachievers

Davis<sup>17</sup> investigated the comparative effects of group guidance and individual counseling on citizenship behavior. Thirty students who ranked lowest in a class of 70 on citizenship grades from the previous year were selected for the study. Three groups of 10 were then randomly selected.

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<sup>17</sup>D. A. Davis, "Effects of Group Guidance and Individual Counseling on Citizenship Behavior," Personnel and Guidance Journal, XXXVIII (1958), 142-145.

Group A participated in 20 fifty-minute periods of group guidance. The students in Group B received two periods each of individual counseling for a total of 20 periods of counseling time. This gave each group the same amount of time from the counselor. Group C received no counseling and became the control group. The three groups were well matched in relation to sex, age, grades, citizenship grades and educational retardation.

At the end of the quarter the citizenship grades were gathered and tabulated. The analysis of the results permitted the following conclusions:

1. Group guidance has an effect on behavior in the classroom as measured by citizenship grades.
2. Individual counseling has an effect on behavior in the classroom as measured by citizenship grades.
3. Group guidance results in greater improvement as measured by citizenship grades than does individual counseling when the same amount of counselor time is used with each method.

Several criticisms can be made of the design of the study. No mention was made in the report concerning the motivation of the students for assistance. The level of competency of the single counselor was not taken into account in the interpretation of the results. And the dismissal of the control group may have had an adverse effect on their citizenship grades.

DeWeese<sup>18</sup> completed a doctoral study in which the academic achievement of students receiving group counseling was compared with the academic achievement of students taking a remedial reading course. His report includes two experiments, the first was a pilot study and the second was an attempt to clarify the results of the first. The subjects for both experiments were low achieving first semester college freshmen. In both experiments, DeWeese controlled for motivation, assigned students randomly to the treatment and control groups, and verified the homogeneity of the groups on ability and grades.

The students assigned to the reading groups were included in a regularly taught reading class offered by the Reading Institute of the university. The students receiving group counseling focused upon such topics as study skills, reading habits, and educational planning.

In analyzing the results, DeWeese states that there were no significant differences in grade point averages in either experiment between the counseling and reading groups. However, the grades of the student in the counseling groups improved enough so that significantly more counseled students were permitted to remain in college than reading students.

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<sup>18</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).



The following criticisms are relevant to the DeWeese study: (1) 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. (2) There is no statement as to the competence of the group counselor or his equivalence to those who conducted the remedial reading program.

Sheldon and Landsman<sup>19</sup> investigated the comparative effects of non-directive group counseling and conventional classroom instruction on academic achievement, reading skills and personality change of college students. They selected twenty-eight freshmen whose academic performance during their first semester of college was below expectations, and invited them to participate in a course. Using a matched pair technique, these students were divided into two classes. The classes were judged to be equal in aptitude, reading skills and personality.

The treatment consisted of a lecture on study-skills and reading improvement which was given to the combined classes three times a week. Twice a week, the two classes were separated with one continuing to be taught by the same lecturer in a conventional lecture discussion session, while the other class participated in non-directive therapy

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<sup>19</sup>W. D. Sheldon and T. Lansman, "An Investigation of Non-directive Group Therapy with Students in Academic Difficulty," Journal of Consulting Psychology, XIV (1950), 210-15.

sessions conducted by competent non-directive therapist. The therapy group often explored personal and social problems introduced by the group members. The treatment lasted for one term.

The criteria for evaluating the effectiveness of the two treatment methods was grade point averages, reading skills as measured by the Iowa Silent Reading Test, and personality characteristics as measured by the California Test of Personality.

The investigators reported that the members of the non-directive therapy groups had significantly higher grade point averages at the conclusion of the treatment period than the students taught in the conventional manner. They found no differences between the groups on either the reading or the personality measures.

There are several weaknesses in the design of this study that lend tenuousness to the results. No mention was made in the report concerning the motivation of the students for assistance, nor how they were selected. The counseled group received both types of treatment thus hindering the isolation of treatment variables. There was no control for the group leaders; one was a skilled therapist while the other was not. These factors tend to load the design in favor of the non-directive counseling method and hence the results are not as clear as might be expected.

Hart,<sup>20</sup> in a doctoral dissertation, 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 first-term 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: 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.

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<sup>20</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).

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 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 used large sample size, controlled for motivation, and provided for 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 difference in counseling methods to have significant effect, while the dismissal of the control group could have had an adverse effect on their academic performance.

A recently completed doctoral dissertation by Gilbreath<sup>21</sup> investigated the effects of structured and unstructured group counseling on certain personality dimensions of male college students who underachieve. A group of 683 students were identified as having high ability for college

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<sup>21</sup>S. H. Gilbreath, The Effects of Structured and Unstructured Group Counseling on Certain Personality Dimensions of Male College Students Who Underachieve (unpublished Ph.D. dissertation, Michigan State University, 1964).

achievement, but whose cumulative grade point average at the end of fall term, 1963, was unsatisfactory. Out of this population, 95 volunteered for the program. These subjects were first separated into common meeting times. 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 a flip of a coin. The same method was used in randomly assigning two groups within each treatment to each counselor.

Each control subject was notified by a personal letter that they could not be seen during the term, due to the large number of responses and the limited staff available, but would receive testing near the end of the term and an interpretation of these tests shortly after the beginning of the following 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 term.

Of the 96 volunteers, 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.

The counseling was done by two counseling psychologists, with similar backgrounds judged to be essentially

equal in ability by those who had supervised them.

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 analysis of the data permits the following conclusions:

1. 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 the above mentioned dimensions.
4. Subjects who experienced some group counseling were more able to overtly express feelings of anger than subjects who received no counseling.

Chestnut<sup>22</sup> who worked as a co-researcher with

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<sup>22</sup>W. J. Chestnut, The Effects of Structured and Un-structured Group Counseling on Male College Students, Under-achievement (unpublished Ph.D. dissertation, Michigan State University, 1964).

Gilbreath on the study described investigated the effects of structured and unstructured group counseling on male college students, underachievement. For his criterion measures he selected the grade point averages at the end of the experiment and three months after the completion of the experiment and measures of study habits and attitudes and achievement need at the completion of the experiment.

The findings from the analysis indicate that students who attended the counselor structured group experience had a significantly greater rate of change in grade point average than the students in either the group structured or control groups. The group structured experience had a greater rate of change than the control, immediately after the completion of the experiment. Significant differences in rate of change of grade point averages were found between the counselor structured experience group and the control group three months following the completion of the experiment. No significant differences were found between the counselor structured and group structured experience groups three months following the completion of the experience. There were no significant differences between the group structured and control group three months following the completion of the experiment. No significant differences were found among the counselor structured, group structured, and control groups on the criterion measures of study habits and attitudes and achievement need.

The Gilbreath-Chestnut study represents a considerable improvement over other studies reviewed in terms of design, including randomization, replication, and control. However, as in many studies, the small number of sessions conducted with the subjects makes conclusions about the effect of differences in counseling tenuous.

### Team Counseling

A review of the literature related to team counseling with groups revealed no studies involving academic under-achievers. The journals and abstracts reviewed were those major publications related to Education, Sociology and Psychology.

However, the use of two therapists has attracted increasing attention during recent years. Co-therapists have applied their skills to various types of group situations. The use of dual leadership has been represented as socially familiar and effective for the aged by Linden,<sup>23</sup> for groups of adolescents by Adler and Berman,<sup>24</sup> and for groups of psychotic and schizophrenic patients by Lundin and Arnov.<sup>25</sup>

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<sup>23</sup>M. E. Linden, "The Significance of Dual Leadership in Gerontologic Group Psychotherapy: Studies in Gerontologic Human Relations, III," International Journal of Group Psychotherapy, 4 (1954), 262-73.

<sup>24</sup>J. Adler and I. R. Berman, "Multiple Leadership in Group Treatment of Delinquent Adolescents," International Journal of Group Psychotherapy, 10 (1960), 213-225.

<sup>25</sup>W. H. Lundin and B. M. Arnov, "The Use of Co-Therapists in Group Psychotherapy," Journal of Consulting Psychology, 16 (1951), 76-80.



Mintz<sup>26</sup> states:

. . . that in combining their insight, technical abilities and other assets, two therapists can offer more to a group than either could offer alone; that a situation close to the primary family is created, providing patients an especially good chance to work out reactions toward both parent figures; that patients of both sexes are offered a like sexed therapist with whom to identify; and that special difficulties in relating to either male or female authority figures can be worked out by patients who would have been unwilling to choose a therapist of the more threatening sex.

### Summary

The review of the literature related to the present investigation consisted of studies which evaluated (1) outcomes of group counseling on scholastic achievement, and (2) comparative studies that have primarily investigated the differential effects of different methods and/or techniques of counseling on academic achievement.

The hypothesis that group counseling has a measurable effect upon academic achievement has been rejected in all but four of the studies reviewed. And due to the limitations of the Sheldon and Landsman<sup>27</sup> study, only the experiments of Spielberger, Weitz and Denny,<sup>28</sup> Hart,<sup>29</sup> Gilbreath,<sup>30</sup> and Chestnut<sup>31</sup> lend support to the hypothesis

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<sup>26</sup>E. E. Mintz, "Special Values of Co-Therapists in Group Psychotherapy," International Journal of Group Psychotherapy, 13 (1963), 127-32.

<sup>27</sup>Sheldon and Landsman, op. cit.

<sup>28</sup>Spielberger, et. al., op. cit.

<sup>29</sup>Hart, op. cit.

<sup>30</sup>Gilbreath, op. cit.

<sup>31</sup>Chestnut, op. cit.

that group counseling measurably improves academic achievement.

Of the experiments reviewed only Hart,<sup>32</sup> and Chestnut<sup>33</sup> have compared the effects of two types of group counseling on academic achievement.

Some of the experiments discussed in this review had weaknesses in design and methodology. The most common of these were sample sizes that were too small, unsatisfactory control for motivation, poor sampling techniques, lack of control for counselor training or bias, and particularly the failure to provide treatment of reasonable length for change to occur.

Although some attention has been given to the variable of technique of group counseling sessions, no researcher has evaluated the comparative effects of a counseling procedure which uses group-individual counseling and a group counseling approach to improve academic achievement. Furthermore, there is little in the literature that takes note of an experiment of this duration. In designing and conducting this experiment an attempt has been made to correct the frequent weaknesses which are found in many of the studies reviewed.

