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THE EFFECTS OF GROUP COUNSELING FOR VOCATIONAL CHOICE UPON  
ADOLESCENTS' EXPRESSED OCCUPATIONAL PREFERENCE

by

LaMyra Highsmith Davis

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Director

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This study was undertaken to investigate (a) whether group counseling for vocational choice reduces the magnitude of the difference between vocational aspiration and vocational expectation and (b) whether one group counseling session would have a greater effect than none, whether two group counseling sessions would have a greater effect than one or none, and whether three group counseling sessions would have a greater effect than two, one, or none.

The purposes of the study were to structure groups for vocational counseling so that the participants were given an opportunity for stating vocational aspirations and expectations prior to and after counseling, and to determine whether emphasis by qualified counselors on such vocational planning factors as interest, test scores, and occupational information would be worthwhile. Also, if these were found to be helpful, in what manner should they be stressed.

Vocational realism was defined as the discrepancy between the expressed vocational aspiration and expressed vocational expectation. The extent of the difference was obtained by subtracting the assigned score for vocational expectation from the assigned score for vocational aspiration. Group counseling, for this study, was defined as a meeting of selected persons for specified periods of time, so that information could be presented which might influence individuals in their preferred occupational choices.

The measures used were: General Aptitude Test Battery and Occupational Aptitude Patterns; Counseling Record and Control; the

Estimate of Worker Trait Requirements; the Educational and Occupational Plans Questionnaire; the National Opinion Research Center--North-Hatt Socioeconomic Index of Occupations.

Two preliminary studies, called Conditions I and II, were conducted to determine the exact procedures, tests to be used, and the length of time for group counseling sessions in the experimental phase of the study, called Condition III. The three conditions of the study took place in eight Guilford County, North Carolina, high schools over a two-year period of time. For Condition I, the subjects were 150 twelfth-grade boys and girls in four schools; for Condition II, the subjects were 190 twelfth-grade boys and girls in four other schools. In addition to determining the specific plans for Condition III, it was noted that a more realistic and positive attitude occurred in the vocational choices of subjects who participated in Condition II.

The subjects for Condition III were 80 tenth-grade girls attending one of the schools involved in Condition I of the study. The General Aptitude Test Battery (GATB) was leased to that high school by the Employment Security Commission (ESC) for one year to be used in the present study. The high school counselor at that school was trained in the administration and interpretation of the GATB by the state department of the ESC. The author was the group counselor. At the time that the GATB was administered to the 80 subjects, 20 girls were randomly assigned to a group to receive no counseling. Sixty girls were assigned to the group to be counseled. One month after the test was administered, the 80 subjects met in a group to complete the

Educational and Occupational Plans Questionnaire. Subsequently, the 60 subjects to be counseled were assigned to four treatment levels as follows: level I, no counseling (20 Ss); level II, one hour of counseling (20 Ss); level III, two hours of counseling (20 Ss); level IV, three hours of counseling (20 Ss). The subjects' expressed occupational preferences were placed upon the NORC scale to obtain a score for their vocational aspirations and a score for their vocational expectations.

A discrepancy realism score was obtained prior to and following all counseling sessions. The pre-counseling and post-counseling scores were statistically analyzed by a specific comparison with adjusting (covariance), a special case of the orthogonal polynomial.

The results of the statistical analysis of covariance indicated that realism between vocational aspirations and vocational expectations increased as the number of hours of group counseling increased. The direction of the significant linear trend was toward agreement between aspirations and expectations.

Specific comparisons between the treatment levels of the experiment did not yield significant results when an analysis of the experimental data was made. However, the indicated significance of the linear function does infer that each level of group counseling had a greater effect than no group counseling upon the differences in vocational aspirations and vocational expectations.

It is believed that the significant changes in the differences between expressed vocational aspirations and vocational expectations

are not a unique result of the particular circumstances of this study. The opportunity to explore differences in perception of occupationally related attitudes and values was made possible and changes in subjects' occupational choices were evidenced. It should be emphasized in regard to the findings of this study that adolescents' problems, occurring during the exploratory stage of development, in acquiring facts about occupations are compounded by the problems created by changes occurring in the purposes and meanings of work. Also, individual and cultural variations affect the adolescent's capacity to learn vocational skills and to acquire information and understanding necessary to weigh occupational alternatives.

APPROVAL SHEET

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## CHAPTER I

### INTRODUCTION AND STATEMENT OF THE PROBLEM

The national labor force contains an increasingly large number of young workers and of employed women. As the proportion of young workers in the labor force grows, many problems emerge that are related to vocational choice. The problems arising from adolescent inexperience and the trends toward automation and job specialization suggest that different methods should be sought to assist individuals in their decisions concerning vocational choice, and in their training and preparations for specific occupations. The anticipated increase in the numbers of persons entering the labor force and the needs of job seekers and job holders indicate the importance of comprehensive programs related to career guidance. The school, as a transitional environment for youth, has the responsibility of continually redefining and amplifying its function as work roles become more competitive within our society.

Converging socioeconomic forces, which have been reflected in many recent legislatively endorsed programs, have emphasized areas that could be developed in an effort to attain improved levels of individual competency in educational and counseling programs. At the present time, vocational education in schools and government agencies must be described as less than adequate. Consequently, unskilled workers and unfilled jobs are persistent problems of the national employment situation.

Any approach taken for investigation of problems of occupational choices involves description or measurement of the realism of vocational aspirations and vocational expectations. In the present study, group counseling was proposed for assisting in the formulation of more accurate perceptions in making vocational choices in adolescence.

The work of Lewin (1939) has had particular importance for the developmental theory of the present research. Lewin stated that the lack of stability of choices during adolescence can increase the magnitude of differentiation between aspirations and expectations. He described the "life space" of the adolescent as full of both possibilities and uncertainties. As far back as the 1930's, Lewin studied the differentiation of time perspective which he believed affects levels of reality. Thus, that which is dreamed of or wished for (level of irreality in the future) becomes separated from what is expected (level of reality in the future). Vague ideas must be replaced by definitive decisions regarding planning and preparing for work in the future.

The recent contributions of Erikson (1959) concerning stages of personality development and of Piaget (1954) concerning stages of development of intellectual activities suggest the importance of vocational choices as one aspect of adolescent development.

Early determinants in life influencing realism of vocational choices have been described by Roe (1957), by Getzels and Jackson (1962), and by Powell and Bloom (1962). Beilin (1955) and Douvan and Adelson (1966) also have described choice making by adolescents in the context of developmental stages. Ausubel (1954) stated that an



adolescent, seeking to become a person in his own right, finds the process of choosing an occupation a critical one.

Some studies concerned with occupational choices of adolescents have included questions about fields of work young persons expect or would like to enter. The adolescents were asked to think about who they were, what they thought about themselves in relation to their peers, and their job preferences. It is assumed that an adolescent can identify and express his vocational aspirations within an accurate context of employment probabilities. However, it appears that an adolescent may hold differing perceptions of the long-term value of an occupation and his occupational values fluctuate from time to time. Many individual variations in occupational knowledge and ability to weigh alternatives can impose limits upon occupational choices.

There has been a growing awareness that some unique learning experiences are present in group participation that cannot be replicated elsewhere. Yet, despite the hopes for group guidance and counseling work, many such programs at the high school level have failed. This failure has been attributed in part to the influence of using traditional teaching methods in group counseling.

The role of the counselor in helping adolescents with vocational plans has been emphasized in training programs related to "manpower programs" initiated by the federal government. However, many traditional school systems provide few opportunities for the school counselor to help students consider the importance of selecting an occupation in relation to students' interests and aptitudes.

Increasingly, the effects of changes in the world of work necessitate changes in the approaches presently taken in vocational counseling programs. Group counseling for vocational choice would provide an opportunity for adolescents from differing backgrounds to learn about the perceptions of work held by others.

This study was based on (1) the need for group counseling programs which reflect consideration of the importance of adolescents' perception of the occupational world, and (2) the need to improve current guidance practices in school programs.

#### Definitions, Abbreviations, Assumptions and Purposes

The definitions of terms, abbreviations, assumptions, hypotheses and purposes of this research are subsequently presented in this order.

#### Definition of terms

Vocational Realism--in the present study vocational realism has been defined as the discrepancy between the occupational choices of adolescents, expressed as vocational aspirations and vocational expectations.

Vocational Aspirations--defined in the present study as those jobs hoped for (Southern Cooperative Series, 1965).

Vocational Expectations--defined as those jobs which are expected (Southern Cooperative Series, 1965).

Vocational Development--for the purposes of this study Super's (1957) definition of vocational development was accepted. The definition was derived from a theory consisting of a series of life stages, a process which continued through time and was manifest in a sequence of vocational behaviors and development. Vocational

development is seen as essentially that of developing and implementing a self concept, or a more or less unified system of interpersonal behavior.

Group Counseling--defined as a technique to present factors which influence individuals' choices of occupations during group meetings of limited time periods.

Conditions of the Study--the three conditions of the study were: Condition I, concerning methodological aspects of group counseling for career guidance; Condition II, concerning the sources of information for possible use with groups; Condition III, concerning the effectiveness of group counseling upon the difference between vocational aspirations and expectations of the subjects of the experiment.

Treatment Levels--the treatment levels for Condition III, the experiment, were: Level I, no counseling; Level II, one hour of counseling; Level III, two hours of counseling; Level IV, three hours of counseling.

Abbreviations--the abbreviations of the study were:

GATB: General Aptitude Test Battery, United States Department of Labor

OAP: Occupational Aptitude Pattern

DOT: Dictionary of Occupational Titles (Consisting of Volume I, Volume II, Volume III and Volume IV)

ESC: Employment Security Commission

CRC: Counseling Record and Control

NORC: National Opinion Research Center--Socioeconomic Index of Occupations

### Assumptions

The assumptions made in the development of the problem were four in number. The first assumption was that there is a difference in vocational aspirations and vocational expectations and the difference can be measured. The second assumption was that vocational choices have begun to stabilize at least by the tenth grade. Also, it is of critical importance for the young person to begin to participate in a process of self-examination for long term employment prospects to be fulfilled, as well as for more immediate goals to be realized. The third assumption was that increases in the labor force in the United States and many changing socioeconomic conditions call for additional and earlier career planning by adolescents. The fourth assumption was that vocational choice plays a part in the adjustment problems related to adolescence.

