

## ABSTRACT

### ASPIRATIONS FOR COLLEGE AMONG MALE SECONDARY SCHOOL STUDENTS FROM SEVENTH TO TENTH GRADE

By

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#### Problem

The problem of this study arose out of the goal of educating every citizen to the highest level of his ability. College enrollments in the future will continue to reflect increases in population as well as changes in the manpower needs of modern society. Knowledge about the aspirations of youth for higher education might assist in the process of encouraging education for everyone to the limits of their ability. Knowledge about what variables might be related to college aspiration might also assist in an understanding of the problem. Students were studied over a four year period, from seventh to tenth grade, and their aspirations for college were described for this time.

#### Theory

The theory which was the basis of this study assumed that a student's aspiration can be viewed as the result of

a developmental process, based in social interaction. A person's conception of his ability can emerge from social and symbolic interaction with significant others and can guide or influence the behavior of the individual.

### Design and Procedures

The sample consisted of 280 male students in the public schools of Lansing, Michigan. Information was gathered on these individuals each year between seventh and tenth grade on educational aspiration, occupational aspiration, self concept of ability, perceived parental evaluation, social class, and grade point average.

Three groups, one composed of students who aspired to college educationally and occupationally, one composed of non-college aspirers, and the other composed of students who indicated a disparity between their educational and occupational aspirations, were selected. These groups were investigated for differences in regard to self concept of ability, perceived parental evaluation, social class, and grade point average.

It was hypothesized that the college aspirers would be significantly higher than the non-college aspirers and the disparity group on each of the four variables.

Consistency of educational aspiration was also described, and it was hypothesized that the college aspirers would be more consistent in their aspirations than the non-college aspirers.

## Results

The results of the analysis generally supported the hypotheses of the study. The college aspirers had significantly higher group mean scores on self concept of ability, perceived parental evaluation, grade point average, and social class than the non-college aspirers and the disparity group. This relationship held at each grade level from seven to ten. The analysis also indicated that aspirations for college were fairly stable over the four year period, but that the college aspirers were not more consistent than the non-college aspirers, except in seventh grade. Both groups exhibited slight changes in their aspiration level during the four year period.

## Discussion

The results of this study substantiated the general body of theory from which the research originated. Students' aspirations for college were significantly related to measures of social interaction and to measures of academic performance. The results of this study indicated that aspirations for college were formed at least six years before college enrollment for many students and that an understanding of variables related to college aspiration might assist in the educational and vocational counseling of students.

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By

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## Chapter I

### THE PROBLEM

#### Introduction

Current discussion in American higher education is focused on the increasing numbers of students attending colleges and universities. Although American society has built an educational system of unmatched dimensions, it is intensifying a drive toward the goal of educating every citizen to the highest level of his ability.

The desire for more and better education is evident at the higher levels of education. Colleges and universities are the object of new attention and concern.

The President of the Ford Foundation expresses the need clearly: "The needs of American society, together with the demands placed on the United States by nations looking to it for leadership, call for an uncommon advance in the number and quality of educated men and women (16: 2)."

The great increases in enrollment in the past few years reflect not only the increase in population, but also the changes in the manpower needs of modern society. Science and technology are creating new demands for men and women with advanced training, and the complexity of modern life places a greater premium on well educated,

talented people.

Of concern to many teachers and counselors is that the educational system may not be taking full advantage of the potentialities of youth. Conant has assumed that only 15 to 25 percent of students in high school can profit from training in science and mathematics (10:20). However, the nature of modern society demands an increased proportion of highly trained individuals. Under Conant's assumption, the demands of society may not be met.

Since higher education has a major responsibility for providing these highly trained individuals, knowledge of how many and which students aspire to higher education is of considerable importance. There is some evidence that aspirations for college are formed some time before the actual college experience (2,35). However, little is known about aspirations for college over a period of time, or to what variables these college aspirations might be related.

Increased understanding of students' aspirations for college may assist in the goal of educating every citizen to the highest level of his ability. Knowledge of variables associated with college aspiration over a period of time may assist teachers and counselors in their efforts to encourage increased student achievement.

The college and non-college aspirations of secondary school students are the concern of this study, which focuses on differences and changes in aspirations over a

four year period.

### Statement of the Problem

The general problem of this study is to determine what the college and non-college aspirations of secondary school male students are over a four year period. Emphasis is placed upon characteristics of students who aspire educationally and occupationally to college and those who do not. Stability of educational aspirations is also described.

Specifically, the purposes of this study are:

- (1) To identify some of the factors associated with college and non-college aspiration among male secondary school students between the seventh and tenth grades.
- (2) To determine the consistency of the students' educational aspirations from the seventh to the tenth grade.
- (3) To identify some differences which may exist between students who aspire to college and students who do not aspire to college, at each of the four grade levels.

### Hypotheses

The hypotheses for this study, stated in research form, are:

- (1) Students who aspire to college have higher self concepts of ability than students who do not aspire to college.
- (2) Students who aspire to college have higher perceived parental evaluations than students who do not aspire to college.
- (3) Students who aspire to college have higher

grade point averages than students who do not aspire to college.

- (4) Students who aspire to college are from a higher social class than students who do not aspire to college.
- (5) Students who aspire to college are more consistent in their aspirations than students who do not aspire to college.

These hypotheses are restated in testable form in Chapter III.

### Definitions of Terms

There are six main terms which are used throughout this study, which are defined here:

- (1) Educational aspiration: The level in the educational system which the student would like to or hopes to attain. (This is distinct from what the student expects to attain.)
- (2) Occupational aspiration: The occupation or job which a student would like or hopes to have when an adult. (This also is distinct from what the student expects to have.)
- (3) Self Concept of Ability: The organization of attitudes or plans of action that a student has about himself in relation to other students.
- (4) Perceived Parental Evaluation: A student's perception of his parents' evaluation of his own ability in school in relation to other students.
- (5) Grade Point Average: An average of the student's academic performance in four subjects: math, science, English, and social studies.
- (6) Social Class: A measure of the father's occupational level.

### Limitations of the Study

This study is limited to the college and non-college aspirations of secondary school male students over a four year period. The aspirations of these students are described, and there is no attempt to predict the actual behavior of these students in a future activity. The study is also limited to a description of college and non-college aspirations as related to four variables: self concept of ability, perceived parental evaluation, grade point average, and social class. If a significant relationship is found between aspiration and one of the variables, a cause and effect relationship by no means necessarily exists.

This study deals with the aspirations of students for college; that is, what students hope to or would like to attain in education, as opposed to what they expect to attain. If significantly more students aspire to college than eventually attend college, this will be reported in the study; however, it is not the purpose of the study to determine the degree of congruency between aspiration and attendance.

The results of this study should have applicability to teachers and counselors who have an interest in understanding more about the educational and vocational goals of male secondary school students.

### Theory

The theoretical framework of this study has as its

base the social interactionist view of George Herbert Mead (27).

A student's educational aspiration can be viewed as the result of a developmental process, based in social interaction. Mead's self concept theory states that a person's conception of himself emerges from social and symbolic interaction with significant others and guides or influences the behavior of the individual. As a product of social interaction, the self concept of ability changes to meet changing evaluations made by others.

According to Mead's theory, the individual's educational aspiration is not determined by his biological makeup, but by the individual's perception of his ability as acquired in social and symbolic interaction with significant others.

Mead's theory can be generally stated as follows: Symbolic interaction is both the medium for the development of human beings and the process by which humans associate with other humans.

### Overview of the Study

In this study, the college and non-college aspirations of male secondary school students are described. Differences between those students who aspire to college and those who do not aspire to college are presented. The aspirations are related to four variables which are self concept of ability, perceived parental evaluation, grade

point average, and social class. The stability of educational aspirations are also described over the four year period.

In Chapter II, the literature which is relevant to this study is reviewed. In Chapter III, the design of the study is presented, including the sample, the instrumentation, the statistical hypotheses, and the analysis techniques. The results of the analysis of the data are presented in Chapter IV, and the summary and conclusions of the study appear in Chapter V.



## Chapter II

### REVIEW OF THE LITERATURE

#### Introduction

This review is divided into five sections. First, some evidence is presented which is related to the general theory of the study, and studies which deal with the relationship of aspiration to self concept of ability are reviewed. The next section reviews the work on parental influence and educational aspiration. The third area of the chapter deals with the relationship of social class to aspiration. Next, academic measures are reviewed, and finally, studies which deal with the consistency of aspiration are discussed.

#### General Theory and Self Concept

The concept "level of aspiration" was introduced in 1931 by Dembo (25:229), and has been defined by Wattenberg as "the standard of performance an individual expects of himself (42:231)."