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<sup>32</sup>Hart, op. cit.

<sup>33</sup>Chestnut, op. cit.

## CHAPTER III

### DESIGN AND METHODOLOGY

The primary purpose of this research is to test the effects of two types of group counseling using the same amount of counselor time, on the grade point averages, study habits and attitudes, self-concept, and behavior ratings of low-motivated male high school students. Randomization, replication, and control are incorporated in the experiment to meet the three essentials of modern design.

#### Design

The design of the study is a posttest-only control group design. Campbell and Stanley<sup>1</sup> indicate that this design has no definite weaknesses in the control of sources of invalidity.

The six counseling groups were randomly divided between the two pairs of counselors and the two types of counseling, group-individual and group. Students were assigned on a random basis to the various treatment groups. Replication was obtained by duplicating the counseling methods. The third level of the design, the control

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<sup>1</sup>D. T. Campbell and J. C. Stanley in N. L. Gage, Handbook of Research on Teaching (Chicago: Rand McNally and Company, 1963).

group, received no treatment. Change in subjects in the counseling groups was then obtained by comparison with the control subjects. The basic design of the study is summarized in the following table.

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

|                | Group<br>Counseling<br>Method | Group-<br>Individual<br>Counseling Method | No Counseling,<br>Control |
|----------------|-------------------------------|---|---------------------------|
| Counselors A&B | 2 groups                      | 2 groups                                  |                           |
| Counselors C&D | 1 group                       | 1 group                                   |                           |
| Total          | 3 groups                      | 3 groups                                  | Control group             |

#### The Population\*

Subjects for the research were chosen from the 1965-66 junior class of Mona Shores High School, Muskegon, Michigan. From that group 96 males who ranked in the lower half of the class on the Michigan M-Scales were operationally defined as low-motivated males and invited to take part in a counseling program. Of the 96, the 74 who decided to participate became the subjects of the study.

#### Random Assignment

Subjects were first grouped according to the period during the school day when they would be free to participate in group counseling. From each of these groups seven individuals were randomly selected to be members of the experimental

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\*See Appendix D, socioeconomic data on population.

groups and the rest were assigned to the control group. In this manner six experimental groups having seven members each, were formed. Then three of these groups were randomly assigned to the group-individual counseling treatment while the other three groups were assigned to the group counseling only treatment. Randomizing techniques were also used to assign the pairs of counselors to the various treatment groups.

The members of the control group were informed that they could not be seen during the term because of the large number of responses and the limited staff available, but they were given books which could be of help in improving their study skills. All subjects, both control and experimental, were promised an interview at a later date for the purpose of test interpretation.

#### Instrumentation

The Michigan M-Scales used as a selection instrument for this study, relates parental attitudes, self concept and personality traits to academic motivation.<sup>2</sup>

Six instruments were developed for inclusion in the scale.

1. The Word Rating List was developed to measure self-concept.
2. A Perceived Parental Attitudes Inventory was developed to determine how the student views his parents' child rearing practices.

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<sup>2</sup>Farquhar, op. cit.

3. A Preferred Teacher Characteristic Scale was developed postulating a "cognitive-affective" continuum of instructor orientation.
4. The Human Trait Inventory was constructed from items which differentiated between discrepant achievers.
5. The Generalized Situational Choice Inventory was developed to assess academic achievement motivation.
6. The Preferred Job Characteristics Scale was developed to determine high or low occupational motivation.

Motivational extremes were assumed to be represented by over and underachievers. It was decided that these discrepant achievement groups would be used to test the validity of the academic achievement motivational constructs. Over and underachievers were selected using a two-stage regression model which involved an attempt to select only those individuals who had a high probability of being correctly classified in either discrepant achievement group.

Chi square item analysis was done for the battery of six tests. Two of the instruments, the Perceived Parental Attitudes Inventory and the Preferred Teacher Characteristics Scale did not produce a sufficient number of items to warrant further analysis. For the Word Rating List 48 male and an equal number of female items remained after cross-validation with an acceptable reliability of .88 to .93 for various samples. Twenty-six male and 25 female Human Trait Inventory items remained after cross-validation. The reliability

coefficients ranged from .68 to .80. The Generalized Situational Choice Inventory yielded 45 male and 30 female items with reliability estimates from .80 to .84 for males and from .68 to .90 for females. The Preferred Job Characteristics Scale produced 20 male and 33 female items after cross-validation with reliabilities ranging from .76 to .89 for males and .60 to .93 for females. These latter tests were combined into one instrument and labeled the M-Scales. Total test reliability estimates of .94 for males and .93 for females were obtained from a random sample of 240 students drawn from the original 4200.

Outcomes of the experiment were measured by four criterion. Measures of study habits and attitudes were obtained by the Brown-Holtzman Survey of Study Habits and Attitudes (SSHA) which asks subjects to indicate how often they feel as each of the 75 items suggests. Brown and Holtzman<sup>3</sup> report the split third reliability of the SSHA for men to be .92. Test-retest with a two week interval produced a reliability coefficient of .95. When grade point averages and SSHA scores were correlated, an average validity coefficient of .42 was computed. On the other hand, correlations between the SSHA and the ACE Psychological examination, a test of scholastic aptitude, were consistently low. Brown and Holtzman feel that a low correlation with

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<sup>3</sup>W. F. Brown and W. H. Holtzman, Brown-Holtzman Survey of Study Habits and Attitudes: Manual (New York: The Psychological Corporation, 1956).

measures of scholastic aptitude and an appreciable relationship to academic success make the SSHA a most useful tool to research counseling since it measures non-intellectual factors which may significantly influence academic achievement.

The Tennessee Self-Concept Scale was used to obtain measures of self-concept. This scale consists of 100 self descriptive statements on which the subjects rate themselves on a five point scale. Fitts<sup>4</sup> reports that a reliability coefficient of .92 was obtained by test-retest with a two week interval and that scores of the Scale correlate with MMPI scores in ways that one would expect from the nature of the scores.

Grade point average for the third and fourth marking periods were used to provide an assessment of treatment effectiveness during both the period of the experiment and a follow-up assessment ten weeks later. Only the grades of solids, such as English, Math, History and Science were used to compute GPA. Parental ratings of the behavior of their son were obtained by a rating scale constructed for this study.

#### Sample

Before describing the characteristics of the 64 students used in the experimental analysis, it is appropriate

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<sup>4</sup>W. H. Fitts, Tennessee Self Concept Scale: Manual (Nashville: Counselor Recordings and Tests, 1965).



to account for students who were initially included in the groups but not included in the analysis. It was decided that in order for students to be included in the final analysis they must have attended 80 per cent of the group sessions. Thus the minimum was 16 sessions for the group counseling treatment or eight sessions for the group-individual counseling treatment. This minimum was assumed to be adequate for exposure to treatment and was chosen as a baseline in order to allow for the possibility of missed sessions due to illness and other events that could not be helped by the student. Since individual sessions were on a flexible schedule, attendance was not a problem.

By referring to Table 3.2 it will be noted that three students did not meet this requirement: Two from the group only treatment and one from the group-individual treatment.

Table 3.2 Students included in the post-treatment analysis.

|                                     | Left<br>School | Less Than<br>Minimum<br>Attendance | Final N |
|-------------------------------------|----------------|------------------------------------|---------|
| Group-individual<br>(original N=21) | 2              | 1                                  | 18      |
| Group only<br>(original N=21)       | 1              | 2                                  | 18      |
| Control<br>(original N=32)          | 2              | 2 (refused<br>testing)             | 28      |

Eleven students receiving group counseling from counselors A and B and seven students receiving group counseling from counselors C and D met the minimum requirements for post-treatment analysis. Also, 11 students receiving group-individual counseling from counselors A and B and seven students receiving group-individual counseling from counselors C and D met the minimum requirement for post-treatment analysis. Thus, each of the two experimental counseling groups contained 18 students from the post-treatment analysis.

There were 32 students assigned to the control group at the beginning of the study. Of these students two refused to complete the testing and two had moved from the city. Therefore, there were 28 students in the control group for the post-treatment analysis.

Since subjects were randomly assigned to counselors and treatments it was assumed that they were homogeneous in terms of selection criteria. To lend support to this assumption, raw scores obtained on the Otis Test of Mental Ability were averaged for each group and compared by means of an analysis of variance.<sup>5</sup> Similarly, the mean GPA (previous term) of each group was tested for differences between groups. Data in Tables 3.3 through 3.5 support the assumption of homogeneity of groups.

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<sup>5</sup>Allen L. Edwards, Statistical Methods for the Behavioral Sciences (New York: Holt, Rinehart and Winston, 1963).

Table 3.3. Mean scores for the Otis Test of Mental Ability and GPA means for each group.

|      | Group-Individual | Group  | Control |
|------|------------------|--------|---------|
| OTMA | 104.89           | 107.67 | 102.89  |
| GPA  | 4.55             | 4.95   | 4.86    |

Inspection of the data in Table 3.3 reveals slight differences among the three treatment groups on the Otis Test of Mental Abilities.

The results of the analysis of variance of the OTMA scores are summarized in Table 3.4. The null hypothesis of no differences cannot be rejected and it was concluded that there were no statistically significant differences on academic aptitude.

Table 3.4. Analysis of variance of the Otis Test of Mental Ability raw scores of the randomly assigned students.

N=64

| Source of Variation | S.S.      | d.f. | M.S.   | F   |
|---------------------|-----------|------|--------|-----|
| Between treatment   | 285.80    | 2    | 142.90 | .58 |
| Within treatment    | 15,008.64 | 61   | 246.04 |     |
| Total               | 15,294.44 | 63   |        |     |

A second consideration in determining the pre-experimental equivalence of the groups is the fall term grade point averages. The mean fall term grade point averages for each group reported in Table 3.3 reveals only slight differences among groups.

The results of the analysis of variance of GPA are summarized in Table 3.5. The null hypothesis was not rejected, and it was concluded that there were no statistically significant differences among the three groups on grade point average. Apparently the differences that do appear in Table 3.3 are of a magnitude that could be expected by chance variation.