### Hypotheses tested

Hypothesis A. Group counseling for vocational choice reduces the magnitude of the difference between vocational aspiration and vocational expectation.

Hypothesis B. One group counseling session should have a greater effect than none; two counseling sessions should have a greater effect than one or none; three counseling sessions should have a greater effect than two, one or none.

### Purposes

The purposes of the study were (1) to structure groups for vocational counseling in such a way that the participants had an opportunity for learning about vocational aspirations and expectations; (2) to determine the value of the group counselor's stressing

factors of vocational planning such as interests, test scores, or occupational information and if they should be stressed, in what manner.

The major purpose of this study, then, was to investigate the influence of group counseling for occupational choice upon the realism of adolescents' expressed vocational aspirations and vocational expectations.

### Summary

In this present study, vocational aspirations and vocational expectations have been considered in direct relationship to methods of group counseling for career guidance. It has been observed that variations in indicated vocational choices can reflect changes in knowledge as experience begins to give aspirations and expectations substance and actually change their meaning over a period of time. The differences in expressed occupational choices of adolescents have been considered in this investigation in the context of vocational aspirations and vocational expectations.

Subsequent chapters in this thesis describe the methods and procedures, analysis of data and discussion, conclusions, and the implications of the findings for practice and for further study.

## CHAPTER II

### REVIEW OF THE LITERATURE

The literature which was reviewed for this study was concerned with (a) the realism of adolescents' expressed vocational aspirations and vocational expectations in a socioeconomic and psychological frame of reference, (b) vocational guidance in groups, and (c) information and legislation related to occupational choice and counseling in adolescence.

#### The Realism of Vocational Aspirations and Expectations

The beginning of an expression of concern with realism in adolescence was closely related to the development of the guidance and counseling movement (Hamburger, 1958). Although it has frequently been mentioned in the literature that career planning is influenced by vocational aspirations and expectations, such factors as occupation, social status, and actual attainment have been considered the ultimate criteria of the realism of vocational choices. Some of the research in the field of vocational choices of adolescents, for example, investigations conducted by Hamburger (1958), Hoyt (1960), and Milliken (1962), have used the contributions of subjects' aptitudes or interests as immediate criteria of successful occupational choices.

Occupational planning and adolescence have often been reviewed in the literature. Summaries are available in Jersild

(1957), Kuhlén (1952), and Super (1957). The research reviewed by these individuals tends to confirm a picture of lack of realism regarding vocational planning during adolescence.

#### Socioeconomic factors

Lewin (1939) believed that the handling of occupational placement plays a significant role in determining the status of an adolescent. According to Lewin, the adolescent in a complex society experiences many difficulties concerning occupational choices. Elements of occupation were believed to add an individualizing force that makes of adolescence a period of stress and perhaps of deprivation at the same time that it raises the general level of achievement.

According to Benedict (1949) sociological changes in cultures within the last fifty years have produced a discontinuous culture. Miller (1951) identifies this discontinuous culture as one which withdraws its work models and work experiences from youth. Davis (1944) and Douvan and Adelson (1966) and many writers have depicted vivid portraits of the adolescent subculture and the conflicts which result from autonomy strivings and cultural demands. These same conflicts have been given wide attention through the means of mass media.

Social class has been identified as a determinant of occupational choice by Warner, Meeker and Eells (1949) and Havighurst and Neugarten (1957). Social class memberships have been presented by Chapman and Volkman (1939) and Pearlin and Kohn (1966) as limiting aspirations and circumscribing plans.

The evidence presented by these authors for the purpose of defining differences effected by social class position appears to have been gathered primarily from observed failures of specific groups to aspire and plan, rather than from the results of empirical studies. These observational conclusions have given no way of judging how large the discrepancies between social class status and occupational aspirations must be to constitute a lack of realism.

Data have been gathered from the social sciences which might be relevant to vocational development and its relationship to social class. Lipsitt (1962) believed that the dynamics of vocational development have strong bearing upon vocational choice and can be understood more comprehensively when individual factors and social influences upon the individual are considered, as well as the interaction between the individual and the group.

The results of sociological studies have been reflected in theories of vocational choice outlined by Beilin (1955), Ginzberg (1951), and Super (1964). Super thought that problems of occupational choice occurring in adolescence might be reviewed in the context of vocational development. With his colleagues in the career plan studies, Super proposed that role, personal and situational factors were important influences on occupational choice.

The vocational stage termed exploratory by Super (1964) occurs during the age range of fifteen to twenty-five years. Others have identified and studied a similar stage of vocational development (Ginzberg, 1961; Thompson, 1966; Turner, 1964) and



have indicated that during this stage adolescents may become aware of contingencies, resources, and methods available for their use in vocational planning.

Ginzberg (1951) theorized that the process of occupational choice could be separated into three categories. The first category was fantasy choices before eleven years of age, the second was tentative choices between eleven and seventeen, and the third was realistic choices occurring between seventeen and young adulthood. Both Ginzberg's and Super's explanations connote possession of an increasing degree of realism upon a progressive continuum of choice.

Several studies have indicated that the variables of age and sex influence differences in vocational choice. In the Southern Cooperative Series (1965), rural ninth- and tenth-grade youth from four southern states were studied concerning their attitudes toward education and their vocational expectations, interests, and preferences. Differences between boys and girls were greatest with regard to vocational interests. Among the concerns of the study were the problems of occupational choices of economically deprived individuals. One of the conclusions was that educational and occupational expectations of young people and their parents were closely related to the families' level of living status. The interests of girls and their attitudes toward education, which were more favorable than were those of the boys, seemed to have special implications for the vocational counseling of girls.

The study conducted by the President's Commission on the Status of Women (1963) has placed emphasis on concerns for the

occupations of women in our society. One outcome of the report has been several pilot conferences conducted to study group counseling for girls. Fullmer (1966) suggested during a pilot conference that counselors should recognize the great importance of the needs of girls, rather than considering special methods of vocational counseling.

Reiss (1961) indicated that women were less likely than men to enter the labor force. Their mobility and experience within the occupational structure have been limited, in part, because women seek jobs which have been generally considered feminine occupations. Reiss stated that lower levels of occupational attainment appeared inconsistent with the fact that women, on the average, have a higher median of educational attainment than men.

Hatt (1950) reported that he had found very little evidence that younger persons rated a larger number of occupations differently than older persons. Analysis by age and sex indicated very small differences in the occupational prestige ratings by the subjects in Hatt's study.

Douvan and Adelson (1966) interviewed 1,045 boys aged fourteen through sixteen and 2,005 girls in grades six through twelve. The problem of sex differences in identity formation was discussed by the investigators. They concluded that boys tend to establish identity around vocational choice and girls do not. The investigators concluded that when girls emphasized their occupational plans they seemed to express traditionally feminine goals for marriage. This fact may contribute to the belief that girls are far

less reality oriented in their conception of work than are boys. In the study by Douvan and Adelson ninety-five per cent of the choices of the girls fell into four categories: (1) Personal Aide, (2) Social Aide, (3) White Collar Aide, and (4) Glamour. These choices were characterized by aspects of motherliness, romance, and beauty.

Marriage, however, was cited as the major goal of ninety-six per cent of the girls questioned. Girls' occupational aspirations supported their marriage plans; the jobs chosen did not require strong professional commitments which would conflict with the traditional feminine role portrayed as ideal for the married woman. The subjects of this study expressed by their job choices a general desire for a middle class way of life; that is, the status rewards of the job were more important than its intrinsic satisfactions.

Simmons (1962) asked fourth-, fifth-, eighth-, and twelfth-grade boys and girls to rank a list of occupational titles for prestige and for interest. Fifth-grade boys showed a high degree of agreement with adults as to the prestige of an occupation. This same level of agreement was not evidenced for the girls in this study until the eighth-grade level. A test-retest technique suggested stable group prestige hierarchies over a two-month period.

Thompson (1966) compared students' ratings of occupations at the freshman and sophomore levels of high school and found that about three out of four of these responses remained the same from one year to the next. Women place emphasis on jobs that would have opportunities for self expression. Men, however, placed emphasis on leadership potentiality in jobs. Differences between what

girls and boys liked about jobs were important, but preferences for certain aspects of jobs did not divide jobs selectively on a male-female basis.

The relationship of job values to vocational aspirations of adolescents was investigated by Singer and Steffire (1954). The writers found that boys with high levels of vocational aspiration were relatively more concerned with job values involving self-expression, while those with low aspirations were more concerned with independence. However, they found no relationship between aspirational level and job values for adolescent girls.

Gribbons and Lohrnes (1964) conducted a longitudinal career development study of 111 boys and girls. One of the concerns of the study was to determine if differences existed between the typical hierarchies of vocational values of boys and girls. The comparisons of the final hierarchies for the two sexes were dominated by similarities rather than by differences. Girls tended to be people oriented and liked to meet and help people, whereas boys gave higher values to salary and prestige. Girls and boys had similar concerns, but they placed different interpretations upon them. The conclusions of the study stressed the importance of assisting young people at an early age to develop an increased awareness of their personal value hierarchies and to integrate their values, their aspirations, and their plans.

The influence of sociological studies upon theories of vocational choice indicates that the acceptance of a general theory

concerning vocational development has relevance for the processes of guidance and counseling. However, the central emphasis of career development studies has been a search for the psychological meaning of vocationally relevant behavior.

Barker (1953) has explored the discrepancy in adolescence between ideals and aspirations and achievements. According to Barker, this discrepancy is due partly to the increased time perspective and a desire to grow up, to achieve, and to succeed which invites long-range goals and aspirations and partly to the inability to foresee obstacles and consequences of actions.

Personality determinants of choice were studied by Small (1953), Steinberg (1952), Strong (1953), and Stubbins (1948, 1950). Cottrell (1942) indicated that any item of social behavior could be understood only when it was analyzed as a functional part of a situation composed of a two-way interactive system. The organism not only develops the response patterns representing its part in an interaction but actually incorporates the response patterns of the others in its own reactive system.

Intelligence as a basis for evaluating aspirations has been the focus of a number of studies (Anastasi, 1956; Cole, 1954; Stewart, 1947; Super, 1963; Terman, 1947). These studies have shown positive relationships between vocational aspirations and intelligence. However, Bernstein (1965) emphasized that the expressions of choice necessary for identification and measurement of aspirations may have no relationship to intelligence but may

reflect environmental influences which encourage and teach verbal expression of felt needs.