The specific aspirations of male secondary school students for college are the focus of this study, within the theoretical framework of the work of George Herbert Mead. A problem encountered in the review of relevant literature in this area was that level of aspiration studies have not been soundly anchored in theory (25:221).

There appears to be some evidence to support the theoretical assumption of this study; that is, that educational aspirations arise out of a social interactional process. Herriott (17:157) studied some social determinants of educational aspiration and his analysis indicated that the higher the level of self assessment, the higher the educational aspiration tended to be. He also suggested that the higher the level of expectation the student perceived others hold for him the higher the educational aspiration tended to be. His sample consisted of 1489 high school boys and girls in the state of Massachusetts.

Festinger, in a study of the development of aspirations, pointed out that knowledge of group standards influenced an individual's own level of aspiration (13:190). Using a sample of college students, Chapman and Volkman found similar results (7:237).

Hertzman and Festinger (18:451), studying college students, suggested that the individual might orient himself with respect to others' aspirations as well as to their performances.

Lewin, again working with college students, suggested that an individual will set up goals near the boundaries of his ability as he defines it (25:230).

Kinnane (21) used a sample of twelfth grade boys in a study of aspirations, and he claimed that the realism of their aspirations tended to be positively related to favorable self attitudes.

Festinger (13:199) attempted to demonstrate the effect of group standards on level of aspiration, and concluded that aspirations tend to be influenced by sources external to the persons who set them.

### Parental Influence

J.L. Lowe (26), in a study of the educational and occupational aspirations of high school seniors, concluded that the parents tended to be the chief influence on the educational and occupational aspirations of the students.

Kahl (20) also studied the educational and occupational aspirations of high school students, but his sample was primarily from the lower socio-economic area. His conclusion was that parental pressure was a significant factor in determining educational and occupational aspirations.

### Social Class

Reissman (34:241) stated the general situation in this area clearly: "Woven throughout much of the literature on social class is the implication that different levels of aspiration are held by individuals in different social classes. However, our conclusion is that the relationship between social class and aspirations is not a simple one."

C. Wright Mills argued that success in America for the white collar class has been an engaging image, a driving motive, and a way of life (28:117).

Sewell (37:196) suggested in his study of high school students, that levels of educational and occupational

aspirations are associated positively with social class when the effects of measured intelligence are controlled.

Mulligan (31:196) demonstrated that the chance a child has of attending college increased as the father's occupational status increased.

Lower status individuals showed lower levels of aspiration than higher status individuals in a study of "underdogs" by Knupfer (22:114).

Kuppner (24), studying the educational interests of junior high school students in a Chicago suburb, found a positive correlation between the level of educational aspiration and the occupational level of the father's job.

Lowe (26), studying the educational aspirations of high school seniors, suggested that the proportion of seniors aspiring to college increased as the socio-economic status of the parents rose.

Weiner and Graves (44), in a study of the educational and occupational aspirations of sixth grade pupils from two socio-economic levels in a community, claimed that changes in the educational aspirations of these pupils were not related to socio-economic status.

Smith (38) also found that in general, changes in students' educational and occupational aspirations were not related to socio-economic status.

#### Academic Measures

Lewin and Dembo (25:268), as a general conclusion in

regard to level of aspiration and academic performance, stated that the level of aspiration will be raised and lowered respectively as the performance reaches or does not reach the level of aspiration.

J.R. Rice (35), studying changes in educational and occupational aspirations between the tenth and twelfth grades among capable students, concluded that the students who were most constant in their aspirations also received the highest grades in school.

Weigand (43:461) demonstrated that among his sample of high school students, those who expressed definite goal aspirations received higher grade point averages than those whose aspirations were indefinite.

J.L. Byers (6:216) studied the levels of aspiration of academically successful and unsuccessful high school students and concluded that past academic performance tended to help determine the level of aspiration.

The educational aspirations of a sample of poorly achieving high school students studied by Nickles (32) were not found to be significantly lower than a sample of higher achieving students.

### Consistency of Aspirations

The specific aspirations of students for college have not been studied over a period of time, although there has been some attention given to consistency of aspirations for specific tasks in the literature.

Rice (35) studied changes in the levels of educational and occupational aspirations between the tenth and twelfth grades of capable students. His data indicated that over fifty percent of the students remained stable in their aspirations over this period of time. The students who fluctuated in their aspirations tended to perform not as well academically and were from lower socioeconomic status groups than those who remained more constant in their aspirations.

Festinger (14:249) argued that changes in the level of aspiration can be explained by whether an individual's performance reaches or does not reach the level of aspiration. In an experiment with college students, his conclusion was that after the subjects attained their level of aspiration, fifty-one percent raised their aspiration, forty-one percent stayed the same, and eight percent lowered their aspiration. After another group had not attained their level of aspiration, seven percent raised their aspiration, twenty-nine percent stayed the same, and sixty-four percent lowered their aspiration.

Ernest Hilgard (19:428) studied aspirations of academically successful and unsuccessful students and claimed that the aspirations of those with a history of academic failure were quite unpredictable over time.

Walter (41:290) found that the level of aspiration did not vary significantly among boys from the sixth to the eighth grade.

Kohout (23) studied the consistency of occupational choices of a sample of adolescents over a period of four years and his data indicated that there was no significant degree of consistency in these choices.

### Summary

The basic conclusion drawn from the review of the literature is that college aspirations over a period of time have not been studied. Most of the research was done with college students serving as the subjects. Differences existed from study to study as to what was meant by "level of aspiration." Too often, this phrase pertained only to an immediate task in a specific situation rather than aspiration for college. Almost none of the studies reported was based on any theoretical framework, and the emphasis was too often on the results and too little attention was given to design. Sample sizes in many of the studies were prohibitively small.

A summary of the literature in regard to aspiration and self concept generally indicated that there was a positive relationship. Herriott's work with 1489 high school students resulted in the finding that as self assessment increased, so did the educational aspiration. Festinger also worked in this area, and his general conclusion was that aspirations tended to be influenced by sources external to the persons who set them.

Little evidence was found which suggested a conclusive

relationship between parental influence and educational aspirations. Lowe's study of the aspirations of high school seniors had the most relevance, and the general conclusion was that parents tended to have a significant influence on aspirations.

Considerable work has been completed on the relationship of social class to educational aspirations. However, it is difficult to draw a definite conclusion from the results which were available. Kuppner's study of junior high school students had relevance, and the conclusion was that the relationship was positive. Sewell's work with high school students also concluded with similar results. However, Weiner and Graves, and Smith found in their studies that social class was not positively related to changes in educational aspirations.

The relationship of aspirations to academic measures does not seem entirely clear. Generally, the relationship appeared to be positive. Pyers studied academically successful and unsuccessful high school students and concluded that past academic performance tended to determine the level of aspiration. However, Nicklas found that poorly achieving high school students did not have significantly lower educational aspirations than a sample of higher achieving students.

No studies were found which dealt specifically with consistency of aspiration for college. However, Rice's study on consistency had some relevance. His sample was a



large number of high school students and his conclusion was that better performing academic students were more consistent in their aspirations than poorer performing academic students. Kohout studied a group of adolescents over a four year period, however, and found very little consistency in their aspirations.

This study differs from previous studies in that it is based upon a specific theory, and that it deals specifically with aspirations of students for college over a four year period. The students are younger and the sample size is larger than those of most previous studies.

The design of the study is presented in the following chapter.

## Chapter III

### DESIGN

#### Introduction

This chapter consists of five main sections, which are the sample, the instrumentation, the statistical hypotheses, the analysis, and the chapter summary.

Characteristics of the subjects, the schools, and the groups selected for the study are presented in the sample section.

The various instruments used in the study are discussed in the instrumentation section of this chapter.

The main statistical hypotheses are stated in testable form in the third section of the chapter.

The statistical tests used to treat the data are presented in the analysis section of the chapter.

The chapter concludes with a summary of the pertinent material of each section.

#### Sample

The sample consisted of all the seventh to tenth grade male students in the public schools of Lansing, Michigan, for whom complete data were available over the period, 1960-1963. Beginning in the fall of 1960, all the public school seventh graders were included in the U.S. Office of

Education Cooperative Research Project #845 (2), and data on this same school class have been collected each year to the present time (3,4). This study was concerned with all those students about whom the following data were available for the four year period, 1960-1963: educational aspiration, occupational aspiration, self concept of ability, perceived parental evaluation, social class, and grade point average. The data used in this study were taken directly from the Cooperative Research Projects referred to above.