Table 3.5. Analysis of variance of fall term grade point averages of the randomly assigned students.

| N=64                |        |      |      |      |
|---------------------|--------|------|------|------|
| Source of variation | S.S.   | d.f. | M.S. | F    |
| Between treatment   | 1.70   | 2    | .85  | .311 |
| Within treatment    | 147.13 | 61   | 2.41 |      |
| Total               | 148.83 | 63   |      |      |

After the study was underway, it was determined that although all students involved in the study were low-motivated as measured by the M-Scales, there were a number that could not be classified as underachievers as commonly described in the literature. Since a good deal of the related research deals with studies involving "typical" underachievers, it was decided that a separate analysis of the data for certain underachievers in the experimental groups was desirable. For the purpose of this study, an underachiever was operationally defined as a student who scored at 100 or above on the Otis Test of Mental Ability, and whose grade point average for the first term was 5.00 or less (5.00 = C- on a 12 point scale). Using this

criterion, nine of the group counseling only subjects, nine of the group-individual subjects, and 11 of the control group subjects could be classified as under-achievers. In order to equalize the groups, two subjects from the control group were randomly excluded from the analysis.

To lend support to the assumption of homogeneity of defined underachieving groups, raw scores obtained on the Otis Test of Mental Ability were averaged for each group and inspected for differences. Similarly, the mean GPA (first term) of each group was inspected for differences between groups. Data in Tables 3.6 and 3.7 give support to this assumption.

Table 3.6. Mean scores for Otis Test of Mental Ability for the groups of defined underachievers.

| N=27             |        |         |
|------------------|--------|---------|
| Group-Individual | Group  | Control |
| 106.68           | 107.00 | 107.44  |

Inspection of the data in Table 3.6 reveals differences so slight among the three treatment groups that they can be attributed to chance variation.

Another consideration in determining the pre-experimental equivalence of the operationally defined under-achievers in our groups is the fall term grade point averages. The mean fall term grade point averages for each group is reported in Table 3.7.

Table 3.7. Mean fall term grade point averages for each group of defined underachievers.

| N=27             |       |         |
|------------------|-------|---------|
| Group-Individual | Group | Control |
| 3.25             | 3.65  | 3.81    |

The data in Table 3.7 reveals differences so slight they can be attributed to chance variation.

Thus, there shall be a separate analysis of data from two distinct groups: (1) the larger group made up of the entire sample and designated as low motivated students and (2) a sub-group of the larger group operationally defined as "typical" underachievers.

The M-Scales selects low motivated students along a continuum of achievement and therefore there were a number of students who could not be classified as "typical" underachievers, i.e., above average ability and below average achievement. There were some students in the three experimental groups that could be called "high" achievers. In order to prevent confusion a description of the students not operationally defined as typical underachievers is now presented.

Two students, one in the group counseling treatment group and one in the control group, had a GPA of B- for the first term of the school year. One student in each of the counseled groups and three students in the control group had a GPA of C+ at the end of the first term. All other students with average and above average I.Q. scores had GPAs of C at the end of the first term. By inspection it is discernable

that no group enjoyed an advantage regarding "high" achievers or a disadvantage because of low ability students.

### The Counseling\*

The approach used in all of the counseling sessions stressed areas dealing with personal problems and personality dynamics thought to be underlying factors causing under-achievement. The problem areas are: feelings of hostility, feelings about self, family relationships, pressure from outside sources, feelings of guilt, and feeling of depression. In the counseling sessions the leaders allowed the discussion to follow the lines determined by the group when they were in accordance with one or more of the problem topics. Members of the groups were encouraged to freely discuss their experiences and feelings concerning such topics. The leaders often interceded by clarifying, summarizing, and directing when needed for continued productivity.

### Counseling Setting

All six of the groups met in a conference room in the high school. Individuals were not assigned seats; they sat facing each other in a small circle. Individual counseling took place in the office of each counselor.

### The Counselors

The four counselors of the investigation each possess a Master's degree in counseling and guidance and are presently

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\*For a more detailed discussion of the counseling see Appendix A.

candidates for advanced degrees. At the time of the experiment three of the counselors were members of the staff at Mona Shores High School and the fourth was employed as an instructor at Michigan State University. All of the counselors had previous high school counseling experience, including counseling with groups. The counselors worked in pairs (male and female). To insure replication of method, the four counselors met weekly to discuss and compare notes concerning the counseling sessions.

### The Null Hypotheses

The basic research hypotheses of this investigation are broadly stated in the first chapter. A more specific formulation of these hypotheses as they relate to the design of the experiment are now stated.

### One-way Analysis of Variance of Third Term Grades

The analysis of the third term grade point averages of the students in the three treatment groups will be made by a one-way analysis of variance.

Null Hypothesis One: There are no differences in academic achievement at the completion of the experiment among the students in the group-individual experience (GI), group experience (G), and the students who did not participate in group counseling (C).

$$H_0: GI = G = C$$

Alternate Hypothesis One: The academic achievement of the students at the completion of the experiment will be greater for the group-individual experience (GI) than for the group experience (G) which will



be greater than the students who did not participate in group counseling (C).

$$H_1: GI > G > C$$

#### One-way Analysis of Variance of the Survey of Study Habits and Attitudes (SSHA)

The analysis of variance of the Survey of Study Habits and Attitude scores for the students of the three treatment groups will be made by a one-way analysis of variance.

Null Hypothesis Two: There are no differences in the SSHA scores at the completion of the experiment in the group-individual experience (GI), group experience (G), and the students who did not participate in group counseling (C).

$$H_0: GI = G = C$$

Alternate Hypothesis Two: The SSHA scores of the students at the completion of the experiment will be greater for the students in the group-individual experience (GI) than the group experience (G) which will be greater than the students who did not participate in group counseling (C).

$$H_1: GI > G > C$$

#### One-way Analysis of Variance of the Self-Concept Scale

The analysis of self-concept scores of the students in the three treatment groups will be made by a one-way analysis of variance.

Null Hypothesis Three: There are no differences in self-concept at the completion of the experiment among the students in the group-individual experience (GI), group experience (G), and the students who did not participate in group counseling (C).

$$H_0: GI = G = C$$

Alternate Hypothesis Three: The self-concept scores of the students at the completion of the experiment will be greater for the students in the group-individual experience (GI), than the group experience (G), which will be greater than the students who did not participate in group counseling (C).

$$H_1: GI > G > C$$

#### One-way Analysis of Variance of Fourth Term Grades

The analysis of variance of fourth term grades for the students in the treatment groups will be made by a one-way analysis of variance.

Null Hypothesis Four: There are no differences in academic achievement ten weeks after the completion of the experiment among the students in the group-individual experience (GI), group experience (G), and the students who did not participate in group counseling (C).

$$H_0: GI = G = C$$

Alternate Hypothesis Four: The academic achievement of the students ten weeks after the completion of the experiment will be greater for the students in the group-individual experience (GI), than for the students in the group experience (G), which will be greater than the students who did not participate in group counseling (C).

$$H_1: GI > G > C$$

#### One-way Analysis of Variance of the Third Term Grades (Underachievers)

The analysis of the third term grade point averages of the defined underachievers in the three treatment groups will be made by a one-way analysis of variance.

Null Hypothesis Five: There are no differences in academic achievement at the completion of the experiment among the students in the group-individual experience (GI), group experience (G), and the students who did not participate in group counseling (C).

$$H_0: GI = G = C$$

Alternate Hypothesis Five: The academic achievement of the students at the completion of the experiment will be greater for the group-individual experience (GI) than for the group experience (G) which will be greater than for the students who did not participate in group counseling (C).

$$H_1: GI > G > C$$

One-way Analysis of Variance of the Survey of Study Habits and Attitudes (Underachievers)

The analysis of variance of the survey of Study Habits and Attitude scores for the defined underachievers of the three treatment groups will be made by the one-way analysis of variance.

Null Hypothesis Six: There are no differences in the SSHA scores at the completion of the experiment in the group-individual experience (GI), group experience (G), and the students who did not participate in group counseling (C).

$$H_0: GI = G = C$$

Alternate Hypothesis Six: The SSHA scores of the students at the completion of the experiment will be greater for the students in the group-individual experience (GI) than the group experience (G) which will be greater than the students who did not participate in group counseling (C).

$$H_1: GI > G > C$$

One-way Analysis of Variance of the  
Self-Concept Scale (Underachievers)

The analysis of self-concept scores of the defined underachievers in the three treatment groups will be made by a one-way analysis of variance.

Null Hypothesis Seven: There are no differences in self-concept at the completion of the experiment among the students in the group-individual experience (GI), group experience (G), and the students who did not participate in group counseling (C).

$$H_0: GI = G = C$$

Alternate Hypothesis Seven: The self-concept scores of the students at the completion of the experiment will be greater for the students in the group-individual experience (GI), than the group experience (G), which will be greater than the students who did not participate in group counseling (C).

$$H_1: GI > G > C$$

One-way Analysis of Variance of  
Fourth Term Grades (Underachievers)

The analysis of variance of fourth term grades for the defined underachievers in the treatment groups will be made by a one-way analysis of variance.

Null Hypothesis Eight: There are no differences in academic achievement ten weeks after the completion of the experiment among the students in the group-individual experience (GI), group experience (G), and the students who did not participate in group counseling (C).

$$H_0: GI = G = C$$

Alternate Hypothesis Eight: The academic achievement of the students ten weeks after the completion of the experiment will be greater for the students in the group-individual experience (GI), than for the students in the group experience (G), which will be greater than the students who did not participate in group counseling (C).

$$H_1: GI > G > C$$

### One-way Analysis of Variance of Behavior Rating Questionnaire

The analysis of variance of behavior rating scores for the students in the treatment groups will be made by a one-way analysis of variance.

Null Hypothesis Nine: There are no differences in the behavior, as rated by parents, of students at the completion of the experiment in the group-individual experience (GI), group experience (G), and the students who did not participate in group counseling (C).

$$H_0: GI = G = C$$

Alternate Hypothesis Nine: The behavior of the students as rated by parents, at the completion of the experiment will be greater for the students in the group-individual experience (GI) than the group experience (G) which will be greater than the students who did not participate in group counseling (C).

$$H_1: GI > G > C$$

### Statistical Treatment

The one-way analysis of variance is used to test the null hypotheses of this 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 level of significance for rejecting the null hypotheses is set at five per cent.