One study reported that students clearly distinguish between aspirations and actual plans (Stephenson, 1957). Schultz and Blocher (1960) made a study to test Bordin's (1943) theory that vocational preferences of youth are related to their perception of occupations which reinforce their own self concept. The tentative findings of Schultz and Blocher's study show a relationship between a person's level of occupational choice and aspirations and his general evaluation of himself.

Lockwood (1958) found that sometimes pupils of high mental ability have selected vocations offering limited opportunities and pupils of low mental abilities have selected occupations for which they were not intellectually fitted. However, the results of Lockwood's study show intelligence as directly related to the student's level of realism in occupational preferences.

Perrone (1965) studied junior high school girls and found that more scholastically high-achieving girls with fewer problems wanted to pursue a vocational goal bringing intrinsic satisfaction and viewed higher education as incompatible with this goal. Conversely, less intelligent girls whose records indicated low levels of achievement were less concerned with self-expression and aspired to goals beyond their educational potential. The results of a study by Hamburger (1958) indicated that intelligence was related to vocational planning, but there were no significant

differences between aspirations and expectations in relation to intelligence and social status.

Milliken (1962) found that a lack of realism was demonstrated by students whose Army General Classification Test scores (AGCT) fell well below mean of the occupation group in which they were interested but which appeared to require abilities not possessed by low scoring students. The investigator surmised that more intelligent students have made considerable effort to obtain information about careers and they might have better chances. Tested ability was employed as the realism criterion. The results of Milliken's research indicated that students were generally realistic in their occupational plans when their stated interests were related to their tested abilities. Many of the students in this study, although desiring work in skilled or semi-skilled areas, achieved scores well above the mean of the professional group. Milliken believed that some students could have attained a college education had they attempted it, and better and earlier career guidance would have helped these students.

#### Occupational Guidance in Groups

The methodological approaches to group counseling in the present study were formulated from reviews of empirical studies and research related to group processes and content. The review of literature considered the counselor's role and the counseling process as intervention.

Bennett (1963) described the stages through which personnel and guidance programs have passed in the last three or four decades. These stages, roughly characterized by Bennett as remedial,

preventative, and developmental, have reflected the scope of the growing awareness concerning the nature of the individual's needs. Studies of learning and motivation have been reflected in occupationally related literature (Gross, 1959; Hoyt, 1960; Kemp, 1964; Levenstein, 1962; Lifton, 1962). Studies such as these have heightened the recognition within the field of guidance and counseling that counseling represents reciprocity of learning for the counselor and the counselee. Tyler (1961) has suggested that translation of the realization that learning can take place in counseling experiences into practices within school systems should involve well planned programs including group procedures. Tyler contended that though every phase of education has contributed to the development of life values, the system of values needs to be made articulate if it is to function as a rational guide. Most of the experimental research that has been conducted in the field of guidance and counseling has been concerned with what phases of guidance can be carried on in groups or in individual interviews or how individual and group counseling techniques could be used together (Richardson & Borow, 1952; Shostrom & Brammer, 1952; Stone, 1948; Tyler, 1961). The research conducted to date has frequently produced significant results but only partial answers concerning the interaction of group and individual procedures.

Research concerning choice making as a process (Cartwright & Festinger, 1943; Krumboltz & Schroeder, 1954; Pritchard, 1962) has indicated that one of the great opportunities for the field of guidance and counseling lies in the area that Festinger (1957) has



called cognitive dissonance. With a group, situations which are rarely repeated elsewhere can be analyzed in terms of behavior learned through consideration of the possible consequences of alternative courses of action (Bennett, 1963). Difficulties which Festinger (1942) believed were encountered in "fitting together" beliefs, attitudes and understanding have made students especially vulnerable as they explored various fields of knowledge, work and play with associates from differing backgrounds. Festinger concluded from his studies that an individual will try to reduce dissonance or avoid situations that increased it by learning to live with uncertainties, exploring differences and examining conflicts.

The counselor's role. Studies in depth of group counseling have been presented by several researchers. Bennett (1963) has described the function of the employment service in counseling, while Wood (1959) stressed the need for counselors to equip themselves with relevant and timely information to bring to the student's attention. Samler (1961) examined the concept of vocation as an integral part of self and urged that counselors consider the psychological as well as the economic man. Roe (1957) devised standards for use in preparing and evaluating occupational literature for guidance personnel.

Kemp (1964) contended that the ability to participate constructively and actively in a group is an extended developmental process. The position taken by Kemp infers that the group process requires limited direction by the counselor. He believed that a function of the counselor in a group might be to provide

information in order to encourage exploration of various vocations. Trow (1941), Pritchard (1962), and Super (1963) stated that group guidance experiences could increase the vocational relevance of what the participant already knows about himself and what he may be helped to discover about himself and the world of work.

Pritchard (1962) and Holland (1959) contended that the counselor should consider the responsibilities of initiating and encouraging self directed selection, as well as considering measured interest, intelligence, special aptitudes, and leisure time activities. The task of providing a framework to facilitate independence of choice was therefore seen as largely dependent upon the counselor's orientation. Lipsitt (1962) suggested that the counselor might see his own role as a relatively minor one through recognition of the extent of the complex and long range process of vocational development, with its ultimate compromise between many differences.

According to Goldman (1962) group methods of guidance and counseling have been both a great hope and a great disappointment. Group procedures were seen hopefully as providing an opportunity for expression of commonalities through shared experiences, as less repetitiousness for the counselor, and as providing increased stimulation for the counselee. The many reported failures in group techniques prompted Goldman to conclude that the failures reflect a lack of separate consideration by the counselor of the group's content and process. The critical element concerning the

content and the process of the group was believed to be the counselor's objectives for the group's outcome.

Samler, in a discussion of vocational development, wrote:

Many workers in the schools and employment agencies have not utilized the insights and understandings of human behavior developed in the last half century to change their practice from a fairly limited and arid matching process to something human, alive, soundly based, and as a matter of fact, very much more interesting to counselor as well as to client. (Samler, 1966, p. 86).

The counseling process as intervention. Hoyt (1960) hypothesized that participation in a group vocational guidance program would be associated with achievements in satisfaction, certainty of vocational choice, realism of vocational choice and the appropriateness of certainty in terms of realism. A comparison of group and individual counseling revealed no differences between the two methods as used in this study.

Ford (1959) studied changes in behavior through group counseling. The purpose of the group meetings was primarily to elicit behavior. Ford believed that the group approach improved the quality of the counseling by removing the monotony of repetition. Ford recommended three meetings with the student. Part of these meetings would involve giving test information and allowing students to ask questions.

Froelick (1958) selected criteria for group guidance in terms of the logical outcome desired, and compared individual and group counseling procedures. It was the intent of these sessions to develop guidelines which would encourage exploration by students of significant

areas of work. Data from this research did not support the claim that counseling must be individual.

A study by Spielberger and Weitz (1964) reported the results of experimental group counseling sessions concerning the effects of group counseling upon the academic performance of anxious college freshmen. The subjects expressed concern with anxiety arousing circumstances of their college environment. They insisted upon dealing with present situational aspects rather than with their precollege experiences. The results of the study suggested that the value of group counseling might hold greatest promise for students who possess personality characteristics which make participation in a group possible.

#### Information and Legislation Related to Occupational Choice and Counseling

Some research has been influenced by recent legislative action which emphasizes the need to improve the effectiveness of educational and counseling services. The passage of the Vocational Education Act of 1963 gave broad recognition to many problems related to job choices. An important provision of the act called for extension of local services to provide occupational information. One of the purposes of this legislation was to provide occupational training opportunities for available jobs.

The Elementary and Secondary Education Act of 1965 contained recommendations of available information for realistic vocational planning, such as skill surveys and a listing of occupational titles (Dictionary of Occupational Titles, 1965). Since the passage of this

act some school systems have allocated additional resources for vocational guidance and counseling. The Civil Rights Act of 1964 and the Equal Pay Act of 1963 included implications and recommendations for the counseling of girls.

Celebrezze (1965), Wirtz (1965), Wolfbein (1961), Wysong (1965), and Stephenson (1957) have made frequent references in their writings to the many challenges confronting the counselor and have urged the need for the counselor to keep abreast of new occupational developments for counseling purposes. Samler (1961) and Pritchard (1962) suggested the use of counseling tools and techniques sensitive to occupational and personal variables which seem significant to vocational success and satisfaction.

One resource for counselors which contains a new approach to the provision of counseling information was a study by Overs and Deutsch (1965) including a sociological study of 796 occupations. Three- to six-page abstracts have been compiled and assigned Dictionary of Occupational Titles codes for occupational files. The authors of the study examined role identities, role conflicts, cultural pressures, patterns of beliefs, values and cognitive orientations, occupational associations, informal work groups, occupational socialization, and social changes in occupations.

The outcome of a seminar on occupational choices was reported by Blau, et al., (1956). Several reports reflected that individuals often compromise between their occupational preferences and expectations. One conclusion was that the value orientations

of individuals determine the relative significance of different kinds of rewards and might determine what employment conditions constituted such rewards. In addition, the relative significance of different choice determinants was mentioned as important in the individual's life history.

Pritchard (1962) stated that much of the current literature, accepted practice, and available working material concerned with the "matching" of individual and vocation appears decidedly inadequate. Leading textbooks on "occupational information" offer little or nothing on how to incorporate elements of new occupational information into vocational counseling programs.

## CHAPTER III

### PROCEDURES

This study evolved from the author's special interest in group counseling procedures and in assisting young persons to see the possibilities of job opportunities in a realistic manner. It was designed to explore the magnitude of the discrepancies adolescents hold about job expectations and job aspirations and to determine if the discrepancies decrease with help obtained through group counseling procedures. The main aspects of the study are presented in the following order: the selection of the measures, the selection of the subjects and conditions of the study, the administration of the measures, and the statistical treatment of the data.

#### Selection of the Measures

In this study, some of the instruments used have been utilized by the ESC as an aid for counseling individuals for occupational choices. One of the instruments, the GATB, is administered each year by some high schools to eleventh- and twelfth-grade seniors who are not planning to attend college. The ESC encourages the use of GATB test results, plus personal or group counseling. Some of the other measures used in this study were adapted from the regional study of the Educational and Vocational Goals of Rural Youth in the South (1965). The Socioeconomic Index of Occupations (NORC scale) used for analyzing the data of Condition III was selected because of its suitability to

the occupational classifications of jobs used by the ESC and the questions concerning the values of jobs asked on the Educational and Occupational Plans Questionnaire. This study was the first one to be conducted in the State of North Carolina using ESC vocational aptitude tests and group counseling sessions.