The same students served as subjects each year. Among these, there were 248 students with complete data in the seventh grade, 285 in the eighth grade, 304 in the ninth grade, and 298 in the tenth grade. Eliminations were made for three reasons: sex, racial identification, and incomplete or inadequate data. Males only were included, as evidence (2) exists which suggests that boys and girls differ in their aspirations and their general self concept of ability. Also, a small but significant number of Negro students were not included because evidence (30) exists which indicates that differences on several variables are such that they should be investigated independently. Incomplete school records accounted for most of the elimination in the study. Some students for whom complete school record data were available were not present or did not complete the questionnaire when it was administered on separate occasions over the four year period.

The schools were located in Lansing, Michigan, which,

in 1962, had a population of 107,000 persons. The median family income for that year was \$6477. Although there was considerable industry in the area, white collar occupations comprised 48 percent of the labor market. The median school years completed was 11.1 in 1962 (40:516).

The distribution of intelligence test scores in the schools did not differ from national norms, so in this particular dimension, the schools were typical of the nation as a whole.

There were three groups selected for this study. Group One was composed of those students who aspired to college both educationally and occupationally, as indicated by their responses on questionnaires. Group Two was composed of those students who indicated a disparity between their educational and occupational aspirations (for example, aspiration to college educationally but not occupationally). Group Three was composed of those students who did not aspire to college educationally or occupationally, as indicated by their responses on questionnaires.

### Instrumentation

The students were selected for the three groups on the basis of their responses to questions, which are reviewed here.

For educational aspiration, the students were asked on the questionnaire to indicate how far they would ideally like to go in school. This educational aspiration instru-

ment was developed by Brookover, et.al.(2). Reliabilities were computed on a test-retest basis. The correlation between seventh and eighth grade educational aspiration was .4246, and between eighth and ninth grade it was .5958. The test-retest correlation between ninth and tenth grade was .7390.

The following was the educational aspiration question.

"If you were free to go as far as you wanted in school, how far would you like to go?"

- a. I'd like to quit right now.
- b. I'd like to continue high school a while.
- c. I'd like to graduate from high school.
- d. I'd like to go to secretarial or trade school.
- e. I'd like to go to college for a while.
- f. I'd like to graduate from college.
- g. I'd like to do graduate work beyond college.

Students were asked this question each year from the seventh to the tenth grade. Responses of "a", "b", and "c" constituted non-college aspiration, and responses of "e", "f", and "g" constituted college aspiration. The very few students who selected response "d" were not included, as they did not clearly fit either category.

For occupational aspiration, the students were asked each year on the questionnaire to indicate the job they would most like to have when they grow up. This instrument was also developed by Brookover, et.al.(2). Reliabilities were computed between seventh and eighth grade on a test-retest basis, and the correlation was .3731. The correlation between eighth and ninth grade occupational aspiration was .2837, and between ninth and tenth grade, it was .2922.

All of these correlations are statistically significant at the .01 level.

The question asked for occupational aspiration was as follows:

"If you were free to choose any job you wanted, what job would you most like to have when you are grown up?"

The responses were classified on the occupational scale developed by Brookover, et.al.(2) as follows:

- a. Professional, teacher, doctor, lawyer, big business
- b. Small business
- c. Clerical and Sales
- d. Skilled and Semi-skilled
- e. Service and farm, gas station, truck driver
- f. Housewife
- g. Glamour job, be famous
- h. A "good job"
- i. No answer

Those students who gave response "a" constituted the occupational college aspirers, and those students who responded to "d" and "e" constituted the non-college occupational aspirers. Since this study dealt only with those students who clearly aspired to college or not to college, those answering small business, clerical and sales, housewife, glamour job, or "good job" were not included, as they did not clearly constitute either college or non-college aspiration.

The test for general self concept of ability consisted of eight five choice items, and was developed by Brookover, et.al.(2). A sample self concept test is presented in Appendix A. The items were coded from "5" to "1" with the

higher self concept alternatives receiving higher values. The students were asked to respond to this scale during each of the four years. A total self concept of ability score for each individual was derived for the eight items. Reliabilities for this scale were computed by the test-retest method. The correlation between seventh and eighth grade self concept was .6965, and between eighth and ninth grade, the correlation was .7333. The test-retest correlation between ninth and tenth grade for self concept was .7064.

Students were also asked on the questionnaire to indicate what they thought their parents felt about their own ability. This test is similar to the self concept of ability test, and was also developed by Brookover, et.al.(3). Instead of asking the students about their own conceptions of their ability, the students were asked what they thought their parents felt about the student's ability in school compared with other students their age. This test consisted of seven five choice items similar to the self concept scale. A total score was determined for each individual, which constituted his perceived parental evaluation. The reliabilities for this scale were computed on a test-retest basis. The correlation between eighth and ninth grade perceived parental evaluation was .6233, and between ninth and tenth grade, the correlation was .7230. Perceived parental evaluation was not available in the seventh grade. A sample perceived parental evaluation scale is presented

in Appendix B.

So that aspirations might be compared to socio-economic data, each student's social class was also determined, by asking the students each year to indicate their father's occupation. Reliabilities for this scale, which was reported in Brookover, et.al.(3), were computed on a test-retest basis. The correlation between eighth and ninth grade social class was .7011, and between ninth and tenth grade, the correlation was .7975. Social class was not available in the seventh grade.

In order to obtain a measure of academic achievement, and in order to compare achievement to aspirations, each student's total grade point average was determined for each of the four years. Since this study dealt specifically with aspirations for college, the subjects included in the grade point average were those which are generally accepted as being "academic" school subjects. These were science, arithmetic, social studies, and English. The total grade point average was computed on the basis of "A" = 4 points, "B" = 3 points, "C" = 2 points, and "D" = 1 point. Grades of "F", and "E", and "Incomplete" received no points. In grades nine and ten, not all students took the same courses, which decreased the reliability of this measure slightly. However, the relatively large number of subjects involved and the longitudinal aspect of the study made the reliabilities of the scale quite acceptable. The reliabilities for grade point average were computed on a



test-retest basis. The correlation between seventh and eighth grade was .8239 for grade point average, and between eighth and ninth grade, the correlation was .8121. The correlation between ninth and tenth grade was .6894.

### Statistical Hypotheses

As mentioned above, there were three groups in this study. They were:

- Group One: College Aspirers educationally and occupationally.
- Group Two: Disparity between educational and occupational aspiration.
- Group Three: Non-College Aspirers educationally and occupationally.

Null Hypothesis I: No difference exists in self concept of ability among the three groups.

Symbolically:  $H_0: M_1 = M_2 = M_3$

Legend:  $M_1$  = College aspirer's group mean  
 $M_2$  = Disparity Group mean  
 $M_3$  = Non-college aspirer's mean

Alternate Hypothesis I: The college aspirer's group mean score on self concept of ability exceeds the mean of the non-college aspirers and the mean of the disparity group.

Symbolically:  $H_{1a}: M_1 > M_2 > M_3$

Legend:  $M_1$  = College aspirer's group mean  
 $M_2$  = Disparity Group mean  
 $M_3$  = Non-College aspirer's mean

Null Hypothesis II. No difference exists in perceived parental evaluation among the three groups.

Symbolically:  $H_0: M_1 = M_2 = M_3$

Legend:  $M_1$  = College aspirer's group mean  
 $M_2$  = Disparity group mean  
 $M_3$  = Non-College aspirer's mean

Alternate Hypothesis II: The college aspirer's group mean score on perceived parental evaluation exceeds the mean of the non-college aspirers and the mean of the disparity group.

Symbolically:  $H_{1a}: M_1 > M_2 > M_3$

Legend:  $M_1$  = College aspirer's group mean  
 $M_2$  = Disparity group mean  
 $M_3$  = Non-college aspirer's mean

Null Hypothesis III: No difference exists in social class among the three groups.

Symbolically:  $H_0: M_1 = M_2 = M_3$

Legend:  $M$  = College aspirer's group mean  
 $M$  = Disparity group mean  
 $M$  = Non-College aspirer's mean

Alternate Hypothesis III: The college aspirer's group mean score on social class exceeds the mean of the non-college aspirers and the mean of the disparity group.

Symbolically:  $H_{1a}: M_1 > M_2 > M_3$

Legend:  $M_1$  = College aspirer's group mean  
 $M_2$  = Disparity group mean  
 $M_3$  = Non-college aspirer's mean

Null Hypothesis IV: No difference exists in grade point average among the three groups.

Symbolically:  $H_0: M_1 = M_2 = M_3$

Legend:  $M_1$  = College aspirer's group mean  
 $M_2$  = Disparity group mean  
 $M_3$  = Non-college aspirer's mean

Alternate Hypothesis IV: The college aspirer's group mean score on grade point average exceeds the mean of the non-college aspirers and the mean of the disparity group.