### Summary

This experiment is designed to test the differences in effect of two types of counseling; group and group-

individual, holding counselor time equal.

Ninety-six male students who ranked in the lower half of their junior class on the Michigan M-Scales were invited to participate in a counseling program. The 74 who accepted the invitation became the subjects of the study.

Subjects were first grouped according to the period during the school day when they would be free to participate in group counseling. From each of these groups seven individuals were randomly selected to be members of the experimental groups and the rest were assigned to the control group. In this manner six experimental groups having seven members each, were formed. Then three of these groups were randomly assigned to the group-individual counseling treatment while the other three groups were assigned to the group counseling only treatment. Randomizing techniques were also used to assign the pairs of counselors to the various treatment groups. The third level of the design, the control group, received no treatment. Change in subjects in the counseled was then obtained by comparison with the control subjects on the four criterion: GPA, study habits and attitudes, self-concept, and behavior ratings.

The one-way analysis of variance is used to test the null hypotheses of this study. The statistic used is F.

The level of significance for rejecting the null hypotheses is set at five per cent.

## CHAPTER IV

### ANALYSIS OF EXPERIMENTAL RESULTS

In Chapter IV the results of the tests on the null hypotheses are reported. Each of the nine experimental null hypotheses are tested by an analysis of variance technique which was reported in Chapter III.

#### Analysis of Variance of the Third Term Grade Point Averages

The first hypothesis, which predicted the immediate effects of treatment, was tested by an analysis of variance of the third term grade point averages.

#### Hypothesis One

Hypothesis one is restated in null form:

1. There are no differences in academic achievement at the completion of the experiment among the students in the group-individual experience, group experience, and the students who did not participate in group counseling.

There were a total of 18 students in the group-individual treatment, 18 students in the group treatment, and 28 students in the control group. The first hypothesis was tested by comparing third term grade point average means of the two treatment groups and the no-treatment control.

The results of the analysis are summarized in Table 4.1.

Table 4.1. Analysis of variance of third term grade point averages for the group-individual counseling, group counseling and control groups.

| Means               | GI = 4.84      |      | G = 5.23     |     | C = 4.72              |  |
|---------------------|----------------|------|--------------|-----|-----------------------|--|
| Source of Variation | Sum of Squares | d.f. | Mean Squares | F   | Hypothesis Tested Is: |  |
| Between Treatments  | 3.01           | 2    | 1.51         | .53 | Not Rejected          |  |
| Within Treatments   | 173.35         | 61   | 2.84         |     |                       |  |
| Total               | 176.36         | 63   |              |     |                       |  |

Necessary:  $F .05 \geq 3.15$  to reject  $H_{01}: GI = G = C$

An F value of 3.15 is necessary for 2,61 degrees of freedom before significant differences between groups can be concluded at the .05 level of confidence.

Inspection of the table reveals an F value of .53 which is not significant. The differences in third term grade point averages between the three experimental groups are likely to have occurred by chance. Therefore, the null hypothesis that there were no differences in academic achievement between the students who participated in group counseling and the students who did not participate in group counseling was not rejected.

#### Analysis of Variance of the Brown-Holtzman Survey of Study Habits and Attitudes

Hypothesis two which stated the immediate effects of treatment on study habits and attitudes is tested by an



analysis of variance of the SSHA scores obtained at the completion of the treatment period.

### Hypothesis Two

Hypothesis two is restated in null form:

2. There are no differences in the Survey of Study Habits and Attitude scores at the completion of the experiment among the students in the group-individual experience, group experience, and the students who did not participate in group counseling.

The procedures followed in testing hypothesis two are identical to those used in testing hypothesis one. A one-way analysis of variance was computed to determine whether or not significant difference in means existed between the three experimental groups. The results of the analysis are summarized in Table 4.2.

Table 4.2. Analysis of variance of Brown-Holtzman Survey of Study Habits and Attitudes raw scores for the group-individual counseling, group counseling, and control groups.

| Means               | GI = 19.05     |      | G = 21.67    |     | C = 18.28             |  |
|---------------------|----------------|------|--------------|-----|-----------------------|--|
| Source of Variation | Sum of Squares | d.f. | Mean Squares | F   | Hypothesis Tested Is: |  |
| Between Treatments  | 129.21         | 2    | 64.61        | .83 | Not Rejected          |  |
| Within Treatments   | 4762.67        | 61   | 78.07        |     |                       |  |
| Total               | 4891.88        | 63   |              |     |                       |  |

Necessary:  $F_{.05} \geq 3.15$  to reject  $H_{02}: GI = G = C$

An F value of 3.15 is necessary for 2,61 degrees of freedom before significant differences between groups can be concluded at the .05 level of confidence.

Inspection of the table reveals an F value of .83. The differences in SSHA scores between the students in the three experimental groups are likely to have occurred by chance. Therefore, we cannot reject Hypothesis two.

#### Analysis of Variance of the Tennessee Self-Concept Scale

Hypothesis three which predicted the immediate effects of treatment on self-concept was tested by an analysis of variance of scores on the Tennessee Self-Concept Scale obtained at the completion of the treatment period.

#### Hypothesis Three

Hypothesis three is restated in null form:

3. There are no differences in self-concept at the completion of the experiment among the students in the group-individual experience, group experience, and the students who did not participate in group counseling.

A one-way analysis of variance was computed to determine whether a significant difference in means existed between the group-individual counseling, group counseling and control groups on the Tennessee Self-Concept Scale. The results of the analysis are summarized in Table 4.3.

Table 4.3. Analysis of variance of Tennessee Self-Concept Scores for the group-individual counseling, group counseling, and control groups.

| Means               | GI = 310       |      | G = 312     |      | C = 311               |
|---------------------|----------------|------|-------------|------|-----------------------|
| Source of Variation | Sum of Squares | d.f. | Mean Square | F    | Hypothesis Tested Is: |
| Between Treatment   | 59.01          | 2    | 29.51       | .032 | Not Rejected          |
| Within Treatment    | 57226.74       | 61   | 938.14      |      |                       |
| Total               | 57285.75       | 63   |             |      |                       |

Necessary:  $F .05 \geq 3.15$  to reject  $H_{03}: GI = G = C$

An F value of 3.15 is necessary for 2,61 degrees of freedom before significant differences between groups can be concluded at the .05 level of confidence.

Inspection of the table reveals an F value of .032 which is not significant. The differences in self-concept between the three experimental groups are likely to have occurred by chance. Therefore, the null hypothesis that there were no differences in self-concept of the students in the different groups cannot be rejected.

#### Analysis of Variance of Fourth Term Grade Point Averages

Hypothesis four which predicted the effects of treatment ten weeks after the experiment was tested by an analysis of variance of the fourth term grade point averages.

#### Hypothesis Four

Hypothesis four is restated in null form:

4. There are no differences in academic achievement ten weeks following the completion of the experiment among the students in the group-individual experience, group experience, and the students who did not participate in group counseling.

The fourth hypothesis was tested by comparing fourth term grade point average means of the two treatment groups and the no treatment control group. The results of the analysis are summarized in Table 4.4.

Table 4.4. Analysis of variance of fourth term grade point averages for the three experimental groups.

| Means               | GI = 5.39      |      | G = 5.64    |      | C = 4.60              |
|---------------------|----------------|------|-------------|------|-----------------------|
| Source of Variation | Sum of Squares | d.f. | Mean Square | F    | Hypothesis Tested Is: |
| Between Treatments  | 19.48          | 2    | 9.74        | 3.62 | Rejected              |
| Within Treatments   | 164.14         | 61   | 2.69        |      |                       |
| Total               | 183.62         | 63   |             |      |                       |

Necessary:  $F .05 \geq 3.15$  to reject  $H_{04}: GI = G = C$

An F value of 3.15 is necessary for 2,61 degrees of freedom before significant differences between groups can be concluded at the .05 level of confidence.

Inspection of the table reveals an F value of 3.62 which is significant at the .05 level. The hypothesis that there are no differences in academic achievement ten weeks following the completion of the experiment among the students in the group-individual experience, group experience, and the

students who did not participate in group counseling is rejected. Differences as large as these would occur by chance less than five times in one hundred.

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.<sup>1</sup> This test is used to determine which of the differences between group means are significant and which are not. The results of Kramer's extension of Duncan's New Multiple Range Test are summarized in Table 4.5.

Table 4.5. Kramer's extension of Duncan's New Multiple Range Test of the Fourth Term GPA means of the three experimental groups.

| Means    | A<br>Control<br>4.60 | B<br>Individual<br>5.39 | C<br>Group<br>5.64 | Shortest<br>Significant<br>Ranges |
|----------|----------------------|-------------------------|--------------------|-----------------------------------|
| A - 4.60 |                      | 3.71                    | 4.88*              | $R_2 = 4.64$                      |
| B - 5.39 |                      |                         | 1.17               | $R_3 = 4.85$                      |
| C - 5.64 |                      |                         |                    |                                   |

\*Significant at the .05 level.

An examination of the means in Table 4.5 indicates that the mean for the group counseling group is greater than the mean for the group-individual counseling group and the latter is greater than the mean for the control group. The difference between the group counseling group and the control

<sup>1</sup>C. J. Kramer, "Extension of Multiple Range Tests to Group Means With Unequal Numbers of Replications," Biometrics (September, 1956), pp. 307-10.

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 Duncan's Test indicate that the student who received group counseling made significantly higher grades ten weeks following the experiment than the students in the control group but not significantly higher grades than the students who received group-individual counseling.

#### Analysis of Variance of the Third Term Grade Point Averages of Defined Underachievers

The fifth hypothesis which predicted the immediate effects of treatment was tested by an analysis of variance of the third term grade point averages for the operationally defined underachievers.

#### Hypothesis Five

Hypothesis five is restated in the null form:

5. There are no differences in academic achievement at the completion of the experiment among the under-achieving students in the group-individual experience, group experience, and the students who did not participate in group counseling.

The fifth hypothesis was tested by comparing third term grade point average means of the defined underachievers in each of the three experimental groups. The results of the analysis are summarized in Table 4.6.

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\*Because the direction of the size of means was not hypothesized in the direction found, research convention dictates that they are observed orders and not reported as conclusions.