#### The General Aptitude Test Battery (GATB)

The GATB (U. S. Department of Labor, 1962), used in the testing and counseling programs of the United States Department of Labor, consists of a battery of twelve tests measuring nine aptitudes. The names and definitions given to these nine aptitudes include a G factor described as general learning ability. Raw scores from the tests are converted to standard scores, for which ninth- and tenth-grade norms are available. In no instance at any stage of this study were students led to believe that results of the aptitude test could determine the occupations they could or could not successfully attain.

#### Occupational Aptitude Patterns (OAP)

Occupational norms (U. S. Department of Labor, 1962) derived from GATB test scores have been used to categorize a series of occupational patterns. Each OAP consists of the most significant aptitudes and the critical aptitude score for a group of occupations having similar aptitude requirements. These scores are called cut-off scores. The occupational titles and codes for the 846 occupations shown in the OAP pattern structure are taken from the Dictionary of Occupational Titles (DOT, Division of Occupational Analysis, United States Employment Service, 1965). The specific occupations in each have been



assigned a DOT Volume II code and a DOT Part IV code. Cut-off scores are given for ninth- and tenth-grade students.

#### The Estimate of Worker Traits

The United States Department of Labor bulletin, Estimate of Worker Trait Requirements for 4,000 Jobs as Defined in the Dot (U. S. Department of Labor, 1956), has been one of the few resources for estimating the realism of vocational decisions of adolescents. The criteria suggested in this bulletin were selected to be used to identify the high and low realism occupational choices of the students in Condition II, and to describe the occupational choices of subjects in Condition III.

#### The Counseling Record and Control (CRC)

The CRC form, a standard ESC device, is presented in Appendix A. Items one through seven on the CRC were completed by the students in Condition II. Before and after group counseling, the students recorded their occupational preferences on this form. The lists of choices, in the manner in which the students expressed them, are found in Appendix B. Items eight, nine, and ten of the CRC were completed by the school counselor, the group counselor, and an alternate counselor who had been a nonparticipant group observer.

#### Educational and Occupational Plans Questionnaire

A questionnaire developed and used in the study of the Educational and Vocational Goals of Rural Youth in the South (Southern Cooperative Series, 1965) was modified for use in this study (see Appendix C). Questions selected were concerned with vocational

aspirations, vocational expectations, opinions in regard to length of schooling, noncollege plans, college plans, and marital plans. The students' responses to the vocational aspirations and expectations were used to obtain the difference scores which were used in this study as the measure of vocational realism.

#### National Opinion Research Center (NORC), North-Hatt Socioeconomic Index of Occupations

The NORC--Socioeconomic Index of Occupations was derived from the North-Hatt study (Reiss, 1961) which had obtained a ranked scale of a group of occupations according to ratings obtained relative to the prestige of the occupation. The index was derived according to the Detailed Classification of the Bureau of the Census (1950). In Condition III of this study the NORC scale was used to score the subjects' pre- and post counseling vocational aspirations and vocational expectations.

#### Subjects and Conditions of the Study

##### Subjects

The subjects of this study were 340 seniors enrolled in eight Guilford County, North Carolina, high schools in the 1964-65 academic year and 80 tenth-grade girls enrolled in one of the same schools in 1965-66. The General Aptitude Test Battery (GATB) was administered to all the subjects in the study from one to three months prior to group counseling. The group counseling was planned and carried out over a two-year period. The vocational guidance procedures were planned cooperatively with the high schools and the Employment Security Commission (ESC).

### Condition I

A total of 150 twelfth-grade boys and girls from four schools were the subjects for Condition I. Ten to twelve students participated in 13 group meetings which were from one to two hours in length. In three of the schools all class members took part in counseling and in the fourth school only noncollege-bound students participated. The author and the counselors met frequently to review all cumulative records of the students and to evaluate the size, composition, membership, and duration of the group meetings. Thus, recommendations for subsequent groups were obtained.

### Condition II

In Condition II 190 twelfth-grade boys and girls were the subjects. The students were asked their occupational preferences before the counseling sessions and again after counseling. The males and females were counseled in separate groups. Students also completed the Counseling Record and Control (CRC) during the group meetings. The role of the author as the group counselor was studied by a non-participant group observer. Situational aspects of employment, recent employment trends, and some local job opportunities were discussed. Then the counselor answered questions of the students about the GATB test scores in relation to Occupational Aptitude Patterns (OAP). The author met with students who shared an interest in a particular field of work and encouraged them to discuss their ideas and beliefs of employment conditions and job prospects. However, specific occupations were not discussed with the individual students but the relationship of

the aptitudes and special areas of work was discussed. The data obtained concerning personal and socioeconomic factors of the subjects were compiled (see Appendix D).

### Condition III

Subjects for Condition III, the experimental phase of this study, were 80 tenth-grade girls. The subjects were selected and assigned to four treatment levels of the experiment by a process of randomization and sorting with the use of a table of random numbers. The four treatment levels were no counseling (20 Ss), one hour of counseling (20 Ss), two hours of counseling (20 Ss), and three hours of counseling (20 Ss). The subjects who were counseled were separated into two groups of ten at each level for the group meetings.

The role of the author during the group counseling sessions was one only of presenting the 8 selected items to be considered in this study. These 8 items concerned aspects of the changing roles of women, changing employment patterns, and some of the implications of these changes for girls planning for employment (see Appendix E). The direction and discussion during each of the group meetings were determined by the students. The author gave the same presentation in each group meeting in order to ascertain whether changes occurred in stated preferences of the subjects' aspirations and expectations in the four treatment levels. No special technique or method of counseling was represented by the choice of items or the manner of presenting them to the groups of subjects.

### Administration of the Measures

The measures selected for use in this study were administered to the 420 subjects in the three conditions of the study over a period of two years. In the administration of the measures, the author introduced the measure, spoke with the students about the plans for group counseling, and said that the high school counselor would schedule the hour and day for counseling sessions. The importance of regular attendance at the group counseling sessions was emphasized.

The measures administered in Conditions I, II, and III were: GATB, OAP, Estimate of Worker Traits. The CRC form was administered to the subjects in Condition I and Condition II. Results of the responses to CRC and counseling session reports were compared to students' cumulative records kept by each school for each individual student.

In addition, for Condition III the author and the high school counselor administered the apparatus tests of the GATB to ten students at a time. The four apparatus tests include a pegboard test and a finger dexterity test. Approximately two and one-quarter hours were required for each student to complete both the written and apparatus tests. The paper-and-pencil tests were machine scored with the exception of one paper-and-pencil motor coordination test. The apparatus tests were tallied as the tests were taken. Also, the Educational and Occupational Plans Questionnaire was administered to the 80 subjects in Condition III.

## Statistical Treatment of the Data

### Condition I

No statistical treatment of data was done for data collected in Condition I.

### Condition II

The McNemar test (Siegel, 1956) was used to test the significance of changes before and after counseling in Condition II. A fourfold table of frequencies was used to represent the first and second sets of responses from the same individuals. A plus (+) and a minus (-) were used to signify different responses.

A nonparametric technique was used to analyze the data because a parametric test, for example a t test, was not considered applicable for these data.

Siegel stated:

In a number of instances the t test is inapplicable . . . as the test assumes that . . . these difference scores are normally and independently distributed in the population from which the sample was drawn, and required that they be measured on at least an interval scale. (Siegel, 1956, p. 62).

### Condition III

An analysis of covariance was used to analyze data for Condition III to determine if the treatment levels of group counseling had an effect upon the magnitude of the differences in the subjects' vocational aspirations and vocational expectations as given before any group counseling and at the end of all group counseling sessions.

According to Ray,

When there are more than two levels of treatment in a single factor experiment and when these levels are themselves equally

spaced on whatever scale is used to denote them, then the regression of the dependent variables on the levels of the independent variable can be determined quite easily. This method, a special case of the orthogonal polynomials can be thought of as fitting a regression equation using the successive powers of the levels . . . or certain functions of the successive powers (Ray, 1960, p. 195).

Ray (1960) gave a form for a single-factor design with four treatment levels. In the analysis of covariance in this study, the linear, quadratic, and cubic components were computed.

#### The Scope and Limitations of the Study

Condition III, or the experimental phase of the study, was conducted at Northeast High School, Guilford County, North Carolina. The GATB was leased to that school by the State of North Carolina for a period of only one year, for research and demonstration purposes which were consistent with the aims and purposes of the present investigation.

No effort was made in the present study to relate the socio-economic level of the subjects to the responses concerning the questions of vocational aspirations and vocational expectations.

The subjects of Condition III consisted of females and included only 80 respondents.

The group of subjects in Condition III who were not counseled rated for their relative prestige the occupational preferences mentioned by all the subjects (see Appendix F). A rank-order of this scale was obtained in the same manner that the NORC scale was derived. This scale was not used as a measurement device in this study due to the limited number of respondents rating the occupations.

## CHAPTER IV

### FINDINGS AND DISCUSSION

The findings of Condition I, Condition II, and Condition III of this study and a discussion of these findings are presented in this chapter.

#### Condition I

Condition I was a preliminary study made to develop the methods and procedures to be used in the experimental phase, Condition III, of this study.

The subjects for Condition I were 190 twelfth-grade boys and girls enrolled in four high schools located in Guilford County, North Carolina. The data for Condition I were obtained from the students' responses to the GATB, from the high school counselors' evaluations of the group counseling experiences, and from the reports of the students on the CRC.

The high school counselors evaluated the preliminary group experiences in terms of the proposed procedures, the information presented, and the high school students' responses to the group meetings. The counselors indicated that the group counseling methods had been particularly effective for identifying and determining students' vocational problems which might receive further study.

The grades of each individual student were compared with the student's GATB scores. In general, students with "high grades"



scored high on the GATB, particularly on the sections of the test contributing to the G factor.

Completion by the students of the CRC prior to group experiences was not appropriate for introductory group counseling meetings. Therefore, during Condition I, other methods were tried for giving students test information and administering the CRC. The result of the various methods tried was a plan combining administration of the CRC, group counseling, and some test interpretation.