Symbolically:  $H_{1a}: M_1 M_2 M_3$

Legend:  $M_1$  = College aspirer's group mean  
 $M_2$  = Disparity group mean  
 $M_3$  = Non-college aspirer's mean

In order to test consistency of educational aspiration over the four year period, students were grouped into college and non-college aspirers based on educational aspiration alone. These two groups were then compared from year to year to test for differences in consistency of educational aspiration. The two groups were:

Group One: College aspirers educationally  
 Group Two: Non-college aspirers educationally

Null Hypothesis V: No difference exists in consistency of educational aspiration between the college aspirers and the non-college aspirers, from grade seven to grade ten.

Symbolically:  $P_1 = P_2$

Legend:  $P_1$  = Correlation between 7th and 10th grade aspiration for college aspirers.

$P_2$  = Correlation between 7th and 10th grade aspiration for non-college aspirers

Alternate Hypothesis V: The correlation between seventh and tenth grade educational aspiration for the college aspirers exceeds that of the non-college aspirers.

Symbolically:  $H_{1a} P_1 > P_2$

Legend:  $P_1$  = Correlation between 7th and 10th grade aspiration for college aspirers.

$P_2$  = Correlation between 7th and 10th grade aspiration for non-college aspirers.

Null hypothesis I was applied at each of the four grade levels. Null hypotheses II and III were applied at grades eight, nine, and ten. Null hypothesis IV was applied at all four grade levels. Null hypothesis V was applied six times, to test differences between grades 7 and 10, 7 and 9, 7 and 8, 8 and 9, 8 and 10, and 9 and 10.

### Analysis

The analysis techniques used in this study were simple analysis of variance, "t" tests, and tests of difference between correlation coefficients.

Simple analysis of variance was used to test the null hypotheses that the three groups in the study were from populations with the same mean. This analysis of variance was used to test differences among the three groups in regard to self concept of ability, perceived parental evaluation, social class, and grade point average. The test of significance using the F distribution in the analysis of variance is valid when the observations are from normally distributed populations with equal variances (12:328). The variances of the groups are reported in Appendix C. The significance level used for the analysis of variance was the .05 level. When the analysis indicated that a significant difference existed among the three groups, "t" tests were applied in order to test for the direction of the differences. The significance level for the "t" tests, in accordance with Edward's suggestion (12:329), was .01.

In order to determine consistency of educational aspirations, correlation coefficients were computed between the educational aspirations for each grade level. There were a total of six coefficients: 7th with 8th, 7th with 9th, 7th with 10th, 8th with 9th, 8th with 10th, and 9th with 10th. The standard formula\* for determining difference between two correlation coefficients was applied to this data, so that consistency of aspiration between college and non-college aspirers could be compared. The significance level used was the .05 level.

All of the above data were punched on I.B.M. cards, and after separation into appropriate groups, the analysis was completed on the C.D.C. 3600 Computer.

### Summary

The sample for this study included all the male public school students for whom the following data were collected over the four year period, 1960-1963: educational and occupational aspiration, self concept of ability, perceived parental evaluation, social class, and grade point average. The data were first collected when the students were in seventh grade and have been collected each year to the present time.

There were approximately 280 students in each grade level used in the study. Eliminations from the total population of students were made on the basis of sex, racial

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\* The Z' transformation, as described in Edwards (12:305).

identification and incomplete or inadequate data. Males only were included, and Negroes were eliminated, as there were indications that both groups should be investigated independently. The majority of eliminations were made because of inadequate school records, and incomplete questionnaire data over the four year period.

The location of the study was Lansing, Michigan, a city of 107,000 persons. The distribution of intelligence scores in the public schools in the city indicated that the students were typical of students across the nation in this respect.

Three groups were selected for this study, which were the college aspirers, the disparity group, and the non-college aspirers. These three groups were investigated for differences in regard to self concept of ability, perceived parental evaluation, social class, and grade point average.

The basic hypothesis for these groups was that the college aspirers have higher mean scores on each of the four variables at each grade level than the disparity group and the non-college aspirers.

Consistency of educational aspiration also was examined. Two groups, one with college aspirations educationally, and one with non-college aspirations educationally were compared over the four year period. It was hypothesized that the college aspirers would be more consistent in their aspirations than the non-college aspirers.

Results were analyzed by means of simple analysis of variance for determining differences between the three groups, and "t" tests were applied to indicate the direction of difference. Differences between correlation coefficients were tested to determine differences in consistency of aspiration.

In the following chapter, the analysis of results is presented.

## Chapter IV

### ANALYSIS OF RESULTS

#### Introduction

The analysis of the data is presented in this chapter. The results of the analysis of variance to test differences between the college aspirers, the non-college aspirers, and the disparity group are presented first. Both the null and the alternate hypotheses are restated in this chapter, with the statistical tables following. Results are presented for each of the four grade levels, beginning with grade seven and concluding with grade ten.

Correlation tables appear next and indicate the consistency of educational aspiration over the four year period. Information is also presented indicating changes in educational aspiration from seventh to tenth grade. Finally, hypotheses which test the consistency of aspiration are presented, and statistical tests are applied.

In the discussion section of this chapter, tables are included which summarize the results for each of the four variables (self concept, perceived parental evaluation, social class, and grade point average) over the four year period, and indicate the differences in consistency of aspiration between college and non-college aspirers.

A summary at the end of the chapter provides the most



significant findings of the study.

### Null Hypotheses

Null hypotheses I-IV test for differences among the three groups on self concept of ability, perceived parental evaluation, social class, and grade point average.

Null Hypothesis I. No difference exists among the college aspirers, the disparity group, and the non-college aspirers in self concept of ability in the seventh, eighth, ninth, and tenth grades.

Alternate Hypothesis. The college aspirer's group mean score on self concept of ability in grades seven through ten exceeds the mean of the disparity group and the mean of the non-college aspirers.

TABLE I. Analysis of Variance of Mean Differences for College Aspirers, Disparity Group, and Non-College Aspirers on Self Concept of Ability In the Seventh, Eighth, Ninth, and Tenth Grades.

	Group	N	Mean	F*	t**
7th	College Aspirers	161	29.81	31.15	5.36
	Disparity Group	60	27.06		
	Non-College Asps.	27	24.44		
8th	College Aspirers	199	30.32	40.65	6.02
	Disparity Group	59	26.76		
	Non-College Asps.	27	24.00		
9th	College Aspirers	211	30.70	79.38	7.35
	Disparity Group	62	26.04		
	Non-College Asps.	31	22.09		
10th	College Aspirers	219	30.12	73.77	6.47
	Disparity Group	52	26.40		
	Non-College Asps.	27	21.11		

\*  $F_{.05} = 3.01$       \*\*  $t_{.01} = 2.35$

Thus, it is evident from the data in Table I that the null hypothesis that no differences exist among the three

groups is rejected. Results of the "t" tests indicate that the college aspirers are significantly higher in self concept of ability than the other two groups, from grade seven to grade ten. The alternate hypothesis is accepted.

Null Hypothesis II. No difference exists among the college aspirers, the disparity group, and the non-college aspirers in perceived parental evaluation in the eighth, ninth, and tenth grades.

Alternate Hypothesis. The college aspirer's group mean score on perceived parental evaluation in grades eight through ten exceeds the mean of the disparity group and the mean of the non-college aspirers.

TABLE II. Analysis of Variance of Mean Differences for College Aspirers, Disparity Group, and Non-College Aspirers on Perceived Parental Evaluation in Grades Eight, Nine, and Ten.

	Group	N	Mean	F*	t**
8th	College Aspirers	199	20.64	34.30	4.68
	Disparity Group	59	18.27		
	Non-College Asps.	27	15.74		
9th	College Aspirers	211	20.89	48.07	6.30
	Disparity Group	62	17.82		
	Non-College Asps.	31	16.16		
10th	College Aspirers	219	20.19	37.11	5.21
	Disparity Group	52	17.50		
	Non-College Asps.	27	14.92		

\*  $F_{.05} = 3.01$

\*\*  $t_{.01} = 2.35$

Thus, it is evident from the data in Table II that the null hypothesis that no differences exist among the three groups is rejected. Results of the "t" tests indicate that the college aspirers are significantly higher in perceived parental evaluation than the other two groups, from grade

eight to grade ten. The alternate hypothesis is accepted.

Null Hypothesis III. No difference exists among the college aspirers, the disparity group, and the non-college aspirers in social class in the eight, ninth, and tenth grades.

Alternate Hypothesis. The college aspirer's group mean score on social class in grades eight through ten exceeds the mean of the disparity group and the mean of the non-college aspirers.

TABLE III. Analysis of Variance of Mean Differences for College Aspirers, Disparity Group, and Non-College Aspirers on Social Class in Grades Eight, Nine, and Ten.