Table 4.6. Analysis of variance of third term grade point averages for the defined underachievers in the group-individual counseling, group counseling, and control groups.

| Means               | GI = 4.77      |      | G = 4.63     |      | C = 3.35              |
|---------------------|----------------|------|--------------|------|-----------------------|
| Source of Variation | Sum of Squares | d.f. | Mean Squares | F    | Hypothesis Tested Is: |
| Between Treatments  | 11.07          | 2    | 5.54         | 2.60 | Not Rejected          |
| Within Treatments   | 51.16          | 24   | 2.13         |      |                       |
| Total               | 62.23          | 26   |              |      |                       |

Necessary:  $F \geq 3.38$  to reject  $H_{05}$ :  $GI = G = C$

An F value of 3.38 is necessary for 2,24 degrees of freedom before significant differences between groups can be concluded at the .05 level of confidence.

The data in Table 4.6 reveals an F value of 2.60 which is not significant at the .05 level of confidence. The differences in grade point averages between the defined underachieving students in the three different groups were likely to have occurred by chance. Therefore, the null hypothesis that there are no differences in academic achievement at the completion of the experiment between the defined underachieving students of the three experimental groups cannot be rejected.

Analysis of Variance of the Brown-Holtzman  
Survey of Study Habits and Attitudes  
Scores of Defined Underachievers

Hypothesis six which predicted the immediate effects of treatment on study habits and attitudes was tested by an

analysis of variance of the SSHA scores obtained at the completion of the experiment for the operationally defined underachievers.

#### Hypothesis Six

Hypothesis six is restated in the null form:

6. There are no differences in the SSHA scores at the completion of the experiment of defined under-achievers in the group-individual experience, group experience, and the defined underachieving students who did not participate in group counseling.

The sixth hypothesis was tested by comparing the SSHA means of the defined underachievers in each of the three experimental groups. The results of the analysis are summarized in Table 4.7.

Table 4.7. Analysis of variance of Brown-Holtzman Survey of Study Habits and Attitudes raw scores for the defined underachievers in the group-individual counseling, group counseling, and control groups.

| Means               | GI = 18.67     |      | G = 19.34    |     | C = 21.67             |
|---------------------|----------------|------|--------------|-----|-----------------------|
| Source of Variation | Sum of Squares | d.f. | Mean Squares | F   | Hypothesis Tested Is: |
| Between Treatments  | 44.67          | 2    | 22.34        | .24 | Not Rejected          |
| Within Treatments   | 2204.00        | 24   | 91.83        |     |                       |
| Total               | 2248.67        | 26   |              |     |                       |

Necessary:  $F \geq 3.38$  to reject  $H_{o_6}$ : GI = G = C



An F value of 3.38 is necessary for 2,24 degrees of freedom before significant differences can be concluded between groups at the .05 level of confidence.

The data in Table 4.7 reveals an F value of .24 that is not significant. The differences in SSHA scores between the defined underachieving students in the three experimental groups are likely to have occurred by chance. Therefore, we cannot reject hypothesis six.

Analysis of Variance of the Tennessee  
Self-Concept Scale Scores of Defined  
Underachievers

Hypothesis seven which stated the immediate effects of treatment on self-concept was tested by an analysis of variance of the Tennessee Self-Concept scores obtained at the completion of the experiment for defined underachievers.

Hypothesis Seven

Hypothesis seven is restated in the null form:

7. There are no differences in self-concept at the completion of the experiment among the defined underachieving students in the group-individual experience, group experience, and the students who did not participate in group counseling.

The seventh hypothesis was tested by comparing the means of the self-concept scores of the defined underachievers in each of the three experimental groups. The results of the analysis are summarized in Table 4.8.

Table 4.8. Analysis of variance of Tennessee Self-Concept raw scores for the defined underachievers in the group-individual counseling, group counseling and control groups.

| Means               | GI = 312       |      | G = 334      |     | C = 315               |
|---------------------|----------------|------|--------------|-----|-----------------------|
| Source of Variation | Sum of Squares | d.f. | Mean Squares | F   | Hypothesis Tested Is: |
| Between Treatments  | 2718.53        | 2    | 1359.27      | .81 | Not Rejected          |
| Within Treatments   | 40485.99       | 24   | 1686.92      |     |                       |
| Total               | 43204.52       | 26   |              |     |                       |

Necessary:  $F .05 \geq 3.38$  to reject  $H_{07}$ :  $GI = G = C$

Inspection of the table reveals an F value of .81 which is not significant. The differences in self-concept scores between the defined underachievers in the three experimental groups are likely to have occurred by chance. Null hypothesis seven cannot be rejected.

#### Analysis of Variance of Fourth Term Grade Point Averages of Defined Underachievers

Hypothesis eight which predicted the effects of treatment ten weeks after the completion of the experiment was tested by an analysis of variance of the fourth term grade point averages.

#### Hypothesis Eight

Hypothesis eight is restated in null form:

8. There are no differences in academic achievement ten weeks following the completion of the experiment

among the defined underachieving students in the group individual experience, group experience, and the defined underachieving students who did not participate in group counseling.

The eighth hypothesis was tested by comparing the fourth term grade point average means of the defined under-achievers in each of the three experimental groups. The results of the analysis are summarized in Table 4.9.

Table 4.9. Analysis of variance of fourth term grade point averages for defined underachievers in each of the three experimental groups.

| Means               | GI = 5.19      |      | G = 4.83     |       | C = 3.38              |
|---------------------|----------------|------|--------------|-------|-----------------------|
| Source of Variation | Sum of Squares | d.f. | Mean Squares | F     | Hypothesis Tested Is: |
| Between Treatments  | 53.59          | 2    | 26.79        | 13.19 | Rejected              |
| Within Treatments   | 48.58          | 24   | 2.03         |       |                       |
| Total               | 102.17         | 26   |              |       |                       |

Necessary:  $F .05 \geq 3.38$  to reject  $H_{0g}$ :  $GI = G = C$

An F value of 3.38 is necessary for 2,24 degrees of freedom before significant differences between groups can be concluded at the .05 level of confidence.

Inspection of the table reveals an F value of 13.19 which is significant at the .05 level of confidence. The hypothesis that there are no differences in academic achievement ten weeks following the completion of the experiment among the defined underachieving students in the three experimental groups is rejected. Differences as large as

these would occur by chance less than five times in one hundred.

In order to determine how the three groups differ, Duncan's New Multiple Range Test as described by Edwards<sup>2</sup> was used. The results of Duncan's New Multiple Range Test are found in Table 4.10.

Table 4.10. Duncan's New Multiple Range Test of Fourth Term Grade Point average means of the defined underachievers in the three experimental groups.

|                  | Control Group |      |       | Group-<br>Individual | Significant<br>Ranges |
|------------------|---------------|------|-------|----------------------|-----------------------|
|                  | Means         | 3.38 | 4.83  | 5.19                 |                       |
| Control          | 3.38          |      | 1.45* | 1.81*                | $R_2 = 1.37$          |
| Group            | 4.83          |      |       | .36                  | $R_3 = 1.44$          |
| Group-Individual | 5.19          |      |       |                      |                       |

\*Significant at the .05 level.

An examination of the means reported in Table 4.10 indicates that the mean for the control group is less than the mean of the group counseling group while the latter is less than the mean of the group-individual counseling group. The differences between the group-individual counseling group and the control group is large enough to be significant at the .05 level of confidence. The difference between the group counseling group and the control group is large enough to be significant at the .05 level of confidence.

<sup>2</sup>Edwards, op. cit.

There were no other differences which were significant.

The result of the analysis of variance and Duncan's test indicate that the defined underachieving students who received either counseling treatment made significantly higher grades than the students of the control group, but there were no significant differences in academic achievement between the two groups which received counseling.

#### Analysis of Variance of the Behavior Rating Scores

Hypothesis nine was tested by an analysis of variance of the behavior rating scores obtained from the parents of subjects. Two mailings of the questionnaire and a follow-up letter resulted in a return of 50 completed questionnaires. Of this total, there were 14 completed questionnaires out of a possible 18 in the group counseling experimental group, 15 completed questionnaires out of a possible 18 in the group-individual counseling experimental group, and 21 completed questionnaires out of a possible 28 in the control group. The total number of returned questionnaires is 78.13% of the possible returns.

#### Hypothesis Nine

Hypothesis nine is restated in the null form:

9. There are no differences in behavior, as rated by parents, of students, at the completion of the experiment, in the group-individual experience, group experience, and the students who did not participate in group counseling.

The ninth hypothesis was tested by comparing the means of the behavior rating scores of each of the three experimental groups. The results of the analysis are summarized in Table 4.11.

Table 4.11. Analysis of variance of behavior rating scores for the group-individual counseling, group counseling, and control groups.

| Means               | GI = 26        |      | G = 28.5     |      | C = 24.8              |
|---------------------|----------------|------|--------------|------|-----------------------|
| Source of Variation | Sum of Squares | d.f. | Mean Squares | F    | Hypothesis Tested Is: |
| Between Treatment   | 111.77         | 2    | 55.88        | 2.66 | Not Rejected          |
| Within Treatment    | 986.01         | 47   | 20.98        |      |                       |
| Total               | 1097.78        | 49   |              |      |                       |

Necessary:  $F .05 \geq 3.19$  to reject  $H_{09}$ :  $GI = G = C$

An F value of 3.19 is necessary for 2,47 degrees of freedom before significant differences between groups can be concluded at the .05 level of confidence.

The data in Table 4.11 reveals an F value of 2.66 which is not significant at the .05 level of confidence. The differences in behavior rating scores between the students in the three experimental groups are likely to have occurred by chance. Null hypothesis nine cannot be rejected.

First, Third and Fourth Term  
Grade Point Average Means

The analysis of the third and fourth term grade point averages of the students in the three treatment groups

have been reported in the preceding pages. The first, third, and fourth term grade point average means for the students in the group-individual counseling, group counseling, and control groups are reported together in Table 4.12.