The following recommendations which resulted from the preliminary study and which became the basis for many of the procedures for the experimental condition of this study were: (1) the use of seven items (one through seven) on the CRC which would be completed by the subjects at the beginning of the group counseling sessions; (2) the numbers of subjects to be counseled in a group session would not be less than eight and not more than twelve persons; (3) boys and girls were to be counseled in separate groups, meeting for not less than one hour and for not more than two hours; (4) an observer was to analyze objectively the interaction between subjects and the counselor in regard to aptitude and interest factors, situational factors, and personal factors. The aptitude and interest factors included all questions asked by the subjects concerning the GATB scores and the resultant OAP. The situational factors included all references made to the number of positions open for each occupation discussed and the beginning salaries or wages for each occupation available in the local area. Personal factors included questions and comments

about needed skills and facts and personal characteristics for specific occupations.

### Condition II

On the basis of the recommendations from Condition I, the first part of the preliminary study, additional group counseling procedures were tested and analyzed in Condition II in order to develop the exact methods of procedures for carrying out the experimental part of this study.

The GATB and selected parts of the CRC were administered to 190 boys and girls enrolled in four additional high schools in Guilford County, North Carolina. The author tabulated and analyzed the personal and socioeconomic data obtained from the CRC for each of the 190 students (see Appendix D). The group observer working individually completed the items related to aptitude and interest factors, situational factors, and selected personal factors. The high school counselor, working individually, compared some of the subjects' cumulative records with their responses on the CRC to determine if there was a similarity of interest, aptitudes, and stated preferences given prior to the beginning of Condition II and the responses obtained during the group meetings.

Using the Estimate of Worker Trait Requirements (1956) and the GATB cut-off scores, the vocational preferences of the subjects before and after group counseling were dichotomized into high- and low-realism categories. Data for evaluating the students' responses in this manner were obtained from the following sources: the results of administration of the GATB; the responses of each student on the seven selected items of the CRC; the observer's comments concerning

each student's participation in the group counseling; and the high school counselors' reports. The Estimate of Worker Trait Requirements provided the author with a description of necessary traits, education, skills, and personality attributes for predicted success in specific occupations. These were compared with the information obtained from the GATE, OAP, and the CRC concerning each of the subjects and their expressed job preferences.

#### Statistical analysis of the data collected in Condition II

The subjects' vocational preferences at the beginning and at the end of each group counseling meeting were classified as high- and low-realism choices and were analyzed by the use of the McNemar test for the significance of change (Siegel, 1956). A distribution of frequency of the data in Condition II can be found in Table 1.

TABLE 1  
DISTRIBUTION OF HIGH- AND LOW-REALISM CHOICES BEFORE AND AFTER  
GROUP COUNSELING IN CONDITION II

	<u>Low Realism After (-) Counseling</u>			<u>High Realism After (+) Counseling</u>	
	A			B	
High Realism (+) Before Counseling	Boys	15		Boys	28
	Girls	<u>13</u>		Girls	<u>22</u>
	Total	28	+	Total	50 = 78
	C			D	
Low Realism (-) Before Counseling	Boys	14		Boys	38
	Girls	<u>10</u>		Girls	<u>50</u>
	Total	24		Total	88 = 112

Table 1, Cell A, shows that 28 students with high-realism choices before counseling indicated low-realism choices after counseling. There were 88 students with low-realism choices before counseling and high-realism choices after counseling. There were 24 students who maintained low-realism choices and 50 students who maintained high-realism choices both before and after counseling. According to the statistical analysis of the data (McNemar test), the change toward high realism was highly significant at the 0.01 level of confidence.

The respondents in Condition II showed a significant trend from a low-realism choice to a high-realism choice. The analysis of the data provided evidence of the need for extended vocational counseling services.

The recommendations which resulted from Condition II and which were used as further bases for the experiment conducted in Condition III were: (1) subjects for the experiment were to be girls; (2) the GATB would be administered to tenth-grade students; (3) girls were to be counseled in groups of ten and each group meeting would last one hour; (4) a questionnaire, to elicit vocational expectations and vocational aspirations, would be administered before and after group counseling.

#### Condition III

Condition III, the experimental part of this study, was planned on the basis of the procedures which resulted from the recommendations of the preliminary studies referred to as Condition I and Condition II. The purpose of Condition III was to investigate the difference in

vocational aspirations and vocational expectations of a group of 80 female high school students before and after varying specified lengths of time in group counseling sessions.

The GATB was administered to the subjects in Condition III one month prior to the planned counseling phase of the study. The written section of the GATB was administered to all 80 subjects at one meeting. The apparatus test section of the GATB was administered the following day to eight groups of 10 subjects each. The written tests were machine scored and the author, with the help of the high school counselor, scored the apparatus tests. At this time, 20 girls were randomly selected to compose the group which would not receive counseling and 60 girls were randomly assigned to receive vocational counseling in group sessions. None of the girls were informed about the specifics of the group counseling to be done.

At the beginning of the counseling phase of the study all 80 subjects met at one time and responded to the Educational and Occupational Plans Questionnaire, on which the subjects expressed their occupational preferences as vocational aspirations and as vocational expectations. It was from these expressed choices that a realism score was obtained. A score was assigned for the expressed vocational aspirations and for the vocational expectations for each subject according to the NORC scale (see Appendix G). The extent of the difference was obtained by subtracting the expectation score from the aspiration score, and this number was used in the statistical analyses (see Appendix H). This score was designated as the first realism discrepancy score.

The next step of the study was a random selection of the 60 subjects to be included in the various treatment levels of the group counseling sessions. For treatment level II, 20 girls were to be counseled in an additional one-hour group counseling session; for treatment level III, 20 girls were to be counseled in two one-hour group counseling sessions; and for treatment level IV, 20 girls were to be counseled in three one-hour group counseling sessions. For treatment level I, 20 girls were to receive no counseling.

The same information and procedures were used in all of the group counseling meetings, regardless of whether the counseling was for one hour, for two hours, or for three hours.

At the meeting of all 80 subjects at the conclusion of all group counseling sessions, the Educational and Occupational Plans Questionnaire was administered a second time. From the expressed vocational aspiration and vocational expectation scores on the questionnaire, a second realism discrepancy score was calculated.

The realism discrepancy score was obtained by subtracting the vocational expectation rating from the vocational aspiration rating. A negative discrepancy realism score occurred when the vocational expectation rating was greater than the vocational aspiration rating and indicated low realism ( $2-5=-3$ ). A positive discrepancy realism score occurred when the vocational expectation rating was less than the vocational aspiration and indicated high realism ( $5-2=+3$ ). Congruence occurred when the vocational expectation rating was the same as the vocational aspiration rating and indicated absolute realism ( $3-3=0$ ).

An additional evaluation was made of realism between the vocational aspirations and vocational expectations expressed by each student, using the information obtained from the GATB cut-off scores and the Estimate of Worker Trait Requirements. The author assigned occupational preferences given by the students to descriptive categories of high and low realism. The criteria used for doing the evaluation were the GATB factors and the factors described in the Estimate of Worker Trait Requirements believed to be necessary for realistic vocational consideration (see Appendix I). This method of evaluating is representative of methods used ordinarily by ESC personnel in counseling high school students concerning vocational choices. Since the ESC manual does not specify exacting methods and delineations for group counseling, ESC personnel are free to choose and improvise upon the suggested counseling procedures given in the ESC manual in a manner they deem most satisfactory for each situation.

Figure 1 represents a comparison of the realism of vocational aspirations and vocational expectations of the subjects in Condition III. This figure shows the inadequacy of subjective decisions by counselors regarding the realism between individual vocational aspirations and vocational expectations.

Individual data sheets (see Appendix J), used for the compilation of the variables and the manner of scoring them for the 80 subjects, included ratings of responses by subjects before and after counseling on the following factors: length of schooling, after school plans, occupational and marital plans, descriptive measurement