	Group	N	Mean	F*	t**
8th	College Aspirers	199	44.41	16.82	4.06
	Disparity Group	59	32.08		
	Non-College Asps.	27	23.07		6.79
9th	College Aspirers	211	44.48	8.70	3.13
	Disparity Group	62	33.40		
	Non-College Asps.	31	32.22		3.48
10th	College Aspirers	219	42.49	7.54	2.68
	Disparity Group	52	35.05		
	Non-College Asps.	27	26.62		4.85

\*  $F_{.05} = 3.01$

\*\*  $t_{.01} = 2.35$

Thus, it is evident from the data in Table III that the null hypothesis that no differences exist among the three groups is rejected. Results of the "t" tests indicate that the college aspirers are significantly higher in social class than the other two groups, from grade eight to grade ten. The alternate hypothesis is accepted.

Null Hypothesis IV. No difference exists among the college aspirers, the disparity group, and the non-college aspirers in grade point average in the seventh, eighth, ninth, and tenth grades.

Alternate Hypothesis. The college aspirer's group mean score on grade point average exceeds the mean of the disparity group and the mean of the non-college aspirers in grades seven through ten.

TABLE IV. Analysis of Variance of Mean Differences for College Aspirers, Disparity Group, and Non-College Aspirers on Grade Point Average in the Seventh, Eighth, Ninth, and Tenth Grades.

	Group	N	Mean	F*	t**
7th	College Aspirers	161	2.60	12.75	4.36
	Disparity Group	60	2.02		
	Non-College Asps.	27	1.72		
8th	College Aspirers	199	2.60	26.34	5.48
	Disparity Group	59	1.89		
	Non-College Asps.	27	1.66		
9th	College Aspirers	211	2.37	33.86	6.15
	Disparity Group	62	1.65		
	Non-College Asps.	31	1.44		
10th	College Aspirers	219	2.12	12.72	3.46
	Disparity Group	52	1.72		
	Non-College Asps.	27	1.45		

\*  $F_{.05} = 3.01$       \*\*  $t_{.01} = 2.35$

Thus, it is evident from the data in Table IV that the null hypothesis that no differences exist among the three groups is rejected. Results of the "t" tests indicate that the college aspirers are significantly higher in grade point average than the other two groups, from grades seven to ten. The alternate hypothesis is accepted.

In order to analyze the stability of college and non-college aspiration over the four year period, inter-correlations were calculated between educational aspirations at each grade level. Table V presents the inter-correlations

for the college aspirers, and Table VI presents the inter-correlations for the non-college aspirers.

TABLE V. Inter-Correlations of Educational Aspiration Level for the College Aspirers, Grades Seven To Ten.

(N = 321)

Grade	8th	9th	10th
7th	.2938*	.2236*	.1313*
8th		.4200*	.2999*
9th			.5577*

Significant "r" at .05 level (319 df) = .110

\* Obtained "r" significant

TABLE VI. Inter-Correlations of Educational Aspiration Level for the Non-College Aspirers, Grades Seven To Ten.

(N = 63)

Grade	8th	9th	10th
7th	-.1160	-.0470	-.2165
8th		.5405*	.3402*
9th			.4226*

Significant "r" at .05 level (61 df) = .249

\* Obtained "r" significant

The correlations of the college aspirers which appear in Table V were compared with the correlations of the non-college aspirers which appear in Table VI. The following null hypotheses test the difference between the correlations. The statistic used was the  $Z'$  transformation.

Null Hypothesis V. No difference exists between college aspirers and non-college aspirers in consistency of educational aspiration from the seventh to the tenth grade.

Alternate Hypothesis. The correlation between Seventh and tenth grade educational aspiration for the college aspirers exceeds the correlation for the non-college aspirers.

TABLE VII. Significance Test for Differences Between Correlations of College Aspirers from Seventh to Tenth Grade and Non-College Aspirers from Seventh to Tenth Grade.

Group	N	7th-10th Correlation	Difference Score (Z)
College Aspirers	321	.1313	2.42*
Non-College Asps.	63	-.2165	

Significant Z at .05 level = 1.96

\* Obtained Z significant

Thus, it is evident from the data in Table VII that the null hypothesis that no difference exists between the two groups in consistency of educational aspiration is rejected. The alternate hypothesis is accepted for significant differences between grades seven and ten.

Null Hypothesis VI. No difference exists between college aspirers and non-college aspirers in consistency of educational aspiration from the seventh to the ninth grade.

Alternate Hypothesis. The correlation between seventh and ninth grade educational aspiration for the college aspirers exceeds the correlation for the non-college aspirers.

TABLE VIII. Significance Test for Differences Between Correlations of College Aspirers from Seventh to Ninth Grade and Non-College Aspirers from Seventh to Ninth Grade.

Group	N	7th-9th Correlation	Difference Score (Z)
College Aspirers	321	.2236	1.972*
Non-College Asps.	63	-.0470	

Significant Z at .05 level = 1.96

\* Obtained Z significant

Thus, it is evident from the data in Table VIII that the null hypothesis that no difference exists between the two groups in consistency of educational aspiration is rejected. The alternate hypothesis is accepted for significant differences between grades seven and nine.

Null Hypothesis VII. No difference exists between college aspirers and non-college aspirers in consistency of educational aspiration from the seventh to the eighth grade.

Alternate Hypothesis. The correlation between seventh and eighth grade educational aspiration for the college aspirers exceeds the correlation for the non-college aspirers.

TABLE IX. Significance Test for Difference Between Correlations of College Aspirers from Seventh to Eighth Grade and Non-College Aspirers from Seventh to Eighth Grade.

Group	N	7th-8th Correlation	Difference Score (Z)
College Aspirers	321	.2938	
Non-College Asps.	63	-.1160	2.97*

Significant Z at .05 level = 1.96

\* Obtained Z significant

Thus, it is evident from the data in Table IX that the null hypothesis that no difference exists between the two groups in consistency of educational aspiration is rejected. The alternate hypothesis is accepted for significant differences between grades seven and eight.

Null Hypothesis VIII. No difference exists between college aspirers and non-college aspirers in consistency of educational aspiration from the eighth to the ninth grade.

Alternate Hypothesis. The correlation between eighth and ninth grade educational aspiration for the college aspirers exceeds the correlation for the non-college aspirers.

TABLE X. Significance Test for Difference Between Correlations of College Aspirers from Eighth to Ninth Grade and Non-College Aspirers from Eighth to Ninth Grade.

Group	N	8th-9th Correlation	Difference Score (Z)
College Aspirers	321	.4200	
Non-College Asps.	63	.5405	1.11*

Significant Z at .05 level = 1.96

\* Obtained Z not significant

Thus, it is evident from the data in Table X that the null hypothesis that no difference exists between the two groups is accepted. The alternate hypothesis is rejected for significant differences between grades eight and nine.

Null Hypothesis IX. No difference exists between college aspirers and non-college aspirers in consistency of educational aspiration from the eighth to the tenth grade.

Alternate Hypothesis. The correlation between eighth and tenth grade educational aspiration for the college aspirers exceeds the correlation for the non-college aspirers.

TABLE XI. Significance Test for Difference Between Correlations of College Aspirers from Eighth to Tenth Grade and Non-College Aspirers from the Eighth to the Tenth Grade.

Group	N	8th-10th Correlation	Difference Score (Z)
College Aspirers	321	.2999	
Non-College Asps.	63	.3402	.3917*

Significant Z at .05 level = 1.96

\* Obtained Z not significant



Thus, it is evident from the data in Table XI that the null hypothesis that no difference exists between the two groups is accepted. The alternate hypothesis is rejected for significant differences between grades eight and ten.

Null Hypothesis X. No difference exists between college aspirers and non-college aspirers in consistency of educational aspiration from the ninth to the tenth grade.

Alternate Hypothesis. The correlation between ninth and tenth grade educational aspiration for the college aspirers exceeds the correlation for the non-college aspirers.

TABLE XII. Significance Test for Difference Between Correlations of College Aspirers from Ninth to Tenth Grade and Non-College Aspirers from the Ninth to Tenth Grade.

Group	N	9th-10th Correlation	Difference Score (Z)
College Aspirers	321	.5577	1.260*
Non-College Asps.	63	.4226	

Significant Z at .05 level = 1.96

\* Obtained Z not significant

Thus, it is evident from the data in Table XII that the null hypothesis that no difference exists between the two groups is accepted. The alternate hypothesis is rejected for significant differences between grades nine and ten.

The two tables which are presented below summarize the changes which took place in educational aspiration from the seventh to the tenth grades. Three types of change

are noted: positive, wherein the student's aspiration level rises, no change, and negative, wherein the student's aspiration level decreases. As indicated in Chapter III, educational aspiration is ranked on a seven point scale. When there has been change, the average amount of change is noted in the table. Results are presented for the College Aspirers and the Non-College Aspirers.