Table 4.12. First, third, and fourth term grade point average means for the students in the three treatment groups.

| Term   | Treatment        |       |         |
|--------|------------------|-------|---------|
|        | Group-Individual | Group | Control |
| First  | 4.55             | 4.95  | 4.86    |
| Third  | 4.84             | 5.23  | 4.72    |
| Fourth | 5.39             | 5.64  | 4.60    |

An inspection of the grade point average means reported in Table 4.12 reveals continued improvement in grade point averages from the first term through the fourth term by the two counseled groups. The grade point average of the control group showed a continuous decline from the first term through the fourth term. By the end of the fourth marking period both counseled groups had grade point averages in the C range while the control groups grade point averages remained in the D range.

The first, third, and fourth term grade point average means for the operationally defined underachievers in each of the three experimental groups are reported in Table 4.13.

Table 4.13. First, third, and fourth term grade point average means for the defined underachiever in the third treatment groups.

| Term   | Treatment        |       |         |
|--------|------------------|-------|---------|
|        | Group Individual | Group | Control |
| First  | 3.25             | 3.65  | 3.81    |
| Third  | 4.77             | 4.63  | 3.35    |
| Fourth | 5.19             | 4.83  | 3.38    |

An inspection of the grade point average means reported in Table 4.13 reveals a continuous improvement in grade point averages for the two counseled groups from the first term through the fourth term. This was not the case for the control group. By the end of the fourth marking period those defined underachieving students in the group-individual counseling treatment had reached a grade point average of better than a C-, those in the group counseling treatment approached a C-, while the control group settled at a D average.

#### Non-Hypothesized Observations

During the course of the experiment, the four counselors met weekly to discuss and compare notes regarding the group counseling. Invariably the conversation came to the topic of the subjects' reaction to the group counseling. Some seemed to be highly involved in the process of counseling, while some adopted a "wait and see" attitude, while still others appeared to remain aloof from active involvement



in the counseling. A question which intrigued the researcher was: What is the relationship between the amount of investment a student has in group counseling and a change in his academic achievement?

To arrive at an answer to this question, each pair of counselors, at the conclusion of the experiment, was asked to submit the names of two students from each of their groups that, in their judgment, indicated a high degree of investment in the group counseling. (Investment in counseling was defined as participating with some degree of enthusiasm in the group discussion. It also includes those actions and attitudes that are signs of self-exploration and a willingness to communicate feelings.) The counselors also were asked to name the two students in each of their groups that they judged to be least invested in the group counseling.

For the analysis there were a total of 24 students, 12 judged most invested in group counseling and 12 judged least invested in the group counseling.

Change in academic achievement was obtained by subtracting the first term grade point average of each student from his third term grade point average.

The point biserial correlation<sup>3</sup> was used to test the relationship between the dichotomous variable (most-least investment) and the continuous variable (GPA change).

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<sup>3</sup>Ibid.

The point biserial correlation between investment in counseling and change in grade point average was:

$$r_{pb} = .42$$

Inspection of the tabled value of  $r$  shows, that with 22 degrees of freedom a coefficient of .40 is needed to indicate a statistically significant relationship at the .05 level of confidence. Since the computed value of  $r$  exceeds the tabled value of  $r$  we conclude that a significant relationship exists between the degree of investment in group counseling and a change in academic achievement.

Another question of interest was whether or not differences existed between the two counseled groups due to the different methods of counseling, different counselors and an interaction between counselors and type of counseling. 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 the two.

Because unequal frequencies within cells tend to inflate the interaction effect, it was decided that equal frequencies in each cell would be created. Since the number of students receiving group counseling from counselors A and B was 11, while counselors C and D group counseled seven students, it was decided that seven students would be selected randomly from the 11 subjects counseled by A and B for each analysis. Likewise, seven of 11 students receiving group-individual counseling from counselors A and B would be

randomly selected for each analysis, since there were seven subjects receiving group-individual counseling from counselors C and D.

The first question tested was: Are there mean differences, due to the effects of different methods of counseling, different counselors and an interaction between counselor and type of counseling, between low-motivated students on third term GPAs?

The results of a two by two analysis of variance are reported in Table 4.14.

Table 4.14. Analysis of variance of third term grade point averages for treatment, counselor and interaction effects.

| Source of Variation | Sum of Squares | d.f. | Mean Squares | F    |
|---------------------|----------------|------|--------------|------|
| Between Treatment   | .67            | 1    | .67          | N.S. |
| Between Counselors  | .49            | 1    | .49          | N.S. |
| Interaction         | .63            | 1    | .63          | N.S. |
| Error               | 48.50          | 24   | 2.02         |      |
| Total               | 50.29          | 27   |              |      |

Since none of the F values in Table 4.14 are greater than unity, the answer to our question is that there are no differences, attributable to differential treatment, counselors and the interaction between treatment and counselor, among the students on the third term GPA.

Question two dealt with possible differences among the students on fourth term GPA, due to differential treatment, different counselors, and the interaction between the two. The results of a two by two analysis of variance are reported in Table 4.15.

Table 4.15. Analysis of variance of fourth term grade point averages for treatment, counselor and interaction effects.

| Source of Variation | Sum of Squares | d.f. | Mean Squares | F    |
|---------------------|----------------|------|--------------|------|
| Between Treatment   | 1.72           | 1    | 1.72         | N.S. |
| Between Counselors  | .46            | 1    | .46          | N.S. |
| Interaction         | .23            | 1    | .23          | N.S. |
| Error               | 52.25          | 24   | 2.17         |      |
| Total               | 54.66          | 27   |              |      |

Again, each F value is less than unity, and we conclude no differences exist among the students on fourth term GPA due to different treatments, counselors, and the interaction between the two.

In Table 4.16 are summarized the results of a two by two analysis of variance which tested for differences among students on SSHA scores due to different treatment, different counselors and the interaction between counselor and treatment.

Table 4.16. Analysis of variance of SSHA raw scores for treatment, counselor and interaction effects.

| Source of Variation | Sum of Squares | d.f. | Mean Squares | F    |
|---------------------|----------------|------|--------------|------|
| Between Treatment   | 54.32          | 1    | 54.32        | N.S. |
| Between Counselors  | .90            | 1    | .90          | N.S. |
| Interaction         | .32            | 1    | .32          | N.S. |
| Error               | 1601.43        | 24   | 66.72        |      |
| Total               | 1656.97        | 27   |              |      |

All F ratio values in Table 4.16 are less than unity. Apparently there are no differences among students on SSHA scores due to the differential treatment, different counselors and the interaction between the two.

The final two by two analysis of variance tested for differences among students on self-concept scores due to different treatments, different counselors and the interaction between the two.

Table 4.17. Analysis of variance of self-concept scale raw scores for treatment, counselor and interaction effects.

| Source of Variation | Sum of Squares | d.f. | Mean Squares | F    |
|---------------------|----------------|------|--------------|------|
| Between Treatment   | 108.04         | 1    | 108.04       | N.S. |
| Between Counselors  | 282.89         | 1    | 282.89       | N.S. |
| Interaction         | 98.89          | 1    | 98.89        | N.S. |
| Error               | 26353.43       | 24   | 1098.01      |      |
| Total               | 26843.25       | 27   |              |      |

There are no significant F values in Table 4.17. There are no differences due to treatment differences, different counselors, and the interaction between the two on self-concept scores of the students.

Thus, on all four criterion there are no significant differences between the two treatment groups of low-motivated students due to the different methods of counseling, different counselors and an interaction between counselor and type of counseling.

#### Summary

The analysis of variance technique was used to test the nine null hypotheses that were stated in Chapter III. The fourth and eighth hypotheses were rejected, the remaining seven were not rejected.

Kramer's extension of Duncan's New Multiple Range Test was employed to further test null hypothesis four. The subjects who experienced the group counseling treatment had grade point averages which were higher, ten weeks after the completion of the experiment, than the grade point averages of the students which received group-individual counseling which were higher than the grade point averages of the control group. The differences that existed were not in accord with the alternate hypothesis, and therefore no further conclusions are warranted.

Duncan's New Multiple Range Test for making multiple comparisons was used to further test the eighth hypothesis.

It was concluded that the grade point averages of the defined underachievers in each of the counseled groups were significantly different from the grade point averages of the defined underachievers in the control group, ten weeks following the completion of the experiment. There were no significant differences between the defined underachievers in the two counseled groups, ten weeks after the completion of the experiment.

## CHAPTER V

### CONCLUSIONS, DISCUSSION, RECOMMENDATIONS, AND SUMMARY

#### Conclusions

An examination of the data reveals that the two treatment groups improved their grade point averages at the completion of the experiment while the control group did not. However, there were no statistically significant differences between the three groups at this time. The fourth term data revealed that the students in the two treatment groups continued to improve their grade point averages while the control made no gain. By the end of the fourth term the grade point average of both treatment groups was higher than C, but the control group's grade point average remained in the D range. There was a statistically significant difference between the group counseling only treatment group and the control group at the end of the fourth term. No other significant differences were found. The data for defined underachievers at the completion of the experiment revealed no statistically significant differences. Even though no statistically significant differences existed at this time those students defined as underachievers improved their third term grade point



averages in the two treatment groups but not in the control group. During the fourth term, while the control group remained at the same low level, the defined underachievers in the treatment groups continued to improve their grade point averages. By the end of the fourth term, the group-individual counseled group of underachievers had higher than a C- average, and the control group continued with a D average. At this time, both counseled groups differed significantly from the control group but not from each other.

The analysis of the data permits the following conclusions:

1. Ten weeks following the term in which counseling occurred low-motivated students who received group counseling over a period of twenty weeks had significantly higher grade point averages than students who received no counseling.
2. Ten weeks after the termination of counseling defined underachievers who received group counseling over a period of twenty weeks had significantly higher grade point averages than the underachievers who received no counseling.
3. Ten weeks after the termination of counseling defined underachievers who received group-individual counseling over a period of twenty weeks had significantly higher grade point averages than the underachievers who received no counseling.

4. No significant differences were found for the term in which counseling was experienced, or ten weeks after counseling, between the grade point averages of low-motivated students who received group-individual counseling or group counseling.
5. No significant differences were found for the term in which counseling was experienced, or ten weeks after the counseling, between the grade point averages of the defined underachieving students who received group counseling and the defined underachieving students who received group-individual counseling.
6. No significant differences were found immediately following the experiment between the grade point averages, study habits and attitude scores, self-concept scores, and behavior rating scores of the low-motivated students in the group counseling, group-individual counseling, and control groups.
7. No significant differences were found immediately following the experiment between the grade point averages, study habits and attitude scores and self-concept scores of the defined underachieving students in the group counseling, group-individual counseling, and control groups.