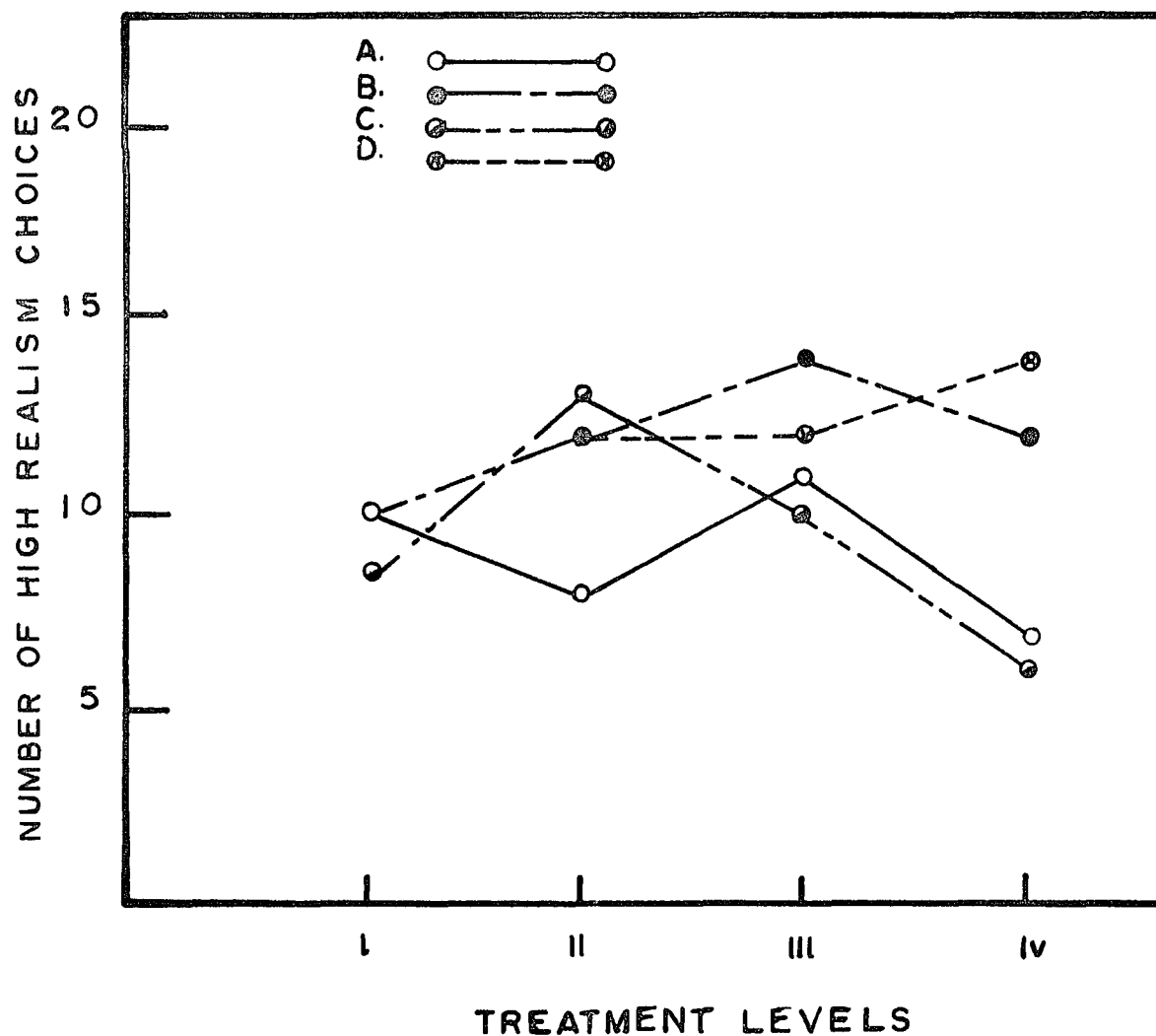


Figure 1. Plot of the number of pre- and post-counseling choices of subjects in Condition III described as "high realism" choices. Criteria for the description of high realism were the GATB cut-off scores and the Estimate of Worker Trait Requirements. Ss = 80 tenth-grade girls. A = vocational aspirations before counseling; B = vocational aspirations after counseling; C = vocational expectations before counseling; D = vocational expectations after counseling.



of expressed occupational choices according to the GATB, the Estimate of Worker Trait Requirements, and expressed occupational preferences as measured by the NORC scores.

Statistical analyses of the data, Condition III

The purpose of the experiment in Condition III was to determine if group counseling increased realism between expressed vocational aspirations and vocational expectations. A specific comparison was made between the four treatment levels with adjusting (covariance). Two discrepancy realism scores were obtained, one prior to counseling and one following the group counseling. These scores for the statistical analyses were obtained by assigning NORC score ratings to the subjects' expressed vocational preferences. The mean realism discrepancy scores and standard deviations before and after counseling are presented in Table 2.

TABLE 2  
MEAN DISCREPANCY REALISM SCORES AND STANDARD DEVIATIONS  
BEFORE AND AFTER GROUP COUNSELING

	N	Mean Discrepancy Score	Standard Deviation
Pre-counseling	80	3.5875	6.8227
Post-counseling	80	2.1375	5.2813

The mean discrepancy score obtained prior to counseling was 3.5875 with a standard deviation of 6.8227. The mean discrepancy score obtained at the end of all counseling sessions was 2.1375 with a standard deviation of 5.2813. The analysis of variance for significance of regression yielded an F value of 4.927, statistically significant at the 0.01 level of confidence.

TABLE 3  
REGRESSION ANALYSIS OF CONDITION III DATA

SOURCE	Jf	SS	MS	F
Regression	4	765.209	191.302	4.927*
Error	75	2912.171	38.829	
Total	79	3677.380		

When the three possible functions of the over-all analysis of covariance were determined, the linear component was found to be significant at the 0.01 level of confidence.\* Table 4 indicates the adjusted analysis of Condition III data showing the linear, quadratic, and cubic components of variance.

TABLE 4  
ADJUSTED ANALYSIS OF CONDITION III DATA SHOWING LINEAR,  
QUADRATIC, AND CUBIC COMPONENTS OF VARIANCE

SOURCE	df	SS	MS	F
Linear	1	268.991	268.991	6.928*
Quadratic	1	51.935	51.935	1.388
Cubic	1	86.964	86.964	2.240
Error	75	2912.171	38.829	

The adjusted mean discrepancy scores decreased as the amount of counseling increased. Table 4 shows that there was a statistically significant linear trend for the adjusted mean discrepancy scores. The formula  $\bar{Y}_n - b(\bar{X}_n - \bar{X})$  (Ray, 1960, p.175) was used to calculate the

adjusted mean discrepancy scores for each treatment level ( $b=.598$ ). The discrepancy between vocational aspirations and vocational expectations decreased as the length of time in group counseling increased. The means for the adjusted mean discrepancy scores are reported in Table 5 and are plotted in Figure 2.

TABLE 5

PRE-COUNSELING, POST-COUNSELING, AND ADJUSTED MEAN DISCREPANCY SCORES FOR EACH OF THE FOUR TREATMENT LEVELS OF CONDITION III.

Source	TREATMENT LEVELS			
	Level I No Counseling (n=20)	Level II One hour Counseling (n=20)	Level III Two hours Counseling (n=20)	Level IV Three hours Counseling (n=20)
First Discrepancy Realism Score	2.30	3.45	2.75	5.85
Second Discrepancy Realism Score	6.35	1.25	0.45	0.50
Adjusted Mean Discrepancy Score	7.12	1.33	1.55	0.85

The results of statistical analyses between the varying treatment levels are reported in Table 6. The F ratio to test the significance of the difference was not significant in any of the comparisons. Although the analysis of covariance for the simple comparisons between the treatment levels of the experiment did not yield significant results, the indicated significance of the linear function in the specific comparison does infer that each level of group counseling had a greater effect than no group counseling upon the differences in vocational aspirations and vocational expectations.

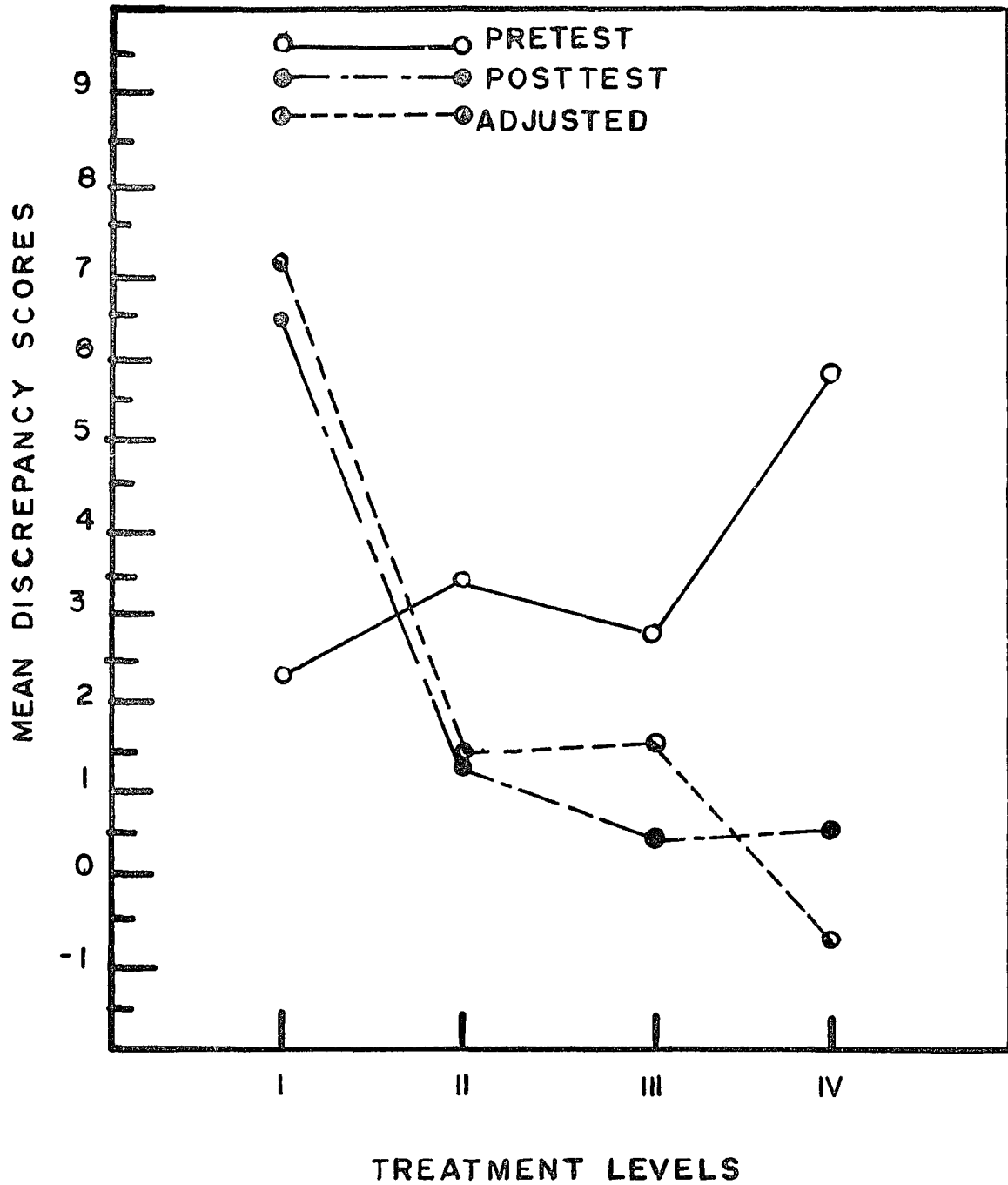


Figure 2. Plot of the pre-counseling (pretest), post-counseling (posttest), and adjusted mean discrepancy scores of the data obtained for the subjects of the four treatment levels of Condition III, the experiment.

TABLE 6  
ANALYSIS OF COVARIANCE AMONG TREATMENT LEVELS OF CONDITION III

Levels of Counseling	df	SS	MS	F
I vs II	1	4.067	4.067	0.105
I vs III	1	0.748	0.748	0.019
II vs III	1	0.490	0.490	0.013
II vs IV	1	80.868	80.868	2.083
III vs IV	1	94.258	94.258	2.428
Error (Remains constant)	75	2912.171	38.829	

Descriptive data, Condition III

The responses to the Educational and Occupational Plans Questionnaire administered before and after group counseling revealed that in no instance did subjects indicate a change in their educational or marital plans after counseling. There were frequent changes, however, in expressed job preferences. This occurrence seems to corroborate the findings of Douvan and Adelson (1966) that educational goals of girls may lack realism when considered in conjunction with occupational choices. Douvan and Adelson believed girls' life plans were influenced more by aspirations for status than by aspirations for a career. The 80 girls in the present study were asked about their plans for occupations and marriage, or occupation plans only. Table 7 represents the tabulation of these variables, and Table 8 is a compilation of the data obtained in each response category on the questionnaire.