TABLE XIII. Changes in Educational Aspiration for the College Aspirers, from Seventh to Tenth Grade.

	Type of Change	N	Percent Who Changed	Average Amount Of Change
7th to 8th	Positive	55	14%	+1.06
	No Change	180	56%	-
	Negative	84	30%	-1.59
7th to 9th	Positive	77	24%	+1.05
	No Change	161	51%	-
	Negative	81	25%	-1.70
7th to 10th	Positive	71	22%	+1.04
	No Change	147	46%	-
	Negative	101	32%	-1.73
8th to 9th	Positive	80	25%	+1.43
	No Change	190	59%	-
	Negative	49	16%	-1.51
8th to 10th	Positive	76	24%	+1.50
	No Change	170	53%	-
	Negative	73	23%	-1.47
9th to 10th	Positive	49	16%	+1.38
	No Change	190	59%	-
	Negative	80	25%	-1.27

TABLE XIV. Changes in Educational Aspiration for the Non-College Aspirers, from Seventh to Tenth Grade.

	Type of Change	N	Percent Who Changed	Average Amount Of Change
7th to 8th	Positive	42	67%	+2.69
	No Change	20	32%	-
	Negative	1	1%	-1.00
7th to 9th	Positive	43	68%	+2.88
	No Change	18	29%	-
	Negative	2	3%	-2.00
7th to 10th	Positive	45	71%	+2.86
	No Change	16	26%	-
	Negative	2	3%	-1.50
8th to 9th	Positive	15	24%	+2.20
	No Change	35	55%	-
	Negative	13	21%	-1.76
8th to 10th	Positive	17	27%	+2.47
	No Change	29	46%	-
	Negative	17	27%	-1.70
9th to 10th	Positive	12	19%	+2.90
	No Change	37	59%	-
	Negative	14	22%	-2.00

### Discussion of Results

In the results which were presented in this chapter, it was evident that the college aspirers, the disparity group, and the non-college aspirers differed significantly in regard to each of the four variables under consideration: self concept of ability, perceived parental evaluation, social class, and grade point average.

The differences which existed among the three groups

were consistent for each grade level from seven to ten. At each grade level, the college aspirers had a significantly higher mean self concept score than the disparity group and the non-college aspirers. If there was a trend in the scores, it was that the self concept of the college aspirers increased slightly from grade seven to ten and that the self concept of the non-college aspirers decreased slightly over the same period. The mean self concept score for the disparity group remained quite stable over the four year period. The differences among the three groups were most dramatic at grades nine and ten for self concept of ability. The variances within groups were homogeneous at each grade level, and are reported in Appendix C.

The three groups also differed significantly at each grade level in perceived parental evaluation. The college aspirers again were significantly higher in their group mean score than the disparity group and the non-college aspirers. The mean score for the college aspirers remained quite stable over the period, as did the mean score for the disparity group. The mean score for the non-college aspirers, however, decreased from eighth grade to tenth grade. The variances within groups were homogeneous at each grade level, and are reported in Appendix C.

The differences among the three groups on social class were also significant at the three grade levels tested. Of the four variables under consideration, however, the differences on social class were the least striking. In each

grade, the college aspirer's group mean score on social class was significantly higher than the mean score of the disparity group and the mean of the non-college aspirers. The differences among the three groups were most obvious in the eighth grade, and decreased each year to the tenth grade. The mean scores of the college aspirers and the disparity group were quite stable over the period, but the mean of the non-college aspirers demonstrated a tendency to increase from grade eight to grade ten. Variances within groups were slightly heterogeneous for grades eight and ten, and these are reported in Appendix C.

The differences among the three groups on grade point average were significant at each of the four grade levels, with the group mean score of the college aspirers being significantly higher than the mean of the disparity group and the mean of the non-college aspirers. The differences were quite consistent from the seventh to the ninth grade. In the tenth grade, the differences were not quite so dramatic, which may reflect the more varied curriculum in high school as opposed to junior high school. The variances for these groups were homogeneous and are reported in Appendix C.

The difference in the size of the three groups at each grade level reflected the significantly larger number of students who aspired to college than who did not. Of the fifty to sixty students who were in the disparity group, the great majority aspired to college educationally. The dis-

parity occurred because they aspired to an occupation not requiring college. The fact that this disparity group mean score was significantly lower than the mean of the college aspirers may suggest that occupational-educational differences on aspiration might contribute significantly to an understanding of college aspiration.

The fact that the differences were significant on each variable even down to the seventh grade might indicate that aspirations for college might be an important consideration for educators while students are still quite young.

The analysis of the data for consistency of aspiration indicated that educational aspirations were generally more stable over the four year period for the college aspirers than for the non-college aspirers. The seventh grade was the crucial year in the difference, as seventh grade educational aspiration was negatively related to educational aspiration in eighth, ninth, and tenth grades for the non-college aspirers. The students in the college aspirers' group tended to have more stable educational aspirations in the seventh grade than the non-college aspirers. When the non-college aspirers reached the eighth grade, there were no significant differences in consistency of educational aspiration between them and the college aspirers.

The inter-correlations for the college aspirers increased as the tenth grade was approached. For example, the correlation between the seventh and eighth grade for the college aspirers was .2938, and the correlation between

the ninth and tenth grade for the college aspirers was .5577. The inter-correlations for the college aspirers were generally small but statistically significant. All of these correlations for the college aspirers were positive. The small (.1313) but significant correlation between seventh and tenth grade for the college aspirers tended to indicate that as early as the seventh grade, college aspirations might have educational importance.

As indicated in Tables XIII and XIV, students tended to change their educational aspirations somewhat during the four year period. The changes were most obvious over a two to three year period; for example, between the seventh and the tenth grades there was more change than there was between the eighth and ninth grades. The number of students who exhibited no change in their educational aspiration level increased each year from the seventh to the tenth grade, especially for the non-college aspirers. Between the ninth and tenth grades, for example, 59 percent of the students in both groups remained exactly the same in educational aspiration level.

The hypotheses stating that the college aspirers would be more consistent in their aspirations were not tenable, except for the seventh grade, as the inter-correlations for the non-college aspirers were all negative in the seventh grade.

A summary of this chapter is now presented, and included are Tables XV and XVI which summarize the results.

TABLE XV.

Summary of Analysis of Variance of Mean Differences for College Aspirers, Disparity Group, and Non-College Aspirers for Four Variables from the Seventh to the Tenth Grade.

Grade	Group	N	Mean Self Concept	F*	Mean Per- ceived Par- ental Eval.	F*	Mean Social Class	F*	Mean G.P.A.	F*
7th	College Aspirers	161	29.81						2.60	
	Disparity Group	60	27.06	31.15					2.02	19.75
	Non-College Asps.	27	24.44						1.72	
8th	College Aspirers	199	30.32		20.64		44.41		2.60	
	Disparity Group	59	26.76	40.65	18.27	34.30	32.08	16.82	1.89	26.34
	Non-College Asps.	27	24.00		15.74		23.07		1.66	
9th	College Aspirers	211	30.70		20.89		44.48		2.37	
	Disparity Group	62	26.04	79.38	17.82	48.07	33.40	8.70	1.65	33.86
	Non-College Asps.	31	22.09		16.16		32.22		1.44	
10th	College Aspirers	219	30.19		20.19		42.42		2.12	
	Disparity Group	52	26.40	73.77	17.50	37.11	35.05	7.54	1.72	12.72
	Non-College Asps.	27	21.11		14.92		26.62		1.45	

\* Null hypotheses for no difference among groups are rejected when obtained F value exceeds 3.01.  $F_{.05}(2,246 \text{ df}) = 3.01$



TABLE XVI. Summary of Significance Tests for Differences Between Correlations: (1) College Aspirers at Various Grade Levels, and (2) Non-College Aspirers At Various Grade Levels.

Grades Correlated	Group	N	Correlation Coefficient	Z Score	Z <sub>.05</sub>
7th-8th	College Aspirers	321	.2938	2.97*	1.96
	Non-College Aspirers	63	-.1160		
7th-9th	College Aspirers	321	.2236	1.97*	1.96
	Non-College Aspirers	63	-.0470		
7th-10th	College Aspirers	321	.1313	2.42*	1.96
	Non-College Aspirers	63	-.2165		
8th-9th	College Aspirers	321	.4200	1.11	1.96
	Non-College Aspirers	63	.5405		
8th-10th	College Aspirers	321	.2999	.3917	1.96
	Non-College Aspirers	63	.3402		
9th-10th	College Aspirers	321	.5577	1.26	1.96
	Non-College Aspirers	63	.4226		

\* Obtained Z score significant.