### Discussion

The study was designed to answer questions about the effectiveness of two different types of group counseling that might be used with low-motivated students. The use of group

counseling in this study was based upon the theory that the low-motivated student needs to become aware of his underlying personality dynamics and relate them to his low-motivation. It was assumed that by combining the advantages of individual counseling and group counseling this awareness would become greater and, therefore, would produce greater change than an experience which used group counseling only.

The results of the study indicate that ten weeks following the counseling experience, group counseling, as defined for this study, conducted with low-motivated male high school students by a male counselor and a female counselor jointly, will produce a significant and positive change in grade point average when compared to a no-treatment control group. Also, ten weeks following the counseling experience, with subjects who were operationally defined as underachievers, both counseling treatments, i.e., group-individual counseling and group counseling only, will produce a significant and positive change in grade point average when compared to a no-treatment control group. A number of questions are raised by the results of the study.

Is it possible that the effects of group counseling are reached only after a period of incubation? Ofman<sup>1</sup> explains some of the often contradictory results in the

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<sup>1</sup>W. Ofman, "Evaluation of a Group Counseling Procedure," Journal of Counseling Psychology, XI (1964), 152-58.

literature on the effects of counseling on grade point average by pointing out that significant improvement did not appear until after three semesters had passed. Evidently, it takes some time before the results of newly gained insights, resulting from group counseling are translated into action. Since problems hypothesized to be the cause of underachievement are a result of a life-long learning process, it would seem reasonable that new modes of behavior would take time to be mastered.

Since all subjects included in the study were volunteers and, therefore, motivated toward counseling, why did not all subjects appear to benefit from this type of experience? Spielberger and associates,<sup>2</sup> it will be remembered, were able to isolate a personality pattern which characterized the students who attended the counseling sessions regularly. The significant relationship between investment in counseling, as judged by the counselors, and academic achievement lends support to the fact that although students are motivated toward self-improvement, the type of experience which is appropriate for the personality dynamics of a particular student must be provided before he is most effectively helped.

Why was the group-individual counseling not more effective than the group counseling? Hart<sup>3</sup> found that affective counseling was more effective in raising GPA

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<sup>2</sup>Spielberger, et. al., op. cit.

<sup>3</sup>Hart, op. cit.

than a cognitive method of counseling. Comments by members of the group-individual counseling treatment group indicate the necessary group cohesiveness was never achieved to promote an intensive, affective type of counseling. For example, each group meeting which followed the week of individual meetings appeared as a "new" session to members. Likewise, during individual counseling sessions, counselors and clients generally failed to achieve a strong relationship because of the lack of continuity. While the experiment was designed to test the effects of group counseling and individual counseling in conjunction, in retrospect it appears that, to the clients at least, what occurred was alternate counseling - first group, then individual, then group, then individual and so on. The design did not really allow for concurrent individual and group counseling. It is not realistic to believe that group counseling and individual counseling done concurrently would be more intensive and thereby more affective than group counseling only? This question can only be answered by future study in counseling with groups.

What of the use of team counseling? Did it provide the advantages suggested by exponents of its use? The counselors of this study agreed that by combining their skills and other assets they could offer more to a group than anyone could alone. Furthermore, they agreed that the sessions were less strenuous, more comfortable, and extremely insightful when compared to groups they had counseled alone.

Although the school had a large student body (1500 in grades 9-12) and the faculty was not appraised of the nature of the experiment, the question of contamination of the results by a possible halo effect must be taken into consideration as a possible limiting factor in this study.

It was gratifying to note that a good many of the students were disappointed when the study was completed. Many said they wanted to continue the group counseling. Since the treatment period was planned as a minimum, this raises additional questions. If the period of counseling had been extended, would the improvement in GPA have been greater? At what point is the greatest benefit achieved? When will it tend to lose its value? Must counseling be used periodically with underachievers to recharge a positive approach to the world? These are questions which haunt the researcher and will only be answered by future research and follow-up evaluations throughout the high school career of the student.

#### Recommendations

It is suggested that the study be replicated to further test the effectiveness of the two approaches of counseling in improving academic achievement of low-motivated high school students.

Additions to the present study which are suggested for future researchers are:

1. Begin the treatment period at the opening of school and continue for 20 weeks to determine if some of the problems of the underachiever might be prevented, before grades are issued.
2. Select low-motivated students who earn below a C average in grades but who score above average on tests of mental maturity in order to create a more homogeneous population and increase investment in counseling.
3. Counsel on an individual and group basis concurrently to increase the intensity and cohesiveness of the group.
4. Meet with the teachers of low-motivated students in an attempt to remove teacher "set" against "problem students."
5. Conduct periodic follow-up evaluations of the sample to determine the overall effect of treatment.
6. Apply all criterion to subjects 10 weeks after the experiment to see if there is a comparable rise with GPA in the counseled groups.

### Summary

This study investigated the effects of two types of counseling treatments on certain attitudes traits, and academic achievement of low-motivated male high school students.

The basic hypotheses of the study were:

1. The academic achievement of low-motivated students

who received both group counseling and individual counseling in conjunction will be greater at the completion of the experiment and ten weeks following the completion of the experiment than that of low-motivated students who had either group counseling or no group counseling.

2. The study habits and attitude scores of low-motivated students who have received both group counseling and individual counseling in conjunction will be greater at the completion of the experiment than those of low-motivated students who had either group counseling or no group counseling.
3. The self-concept scores of low-motivated students who have received both group counseling and individual counseling in conjunction will be greater at the completion of the experiment than the self-concept scores of low-motivated students who had either group counseling or no group counseling.
4. The behavior rating scores of low-motivated students who have received both group counseling and individual counseling in conjunction will be greater at the completion of the experiment than the behavior rating scores of low-motivated students who had either group counseling or no group counseling.

The two types of group experiences used to test the hypotheses of investigation were: (1) group counseling only, and (2) group counseling and individual counseling done in



conjunction. All group sessions were conducted jointly by a male and a female counselor who were active participants in the group discussions.

Ninety-six male students who ranked in the lower half of their junior class on the Michigan M-Scales were invited to participate in a counseling program. The 74 who accepted the invitation became the subjects of the study.

Subjects were first grouped according to the period during the school day when they would be free to participate in group counseling. From each of these groups seven individuals were randomly selected to be members of the experimental groups and the rest were assigned to the control group. In this manner six experimental groups having seven members each were formed. Then, three of these groups were randomly assigned to the group-individual counseling treatment while the other three groups were assigned to the group counseling only treatment. Randomizing techniques were also used to assign the pairs of counselors to the various treatment groups. The third level of the design, the control group, received no treatment. Change in counseled subjects was assessed by comparing them to the control subjects on four criterion: GPA, study habits and attitudes, self-concept, and behavior ratings.

It was decided that in order for students to be included in the final analysis they must have attended 80 per cent of the group sessions. Thus, the minimum was 16

sessions for the group counseling treatment or eight sessions for the group-individual treatment. Since individual sessions were on a flexible schedule, attendance was not a problem. Eighteen students in each of the two experimental groups met the minimum requirements for post-treatment analysis. There were 28 students in the control group for the post-treatment analysis.

Although all students involved in the study were low-motivated as measured by the M-Scales, there were a number that could not be classified as "typical" underachievers. Since a good deal of the related research deals with studies involving "typical" underachievers, it was decided that a separate analysis of the data for certain underachievers in the experimental groups was desirable. For the purpose of this study, an underachiever was operationally defined as a student who scored at 100 or above on the Otis Test of Mental Ability, and whose grade point average for the first term was 5.00 or less (5.00 = C- on a 12 point scale). Using this criterion, nine of the group counseling only subjects, nine of the group-individual subjects, and 11 of the control group subjects could be classified as underachievers. In order to equalize the groups, two subjects from the control group were randomly excluded from the analysis.

A one-way analysis of variance was performed to test the nine null hypotheses of this study. The F statistic was used to test for significance at the .05 level.

Null hypothesis four (related to academic achievement ten weeks after the completion of the experiment) and eight (relating to academic achievement of defined underachievers ten weeks after the completion of the experiment) were rejected at the .05 level of confidence and it was concluded that in both cases significant differences in academic achievement existed between the experimental groups and the control group as a result of treatment effects.

For hypothesis four, Kramer's extension of Duncan's New Multiple Range Test to groups with unequal numbers was used to test which groups actually differed significantly (.05). The results indicated that subjects who received the group counseling only treatment achieved a significantly higher grade point average than those who received no counseling. No other statistically significant differences were found to exist.

Duncan's New Multiple Range Test was used to determine how the three groups of defined underachievers differed ten weeks after the completion of the experiment. It was found that the defined underachieving students who received group counseling only, as well as those who received group-individual counseling made significantly higher grades than the defined underachieving students who received no counseling. No other differences were significant between the three groups.

The results of the study indicate that group counseling when conducted with low-motivated male high school

students can produce a significant and positive change in grade point average when compared to a no-treatment control group. With subjects defined as underachievers, both group and group-individual counseling can produce a significant and positive change in grade point average when compared to a no-treatment control group. However, the results are not immediate! It appears that the effects of group counseling are dependent on a period of incubation before newly gained insights are translated into action. This may partially explain the numerous studies which fail to find significant improvement in grade point average immediately following the experiment.

It was also suggested that individual personality patterns must be accounted for before an individual is most effectively motivated to self-improvement.

Since the group-individual counseling was not more effective than the group counseling only treatment in the case of the low-motivated students, it was suggested that the lack of continuity between both the group sessions and the individual sessions contributed to a lack of cohesiveness and rapport, thereby inhibiting an affective discussion.

The use of team counseling was endorsed by the four counselors as providing distinct advantages over single group leadership.

Recommendations included a replication of the study; treatment beginning with the opening of school; selection of a more homogeneous population; group and individual counseling

concurrently; counseling with teachers; and periodic follow-up evaluations of the subjects.

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## APPENDICES

## APPENDIX A

### THE COUNSELING

Kagan<sup>1</sup> states that researchers should describe the nature of their group procedures so that replication by others is possible. To not do so is confusing and an obstacle to further discovery by others.