TABLE 7

TABULATION OF THE PLANNING VARIABLES, EDUCATION, TRAINING AND AFTER SCHOOL PLANS OBTAINED FROM THE EDUCATIONAL AND OCCUPATIONAL PLANS QUESTIONNAIRE (CONDITION III)\*

EDUCATION	Probably last year	Another year or two	Finish high school	Some college	Graduate 4-year college	Continued professional study	Total
TRAINING (After School Plans)							
No response	-	-	-	4	11	10	25
Take training course	-	2	23	-	-	-	25
Take apprenticeship	-	1	3	-	-	-	4
Go to work immediately	1	1	3	-	-	-	5
Marriage	1	-	7	-	-	-	8
Help family	-	-	1	-	-	-	1
Undecided	-	1	11	-	-	-	12
Total	2	5	48	4	11	10	80

\*Subjects were eighty tenth-grade girls.

TABLE 8

FREQUENCY OF SUBJECTS' RESPONSES TO THE CATEGORIES OF THE  
EDUCATIONAL AND OCCUPATIONAL PLANS QUESTIONNAIRE  
(CONDITION III)

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<u>EDUCATIONAL GOALS</u>	
No response . . . . .	0
Probably last year of high school . . . . .	2
Another year or two of high school . . . . .	5
Finish high school . . . . .	48
Some college . . . . .	4
Graduate 4-year college . . . . .	11
Continued professional study . . . . .	<u>10</u>
Total . . . . .	80
<u>TRAINING: AFTER SCHOOL PLANS</u>	
No response . . . . .	25
Take training course . . . . .	25
Take apprenticeship . . . . .	4
Go to work immediately . . . . .	5
Marriage . . . . .	8
Help family . . . . .	1
Undecided . . . . .	<u>12</u>
Total . . . . .	80
<u>OCCUPATION AND MARRIAGE</u>	
No response . . . . .	6
Occupation only . . . . .	8
Occupation and marriage . . . . .	65
Marriage only . . . . .	<u>1</u>
Total . . . . .	80

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Regardless of the level of education or training anticipated, 65 of the girls planned to marry and to be employed in a gainful occupation away from home. Only one girl did not plan to finish high school but did plan to marry and not to work. Eight girls responded that they expected to work and not to marry. The educational objective of slightly more than half of the subjects was to finish high school (48). Twenty-five girls planned to go on to college and intended to graduate from a four-year college. The 25 college-bound students marked the no-response category for training anticipated. The remaining 55 girls in the study were divided between plans to take a training course (27), to go to work immediately (5), or to marry (8). The category "help family" was checked by only one subject. Twelve girls were undecided about their plans.

#### The content of group counseling sessions, Condition III

The occupational choices of the girls in the experimental condition of this study reflected a strong emphasis upon traditionally feminine occupations. The students who expressed the strongest occupational convictions were those who selected nursing. Other group members were interested in knowing why this group had decided to become nurses. For the most part, these girls expressed a desire to "help people" and often said that their vocational choices had been influenced by friends and relatives who were nurses.

Disagreement among the girls about occupational concepts seemed to this author to be based upon differences and inaccuracies in the students' perceptions of occupational requirements necessary



for the various kinds of occupations. Many of the girls in this study whose test scores indicated aptitudes which would make completion of college work possible had selected secretarial training for their high school major.

Negative feelings expressed by the girls during the group counseling sessions seldom became hostile to the point of disrupting the groups. However, the girls did express negative and positive opinions concerning jobs. For example, some of the girls had made early vocational choices to be beauticians. Many of these girls had a low distribution of scores on the paper-and-pencil tests of the GATB. There is a possibility that some of the students in this study who may have had limited academic success were responsive to the recruitment procedures employed by beauty schools. Some students made derogatory comments about beauticians' work. In one instance, a student who had made plans to study at a beauty school during the following summer began to cry during the group meeting and told one member of the group that she regretted that she had prepaid part of her tuition for this training. Such instances provided some knowledge and insight concerning the emotional qualms tenth-grade girls might experience in making decisions about vocations.

During the first group meetings, students were attentive and polite and seemed to enjoy the attention they were receiving as the selected participants in this study. During the second group meetings of students in Level III, the girls interacted with each other and seemed to have greater awareness of the similarities and

the differences of occupations. At the third group meeting in level IV, the girls wanted more information about their own individual test scores. Eight girls who participated in level IV, or three hours of group counseling, wrote comments about their personal feelings concerning the group counseling experiences. The exploration of differences in occupational beliefs and perceptions seemed to be advantageous in helping individuals identify some of the common problems persons might experience in regard to occupational choices.

Some students said they felt that homemaking was a minor occupation and explained that their mothers were employed outside the home. Some girls said that they might work, but they could not consider their aspirations and expectations for work as they considered their hopes for marriage.

The occupational preferences of the adolescent girls in this study were characterized by either idealistic job attitudes and an expressed unwillingness to compromise their ideals, or they viewed their choices of jobs as an economic necessity to obtain material goods and wealth they believed essential for their future family. At all treatment levels, there was little or no expression by the girls of vocational preferences for occupations which would require a strong professional commitment. The girls who participated in level IV did discuss a greater range of occupational possibilities than the subjects in level II and level III.

The girls in this study seemed to be concerned about their lack of skills required by some occupations. The effects upon the group

members produced by the presence of the author, unknown before counseling, cannot be overlooked completely. The students were interested in knowing about the personal life of the author, if she was married, had children, and worked outside the home.

A frequency distribution of the general intelligence, or G factor scores, obtained by the 80 girls is shown in Figure 3. The scores obtained by this group of girls were normally distributed.

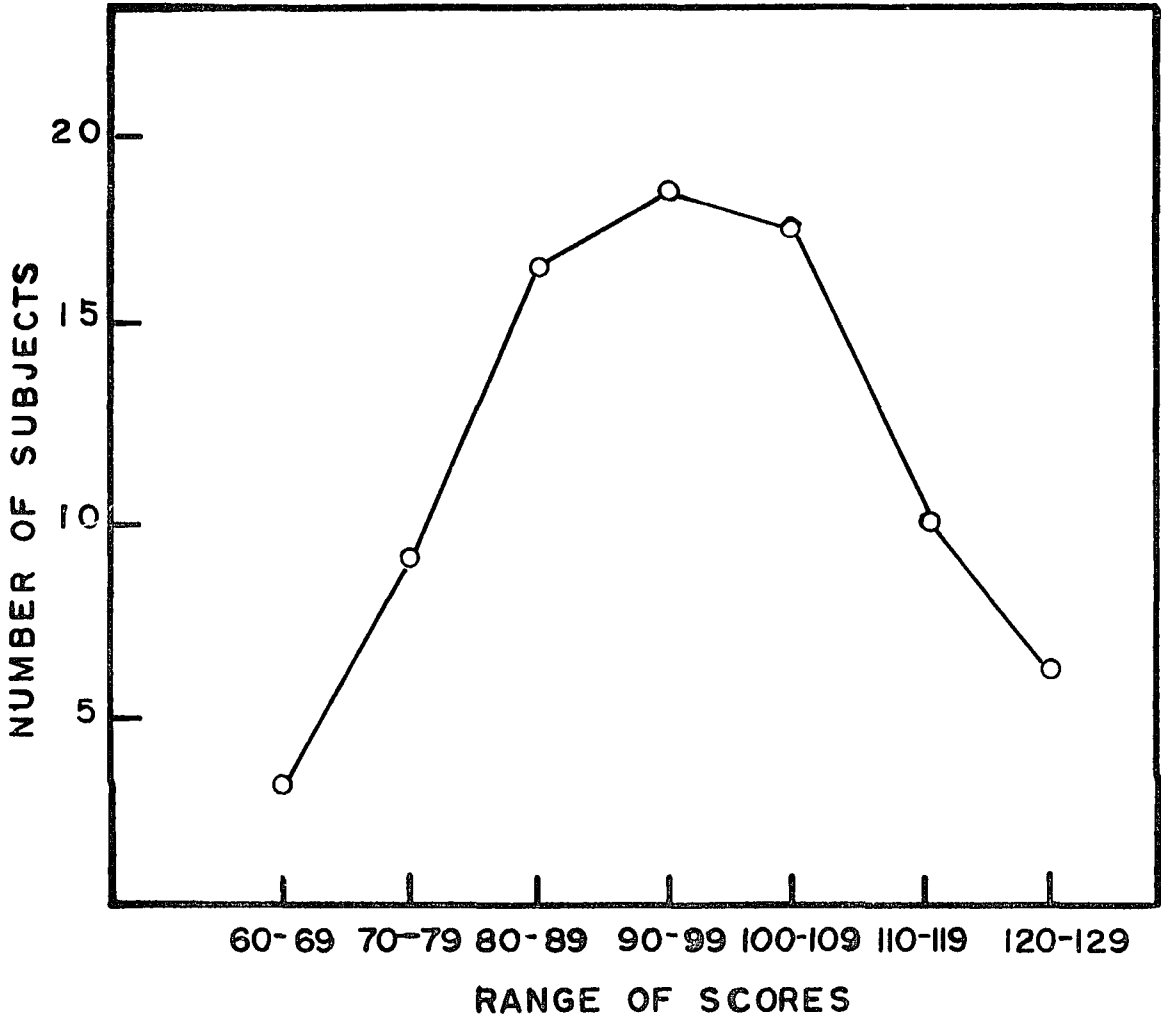


Figure 3. Frequency distribution of the GATB--G factor scores of the 80 tenth-grade girls who were the subjects in Condition III, the experiment. GATB minimum G scores for predicted success: "some college" = 100; 4 years of college = 110.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

#### Objectives of the Study

This study was designed to determine methods and procedures to be used in a study of the effects of group counseling for vocational choice upon adolescents' expressed occupational preferences. The group experiences were planned on the basis of findings about vocational development. The realism of the adolescent subjects' expressed occupational preferences was investigated by measuring the difference in vocational aspirations and vocational expectations before and after group counseling. The desired outcome was to determine procedures, techniques, and lengths of counseling needed for adolescents to be more realistically oriented to the various kinds of occupations and occupations for which they would qualify.