### Summary

The results of the analysis generally supported the hypotheses of the study. Of the ten hypotheses tested, seven were affirmed.

Analysis of variance was used to test differences among college aspirers, the disparity group, and the non-college aspirers for the four variables under consideration: self concept of ability, perceived parental evaluation, social class, and grade point average. When a significant difference was found, "t" tests were applied to the data to indicate the direction of the difference.

The college aspirers had significantly higher group mean scores on self concept of ability than the disparity group and the non-college aspirers. This relationship was highly significant statistically, and held for grades seven through ten.

The group mean score of the college aspirers was also significantly higher on perceived parental evaluation than the disparity group and the non-college aspirers. This data was available for grades eight through ten, and the differences were significant and consistent for each grade.

The college aspirers again had significantly higher group mean scores on social class than the disparity group and the non-college aspirers. This data also was available for grades eight through ten, and the differences were significant at each grade level. However, differences among the three groups on social class were more pronounced

in eighth grade, and less each year thereafter. Of the four variables under consideration in this study, the least striking differences among groups were found on social class.

The hypotheses concerning differences among the three groups on grade point average were also affirmed. The college aspirers had significantly higher grades each year than the disparity group and the non-college aspirers. These differences held each year from seventh to tenth grade, and were quite consistent over the period.

The difference in the sizes of the three groups at each grade level (for example, 161 college aspirers, 60 in the disparity group, and 27 non-college aspirers) reflected the significantly larger number of students who aspired to college than did not. The disparity groups were composed mostly of students who aspired to college educationally. The disparity occurred because they aspired to an occupation not requiring college. The fact that this disparity group mean score was significantly lower than the mean of the college aspirers might suggest that occupation-educational differences on aspiration might contribute to an understanding of total college aspiration.

The analysis of the data for consistency of educational aspiration indicated that the aspirations for college were fairly stable over the four year period, but that college aspirers were not necessarily more consistent over this period than the non-college aspirers.

The inter-correlations for college aspirers increased as the tenth grade was approached. For example, the correlation between the seventh and eighth grade for the college aspirers was .2938, and the correlation between the ninth and the tenth grade for the college aspirers was .5577.

The inter-correlations for the college aspirers were generally small but statistically significant. All of the correlations for the college aspirers were positive. The small (.1313) but significant correlation between seventh and tenth grade for the college aspirers tended to indicate that as early as the seventh grade, college aspirations might have importance.

The situation was somewhat different for the non-college aspirers. All the correlations with seventh grade aspiration were negative, indicating that for this group of students, the seventh grade was not a crucial year in the formation of aspirations. However, in the eighth grade, a respectable (.5405) and significant correlation was found with ninth grade educational aspiration. The inter-correlations for the non-college aspirers were significant and quite stable beginning in the eighth grade.

Some students tended to change their educational aspirations slightly during the four year period. These changes were most obvious over a two to three year period; for example, between the seventh and the tenth grades there was more change than there was between the eighth and ninth grades. The number of students who exhibited no change in

their educational aspiration level increased each year from the seventh to the tenth grade, especially for the non-college aspirers. Between the ninth and tenth grades, for example, 59 percent of the students in both groups remained exactly the same in their educational aspiration level.

The hypotheses stating that the college aspirers would be more consistent in their aspirations were not tenable, except for the seventh grade, as the inter-correlations for the non-college aspirers were all negative in the seventh grade.

In the final chapter which follows, the summary and conclusions of the study are presented.

## Chapter V

### SUMMARY AND CONCLUSIONS

#### The Problem

The problem of this study arose out of the goal of educating every citizen to the highest level of his ability. College enrollments in the future will continue to reflect increases in population as well as changes in the manpower needs of modern society. Knowledge about the aspirations of youth for higher education might assist in the process of encouraging education for everyone to the limits of their ability. The college and non-college aspirations of secondary school students were the concern of this research. Students were studied over a four year period, and differences in the consistency of their aspirations were described. Some variables (self concept of ability, perceived parental evaluation, social class, and grade point average) were also examined in relation to college aspiration.

#### Theory

The theory which was the basis of this study assumed that a students' aspirations can be viewed as the result of a developmental process, based in social interaction. A person's conception of his ability can emerge from social and symbolic interaction with significant others and can

guide or influence the behavior of the individual.

### Design and Procedures

The sample for the study consisted of approximately 280 male students in a midwestern city of 107,000 people. The following data were collected over the seventh to tenth grade period, 1960-1963 on these students: educational and occupational aspiration, self concept of ability, perceived parental evaluation, social class, and grade point average.

Three groups were selected for this study. Group one consisted of those students who aspired to college educationally and occupationally. Group two consisted of those students who indicated a disparity between their educational and occupational aspirations, and group three consisted of the non-college aspirers.

The students were selected for the three groups on the basis of their responses to educational and occupational aspiration instruments developed by Brookover, et.al.(2). Reliabilities based on test-retest methods were reported in Chapter III.

The self concept of ability scale and the perceived parental evaluation scale were also developed by Brookover, et.al.(2). Test-retest reliabilities for these instruments ranged from .62 to .73, and were reported in Chapter III.

The social class score for each student was based on the father's occupation, and was also taken from Brookover, et.al.(3). Test-retest reliability coefficients for this mea-

sure ranged from .70 to .79 and were reported in Chapter III.

Each student's grade point average was figured on the basis of his work in four school subjects, generally regarded as being the "academic" subjects. These were English, math, science, and social studies. Test-retest reliabilities were computed for grade point average, and ranged from .68 to .82, and were reported in Chapter III.

The three groups in the study (college aspirers, disparity group, and non-college aspirers) were investigated for differences in regard to the four variables: self concept of ability, perceived parental evaluation, social class, and grade point average.

The four main research hypotheses which applied at each grade level were:

- (1) The college aspirers have significantly higher self concepts of ability than the disparity group and the non-college aspirers.
- (2) The college aspirers have significantly higher perceived parental evaluation scores than the disparity group and the non-college aspirers.
- (3) The college aspirers have significantly higher social class scores than the disparity group and the non-college aspirers.
- (4) The college aspirers have significantly higher grade point averages than the disparity group and the non-college aspirers.

Consistency of educational aspiration was also examined, and it was hypothesized that the college aspirers were more consistent in their educational aspirations over the



four year period than the non-college aspirers.

Analysis of variance was used to test differences among the college aspirers, the disparity group, and the non-college aspirers. When significant differences were found, "t" tests were applied which specified the direction of the differences. Difference between correlation coefficients ( $Z'$  transformation) was used to test for differences in the consistency of educational aspiration.

### Findings

The results of the analysis generally supported the hypotheses of the study. The college aspirers had significantly higher group mean scores on self concept of ability, perceived parental evaluation, grade point average, and social class than the disparity group and the non-college aspirers. This relationship held at each grade level from seven to ten for each variable tested. For self concept of ability, for example, the mean scores for the college aspirers, the disparity group, and the non-college aspirers were 30.32, 26.76, and 24.00 respectively, in the eighth grade. For grade point average in the same year, the means for the college aspirers, the disparity group, and the non-college aspirers were 2.60, 1.89, and 1.66 respectively. A composite summary table indicating differences among the three groups was presented in Chapter IV, page 47.

The analysis indicated that aspirations for college were fairly consistent over the four year period, but that

the college aspirers were not necessarily more consistent over this period than the non-college aspirers. The inter-correlations for the non-college aspirers were all negative for the seventh grade, indicating that for this group, the seventh grade was not a crucial year in the formation of aspirations. However, the inter-correlations for the college aspirers were positive for the same period, indicating that the seventh grade might be an important year for some students in the formation of college aspirations. In grades eight, nine, and ten, there were no significant differences in the consistency of aspirations for the college aspirers and the non-college aspirers.

Some students tended to change their educational aspirations slightly during the four year period. These changes were most obvious over a two to three year period; for example, between the seventh and the tenth grades, there was more change than there was between the eighth and the ninth grades. The number of students who exhibited no change in their educational aspiration level increased each year from the seventh to the tenth grade, especially for the non-college aspirers. Between the ninth and tenth grades, for example, 59 percent of the students in both groups remained exactly the same in educational aspiration level.

The main findings of this study were:

- (1) Students aspiring to college educationally and occupationally had significantly higher mean self concepts of ability than students indica-

ting a disparity in their aspirations and students not aspiring to college educationally and occupationally, in grades seven through ten.