In order to describe as clearly as possible the counseling conducted during this study, the following procedures were taken:

1. Disinterested judges were asked to describe the counseling in samples of two group sessions.
2. Subjects in the study were asked to describe the counseling that took place in their group.
3. Excerpts were taken from taped group sessions.

#### Comments by Disinterested Judges

Two instructors who were serving as practicum supervisors in the College of Education at Michigan State University were asked to comment on techniques and processes in samples of two group counseling sessions. Their comments were:

Judge I --

Sample 1 - "Both counselors are questioning - pushing for specific ideas. The counselors are using

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<sup>1</sup>N. Kagan, "Group Procedures," Review of Educational Research, XXXVI (1966), 274-85.

a directive controlling method and are extremely active in the discussion."

Sample 2 - "Counselor 1 seems to be very active in the discussion. His remarks keep the relationship going and making progress. Counselor 2 is not as active in this sample. The comments of the counselors deal primarily with affect."

Judge II --

Samples 1 and 2 - "The students are dealing with the very real and very typical concerns of adolescence - independence, parental relations, and the kinds of people they are and want to become. They are doing a good job. The counselors participate and lead very much, perhaps more than necessary at times."

#### Students' Perceptions of the Counseling

Several weeks after the closing of school, students who had participated in the group sessions were contacted by telephone. When asked to describe what they thought the counseling was all about, their answers were much the same, i.e., "A discussion period to help us out in school." When pushed further, by the question, "How would you describe the counselor's part in the group sessions?" the following replies were given:

Student 1 - "It seemed they tried to keep us from talking about things that weren't really important and tried to make sure we talked about things that bugged us."

Student 2 - "They really listened and made sure they understood what we were trying to say."

Student 3 - "I don't know - It seems like they wanted us to talk about our problems."

### Excerpts from Group Sessions

The following two excerpts, taken from tape recordings of two group sessions, illustrate the counselor's role in the sessions.

#### Excerpt I --

Student 1 - "I asked my dad for the car the other day, and he started to give me all kinds of warnings, but I kept on thanking him up and down so he'd feel good. . . . Thanks dad, you're a good guy. . . ."

Student 2 - "Doesn't that make you feel rotten though? . . . to have to butter him up?" . . .

Long pause

Counselor: "You sound disgusted, Rod. How do you feel about having to butter up your dad for a favor?"

#### Excerpt II --

Student 1 -- "Most of the kids I know seem to hate school. I don't really hate it -- Not with a passion

or anything -- I'd rather not come."

Counselor: "It really sounds as though school makes you feel kind of down -- Can you tell us some more about this?"

### Summary Statement

Both the subjects and disinterested judges perceived the counselors as directing the discussion toward specific problem areas and away from areas of relative unimportance. This is in accord with the definition of group counseling; "as an experience shared by a group of students and counselors, in which the counselors are active participants, determining topics to be discussed and time spent on particular topics by giving certain kinds of leads and responding to certain leads given by group members."<sup>2</sup>

Furthermore, the subjects' and judges' comments agree with the following statement:

"The problem areas are: feelings of hostility, feelings about self, family relationships, feelings of guilt, and feelings of depression. In the counseling sessions the leaders allowed the discussion to follow the lines determined by the group when they were in accordance with one or more of the problem topics.

. . . The leaders often interceded by clarifying, summarizing, and directing when needed for continued productivity."<sup>3</sup>

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<sup>2</sup>See Chapter I, p. 9.      <sup>3</sup>See Chapter III, p. 48.

Finally, it can be concluded that counseling was conducted as it was intended, that is, it conformed to the definition of counseling as set forth for the purposes of this study. If labels must be attached to the group counseling of this study, it might be described as: "A leader-structured type of counseling which focused on specific problem areas hypothesized as being related to low-motivation."



## APPENDIX B

### Questionnaire

## QUESTIONNAIRE

Some individual traits are listed below. The two extremes of each trait are given. If you think your son rates high on a trait, encircle number 4; if you think he rates low on a trait, encircle number 1. If you think he rates in between the two extremes, encircle 2 or 3, depending upon which extreme he tends to be more like. Remember, you need not place your name on this questionnaire.

- A. Self-insight (the ability to see and clearly understand himself as he relates to his everyday world).

Little self-insight                      1   2   3   4   Tremendous insight

- B. Ability to express himself (to speak out clearly and forcibly).

Poor    1   2   3   4   Good

- C. Anxiousness (worries and fusses a lot).

High anxiety                              1   2   3   4   Little anxiety

- D. Attitude towards work.

Trys to avoid work                      1   2   3   4   Pitches right in

- E. Seriousness of purpose.

No future goals                              1   2   3   4   Plans ahead

- F. Motivation (willingness to attack a task and work to his best ability).

Low motivation                              1   2   3   4   High motivation

- G. Independence (stands up for his rights).

Little    1   2   3   4   Much

- H. Attitude towards authority.

Resents authority                              1   2   3   4   Accepts authority

- I. Study habits.

Poor    1   2   3   4   Good

## J. Self-satisfaction.

|                         |   |   |   |   |                      |
|-------------------------|---|---|---|---|----------------------|
| Displeased with himself | 1 | 2 | 3 | 4 | Pleased with himself |
|-------------------------|---|---|---|---|----------------------|

## **APPENDIX C**

### **LETTERS**

April 27, 1966

Dear Parent:

During the past twenty weeks your son has been offered the opportunity to participate in weekly group discussions conducted by myself and three of the counselors at the Mona Shores High School. We are extremely interested in discovering if our discussions had any effect on the everyday behavior of your son. I have agreed to collect and study this information and to report it to the others involved. Therefore, we are asking you to complete the enclosed questionnaire and return it in the self-addressed envelope. Since we are interested in the boys as a group, you need not identify yourself or your son in filling out the questionnaire.

Since we consider this information very important to our future plans, your cooperation will be greatly appreciated. Thank you.

Sincerely,

Joseph Mezzano  
Instructor

May 18, 1966

Dear Parent:

Two weeks ago you received a questionnaire in the mail asking that you rate your son on various traits.

If you have already sent in the completed questionnaire, please disregard this letter. If you have not done so, I again ask that you please do so as soon as possible.

Since the information requested is of considerable importance to the counselors of Mona Shores High School and to me, I am certain that you will be willing to take a moment to complete and mail the questionnaire to me. Again, remember, you need not place your name on the questionnaire.

Thank you.

Sincerely,

Joseph Mezzano, Instructor  
Department of Counseling, Personnel Services  
and Educational Psychology

JM:pd

May 28, 1966

Dear Parent:

This letter is a means of expressing my gratitude to those of you who have already returned the questionnaire which you received a month ago, and to encourage those who have not done so, to take a few moments to complete and mail the questionnaire.

I am again enclosing a questionnaire, and a self-addressed, stamped envelope in the event that the first mailing did not reach you.

This information is of considerable importance to the high school counselors and to me, and I am certain that you will be willing to take a moment to help us. Remember, you need not place your name on the questionnaire.

Thank you.

Sincerely,

Joseph Mezzano, Instructor  
Department of Counseling, Personnel Services  
and Educational Psychology

JM:lb

Enclosure

#### **APPENDIX D**

**Report of basic socioeconomic characteristics of the study population and the populations of the United States, Michigan, Muskegon County, and the Mona Shores School District.**



Table 1. Percentage of workers in occupational categories.

| Occupational Category  | U.S. | Mich. | County | School District | Sample |
|------------------------|------|-------|--------|-----------------|--------|
| Professional           | 3.9  | 10.6  | 8.6    | 2.2             | 12.6   |
| Managerial-Supervisory | 6.7  | 12.2  | 9.4    | 18.0            | 7.0    |
| Clerical and Sales     | 6.5  | 13.3  | 11.0   | 10.0            | 8.0    |
| Skilled Workers        | 33.5 | 47.7  | 41.8   | 35.0            | 28.0   |
| Semi-Skilled           | 19.4 | 6.6   | 6.6    | 14.0            | 18.5   |
| Other                  | 31.0 | 10.6  | 22.6   | 1.0             | 25.9   |

Table 2. Percentage of persons with income, in annual income ranges.

| Income               | U.S.    | Mich.   | County  | School District   |
|----------------------|---------|---------|---------|-------------------|
| Under \$3,000        | 32.5    | 26.1    | 13.1    | 1.0               |
| \$3-5,000            | 19.7    | 17.4    | 18.8    | 6.1               |
| \$5-7,000            | 19.6    | 22.6    | 32.1    | 25.0              |
| \$7-10,000           | 16.2    | 19.8    | 23.1    | 35.0              |
| \$10,000 and up      | 12.1    | 14.3    | 12.9    | 33.0              |
| Median Annual Income | \$4,791 | \$5,534 | \$5,567 | \$7,000 (approx.) |

Table 3. Median grade completed of persons 25 years and older.

| U.S. | Mich. | County | School District | Sample |
|------|-------|--------|-----------------|--------|
| 10.5 | 10.7  | 10.4   | 12.5            | 12.2   |

Table 4. Percentage of non-whites.

| U.S. | Mich. | County | School District | Sample |
|------|-------|--------|-----------------|--------|
| 11.2 | 9.4   | 8.7    | 0               | 0      |

Table 5. Percentage of natives of foreign or mixed parentage.

| U.S. | Mich. | County | Sample |
|------|-------|--------|--------|
| 13.6 | 17.4  | 15.2   | 14.0   |

#### Summary of Tables

The population included in the study is more representative of the U.S., State, and County in occupational categories, than it is of the School District. Although the majority of the families of the school district are better off, occupationally speaking, than the other populations studied, the families of the low-motivated students in our study are less fortunate, job-wise, than their neighbors in the school district.

As we move from the population of the U.S., through the populations of the state and the county, to the population of the school district, the percentage of workers in the lower income range decreases. Likewise, the median income increases as we move from the national population to the school district population. It appears that the parents of our study group receive an annual income similar to that of the state population. Although the income of the school district population is higher than that of the other populations studied, families in our sample are not as well

off, income-wise, as their school district neighbors.

The populations, in the category of median grade completed, rank in the following order: (1) school district, (2) parents of our sample, (3) state, (4) nation, (5) county.

There are no non-whites in the school district.

The sample is representative of all populations studied, regarding the percentage of natives of foreign or mixed parentage.



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