- (2) Students aspiring to college educationally and occupationally had significantly higher mean perceived parental evaluation scores than students indicating a disparity in their aspirations and students not aspiring to college educationally and occupationally, in grades eight through ten.
- (3) Students aspiring to college educationally and occupationally had significantly higher mean social class scores than students indicating a disparity in their aspirations and students not aspiring to college educationally and occupationally, in grades eight through ten.
- (4) Students aspiring to college educationally and occupationally had significantly higher grade point averages than students indicating a disparity in their aspirations and students not aspiring to college educationally and occupationally, in grades seven through ten.
- (5) College aspirers tended to be more consistent than non-college aspirers in their educational aspirations when they were compared from grades seven to ten, seven to nine, and seven to eight.
- (6) No difference existed in the consistency of educational aspiration between the college aspirers and the non-college aspirers when compared from grades eight to nine, eight to ten, and nine to ten.

### Conclusions

The results of this study generally substantiated the theory from which the research originated. Students' aspirations for college were highly related to self concept of ability, and this held from seventh to tenth grade. A student's perception of his parent's evaluation of his own

ability was also significantly related to his aspirations. Although social class was significantly related to aspiration for college, the degree of significance decreased each year until the tenth grade. Of the four variables under consideration, social class differences were the least striking. With the developmental approach of this study, this trend for social class differences is encouraging, although it is evident that aspirations did not develop apart from social class. It is encouraging in that a student's conception of his own ability seems to be more highly related to his aspirations than his social class rating is. As expected, aspirations for college were also significantly related to grade point average.

The separation of the students into three groups on the basis of their educational and occupational aspirations proved quite tenable. For each variable under consideration (self concept of ability, perceived parental evaluation, social class, and grade point average) and for each grade level tested from seven to ten, the college aspirers had the highest mean scores and the non-college aspirers had the lowest mean scores. The other group, composed of students who indicated a disparity between their educational and occupational aspirations, had mean scores between the college aspirers and the non-college aspirers each year. Since the great majority of this disparity group aspired to college educationally but not occupationally, an understanding of occupational aspirations may contribute

to a knowledge of college aspiration in general. On the other hand, educational aspirations might be the more significant variable related to college aspiration as a whole.

Those students who aspired to college in seventh grade were also fairly likely to aspire to college in each grade after seventh, but this was not the case for the non-college aspirers, as their aspirations did not tend toward consistency until the eighth grade. After eighth grade, there were no significant differences in consistency of educational aspiration between the college aspirers and the non-college aspirers.

Many more students at each grade level aspired to college than did not, both educationally and occupationally. As expected, and in accordance with previous findings (1, 35), a greater proportion of students aspired to college in each grade than the proportion of students who actually attend college after high school graduation.

It was evident that aspirations for college were not formed just before enrollment in college, as in the seventh grade there was a relatively stable formation of aspiration for many students. If aspirations for college at this early stage are in fact relevant, counselors and teachers might do well to verbalize these aspirations with students.

The results of this study raised some doubts about the findings of some other researchers in regard to the

relationship of aspirations to social class. In the review of the literature, it was noted that the relationship of social class to aspirations was not clear. In this study, social class was found to be significantly related to college aspiration. However, as noted earlier, social class seemed to have decreasing relation to aspiration each year from seventh to tenth grade, so before any conclusive statements could be made, a more intensive study of the relationship of social class to aspirations should be done.

The most significant findings of this study were the relationship of college aspirations to self concept of ability and perceived parental evaluation, in that there might be some implications for counseling and teaching. If a student's achievement in school and aspirations for future educational and employment are not merely functions of his "innate ability" but are closely related to his conception of himself, then the role of the teacher or counselor might be considerable in his development. It has been demonstrated that a student's self concept can be enhanced by working with his parents, and this has resulted in improved academic performance (39). The role of a students' parents might also be significant in the formation and enhancement of college aspirations.

#### Implications for Future Research

Three specific areas of investigation might be plausi-

ble as extensions of this study. First, a study dealing with the differences between educational and occupational aspiration might add to an understanding of college aspiration as a whole. A descriptive study of the role of occupational aspiration in relation to achievement, consistency, and other variables might prove beneficial.

The relationship of social class to college aspiration in this study decreased in significance each year to the tenth grade. A logical extension of this study would be to follow up on the same students for the next three years to determine if this decreasing significance continued. It would also be worthwhile to note which students actually attended college by social class among the sample.

Third, a follow up study on the same students in regard to later grades in high school as related to college aspirations might be worthwhile. As the students move closer to actual college enrollment it would be beneficial to note any changes that might take place in their aspirations and achievement.

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APPENDIX A

Self Concept of Ability Scale

Circle the letter in front of the statement which best answers each question.

1. How do you rate yourself in school ability compared with your close friends?
  - a. I am the best
  - b. I am above average
  - c. I am average
  - d. I am below average
  - e. I am the poorest
2. How do you rate yourself in school ability compared with those in your class at school?
  - a. I am among the best
  - b. I am above average
  - c. I am average
  - d. I am below average
  - e. I am among the poorest
3. Where do you think you would rank in your high school graduating class?
  - a. among the best
  - b. above average
  - c. average
  - d. below average
  - e. among the poorest
4. Do you think you have the ability to complete college?
  - a. yes, definitely
  - b. yes, probably
  - c. not sure either way
  - d. probably not
  - e. no
5. Where do you think you would rank in your class in college?
  - a. among the best
  - b. above average
  - c. average
  - d. below average
  - e. among the poorest
6. In order to become a doctor, lawyer, or university professor, work beyond four years of college is necessary. How likely do you think it is that you could complete such advanced work?
  - a. very likely
  - b. somewhat likely
  - c. not sure either way
  - d. unlikely
  - e. most unlikely

Go on to the next page

7. Forget for a moment how others grade your work. In your opinion how good do you think your work is?
- a. My work is excellent
  - b. My work is good
  - c. My work is average
  - d. My work is below average
  - e. My work is much below average
8. What kind of grades do you think you are capable of getting?
- a. Mostly A's
  - b. Mostly B's
  - c. Mostly C's
  - d. Mostly D's
  - e. Mostly E's



APPENDIX B

Perceived Parental Evaluation

Scale

Please answer the following questions as you think your parents would answer them. If you are not living with your parents answer for the family with whom you are living.

Circle the letter in front of the statement that best answers each question.

1. How do you think your parents would rate your school ability compared with other students your age?
  - a. Among the best
  - b. Above average
  - c. Average
  - d. Below average
  - e. Among the poorest
2. Where do you think your parents would say you would rank in your high school graduating class?
  - a. Among the best
  - b. Above average
  - c. Average
  - d. Below average
  - e. Among the poorest
3. Do you think your parents would say you have the ability to complete college?
  - a. Yes, definitely
  - b. Yes, probably
  - c. Not sure either way
  - d. Probably not
  - e. Definitely not
4. In order to become a doctor, lawyer, or university professor, work beyond four years of college is necessary. How likely do you think your parents would say it is that you could complete such advance work?
  - a. Very likely
  - b. Somewhat likely
  - c. Not sure either way
  - d. Somewhat likely
  - e. Very unlikely
5. What kind of grades do you think your parents would say you are capable of getting in general?
  - a. Mostly A's
  - b. Mostly B's
  - c. Mostly C's
  - d. Mostly D's
  - e. Mostly E's

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6. How far do you think your parents expect you to go in school?
  - a. They expect me to quit as soon as I can.
  - b. They expect me to continue in high school for a while.
  - c. They expect me to graduate from high school.
  - d. They expect me to go to secretarial or trade school.
  - e. They expect me to go to college for a while.
  - f. They expect me to graduate from college.
  - g. They expect me to do graduate work beyond college.
7. In general, would your parents say you are doing as well in school as you are capable of doing?
  - a. Yes, definitely
  - b. Yes, probably
  - c. Not sure either way
  - d. Probably not
  - e. Definitely not

## APPENDIX C

Variances of College Aspirers, Dis-  
parity Group, and Non-College Aspir-  
ers on each Variable from the Seventh  
To the Tenth Grade

Variances of College Aspirers, Disparity Group, and Non-College Aspirers on Each Variable from the Seventh to the Tenth Grade.

	Group	Self Concept	P.P.E.*	Social Class	G.P.A.**
7th	College Aspirers	14.88	-	-	.6902
	Disparity Group	9.99			.7670
	Non-College Asps.	13.33			.4550
8th	College Aspirers	15.59	9.03	509.86	.8037
	Disparity Group	15.70	12.23	384.76	.6545
	Non-College Asps.	21.99	17.81	389.30	.6491
9th	College Aspirers	15.15	8.48	511.18	.6855
	Disparity Group	20.01	11.98	467.74	.5942
	Non-College Asps.	19.02	10.53	385.58	.5807
10th	College Aspirers	16.79	11.89	544.95	.7925
	Disparity Group	13.49	10.80	417.34	.7271
	Non-College Asps.	10.79	10.22	413.31	.7482

\* Perceived Parental Evaluation

\*\* Grade Point Average