#### Subjects and Conditions of the Study

The subjects of two preliminary studies, Conditions I and II, were 340 twelfth-grade boys and girls enrolled in the academic year 1964-65 in eight high schools in Guilford County, North Carolina, and 80 tenth-grade girls who were the subjects of the experimental phase of this study, or Condition III. The 80 tenth-grade girls were enrolled in 1965-66 in one of the same county high schools. In all conditions of the study the subjects were administered the General Aptitude Test Battery (GATB) and participated in group counseling sessions.

### Condition I

The subjects in Condition I were 150 twelfth-grade boys and girls who were enrolled in 1964-65 in four high schools in Guilford County. The students were administered the GATB, the Counseling Record and Control (CRC), and were counseled in groups in order to develop the plans and procedures of the study. The following recommendations, resulting from Condition I, were used as the basis for further study of group counseling for vocational choice: eight to 12 students could be counseled during each of the group sessions; group meetings would last for not less than one and not more than two hours; boys and girls would be counseled in separate groups; a group observer would be used to study the verbal interaction of group members in regard to questions of aptitude and interests, situational factors of work, and personal factors. Test information, derived from the Occupational Aptitude Patterns (OAP) of the GATB provided the basis for discussion during the group sessions. Working separately, the students, the group observer, and the high school counselors completed parts of the CRC.

### Condition II

The subjects in Condition II of this study were 190 twelfth-grade boys and girls enrolled in 1965-66 in four additional high schools in Guilford County. The subjects responded to the GATB, the CRC, and were counseled in separate groups of boys and girls. The group observer evaluated the groups according to the group members' verbal responses. The high school students completed seven items on

the CRC; then the high school counselors evaluated the CRC answers and the cumulative records of each student with regard to information relevant to their expressed vocational choices.

Data secured. A comparison was made by the author of the expressed occupational choices of subjects recorded on the CRC before and after group counseling. The information from the GATB, the OAP, and the CRC were compared to the GATB cut-off scores and the Estimate of Worker Trait Requirements. From these criteria students' preferences were assigned to high- and low-realism categories. The statistical analysis of the data obtained by the use of these criteria indicated that a significant change had taken place from low- to high-realism choices as a result of group counseling.

The following recommendations were made as a result of the findings of Condition II and were also the basis for the plans for the experimental condition of the study: subjects for the experiment were to be girls; girls were to be counseled in groups of ten and each group meeting would last one hour; a questionnaire to elicit vocational expectations and vocational aspirations would be administered before and after group counseling.

### Condition III

The recommendations of the preliminary stages of the study, referred to as Conditions I and II, formed the basis for the plans and procedures for Condition III, the experiment.

The subjects for Condition III were 80 tenth-grade girls enrolled in 1965-66 in one of the same high schools in Guilford

County involved in Condition I of the study. The GATB was leased to that high school by the Employment Security Commission (ESC) for one year to be used in the present study. The high school counselor at that school was trained in the administration and interpretation of the GATB by the state department of the ESC. The author was the group counselor. At the time that the GATB was administered to the 80 subjects, 20 girls were randomly assigned to a group to receive no counseling. Sixty girls were assigned to the group to be counseled. One month after the test was administered, the 80 subjects met in a group to complete the Educational and Occupational Plans Questionnaire. Subsequently, the 60 subjects to be counseled were assigned to four treatment levels as follows: level I, no counseling (20 Ss); level II, one hour of counseling (20 Ss); level III, two hours of counseling (20 Ss); level IV, three hours of counseling (20 Ss). The subjects' expressed occupational preferences were placed upon the NORC scale to obtain a score for their vocational aspirations and a score for their vocational expectations.

Data secured. A discrepancy realism score was obtained by subtracting the vocational expectation score from the vocational aspiration score. A discrepancy realism score was obtained prior to and following all counseling sessions. The pre-counseling and post-counseling scores were statistically analyzed by analysis of covariance. The following are recommendations which resulted from Condition III: cooperative ESC and high school vocational guidance programs, based upon a theory of vocational development, can be planned for tenth-grade



girls; a high school guidance counselor, trained in the use of the GATB, can utilize the results of the tests for vocational guidance purposes in group situations; verbal interaction of tenth-grade college-bound and noncollege-bound girls concerning vocational perceptions results from group counseling experiences; tenth-grade girls participate actively in group counseling situations when the group counselor's intervention is limited; similarities and differences in vocational aspirations and vocational expectations are expressed by tenth-grade girls during occupationally oriented group counseling meetings; occupational preferences of tenth-grade girls become more realistic after group counseling meetings for vocational choice.

#### Measurements Taken

##### General Aptitude Test Battery (GATB)

The GATB was administered to the subjects in all three conditions of this study. This was the first time that the GATB was used for high school students in conjunction with group counseling in the state of North Carolina. Traditionally, school systems have provided only limited opportunities for noncollege-bound and college-bound students to examine, in early adolescence, interests, aptitudes, and skills for various occupations. In this study, small group counseling sessions were planned as an opportunity for students to explore various occupational requirements.

##### The Occupational Aptitude Patterns (OAP)

The OAP norms have been derived from the GATB scores to be used in occupational placement and counseling.

### Counseling Record and Control (CRC)

The CRC is a standard form of the ESC and was used in a modified form in Conditions I and II. In the present study, the CRC was used in conjunction with test information, group counseling procedures, and for purposes of evaluation of the socioeconomic and personal data which resulted from the preliminary group counseling experiences.

### The Estimate of Worker Trait Requirements

The United States Department of Labor has provided job descriptions for 4,000 jobs, which may be used to evaluate individual aptitudes, traits, and interests for different fields of work.

### The Educational and Occupational Plans Questionnaire

This questionnaire was administered to the 80 subjects in Condition III before and after group counseling to elicit subjects' vocational expectations, or the jobs students felt they might obtain upon graduation from high school. Subjects were also asked to indicate their vocational aspirations and any further training they were planning.

### National Opinion Research Center (NORC), North-Hatt Socioeconomic Index of Occupations

The NORC scale was used in Condition III as a method of assigning scaled values to the occupational preferences expressed by the subjects as vocational aspirations and as vocational expectations. The realism discrepancy score was thus obtained from the differences between these scores prior to and after counseling.

## Interpretation of the Findings

### Conditions I and II

The present study revealed that planning for vocational counseling programs which existed at the beginning of the present study did not involve active participation by the adolescent counselees. The plans in this study for group counseling for vocational choice included acceptance of the theoretical basis of vocational development as a way of structuring the group meetings. The review of literature indicated that systemization of planning in high school counseling programs has been difficult, particularly in programs for youth who have lacked backgrounds which might enable them to make adequate vocational choices. The findings of Conditions I and II of the study indicated that one aspect to be considered in counseling programs would be to provide the opportunity for each student to express his own ideas about jobs and to learn about the hopes and expectations of his peers. The adolescent subjects in the first conditions of the present study were more apt to see occupational outcome in relationship to their wants at the present time, rather than as the result of careful planning and preparation.

When group counseling for vocational choice was used in conjunction with administration of the GATB and consideration was given to the stages of vocational development of the subjects, statistically significant changes took place in the job choices of the boys and girls.

### Condition III

It is believed that the significant changes in the differences between expressed vocational aspirations and vocational expectations are not a unique result of the particular circumstances of this study. The opportunity to explore differences in perception of occupationally related attitudes and values was made possible and changes in subjects' occupational choices were evidenced. It should be emphasized in the findings of this study that adolescents' problems, occurring during the exploratory stage of development, in acquiring facts about occupations are compounded by the problems created by changes occurring in the purposes and meanings of work. Individual and cultural variations also affect the adolescent's capacity to learn vocational skills and to acquire information and understanding necessary to weigh occupational alternatives. The group meetings of the present study gave the counselor and the adolescent group members an opportunity to acquire knowledge about occupational requirements.

### Conclusions

The conclusions of Condition III, the experiment, are discussed relative to the hypotheses of this phase of the study.

Hypothesis A. Group counseling for vocational choice reduces the magnitude of the difference between vocational aspiration and vocational expectation.

The results of the statistical analysis of covariance indicated that realism between vocational aspirations and vocational expectations increased as the number of hours of group counseling increased. The direction of the significant linear trend was toward agreement between

aspirations and expectations. Departures from linearity were not significant. The over-all differences did show a reduction of the magnitude of the discrepancy ratings between vocational aspirations and vocational expectations with group counseling. Therefore, the first hypothesis of the experimental phase of the study was supported by the results of the statistical analysis.

Hypothesis B. One group counseling session should have a greater effect than none; two counseling sessions should have a greater effect than one or none; three counseling sessions should have a greater effect than two, one or none.

Specific comparisons between the treatment levels of the experiment did not yield significant results when an analysis of the experimental data was made. However, the indicated significance of the linear function does infer that each level of group counseling had a greater effect than no group counseling upon the differences in vocational aspirations and vocational expectations.

## CHAPTER VI

### RECOMMENDATIONS FOR FURTHER STUDY

Subsequent research in the area of assessing the realism of self-report discrepancies between vocational aspirations and vocational expectations is recommended as a result of this investigation.

1. Further study is recommended to develop counseling procedures, which will present realistically the advantages and disadvantages of occupations, and the knowledge, skills, and competencies required by employers for specific occupations.
2. Counseling for occupations might begin at the ninth- or tenth-grade level in the high school program and be followed in the twelfth year to determine whether the magnitude of the discrepancies between vocational aspirations and vocational expectations has decreased.
3. Case studies of individuals acknowledging high or low realism between vocational aspirations and vocational expectations would provide external criteria in assessing expressed realism discrepancy scores.

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APPENDIX

## APPENDIX A

THE COUNSELING RECORD AND CONTROL ADMINISTERED TO ALL SUBJECTS  
IN CONDITION I AND CONDITION II OF THE PRESENT STUDY

NAME \_\_\_\_\_

BIRTH DATE \_\_\_\_\_

1. EXPRESSED VOCATIONAL DECISION:

2. <u>WORK EXPERIENCE</u>	<u>ELEMENTS LIKED</u>	<u>ELEMENTS DISLIKED</u>

3. EDUCATION AND TRAINING4. LEISURE TIME ACTIVITIES OF VOCATIONAL SIGNIFICANCE5. SKILLS DEVELOPED6. SOCIOECONOMIC FACTORS (One or both parents working; approximate joint income; number of siblings; residence with one or both parents, or other.)7. INTERESTS8. PERSONAL TRAITS (Notes made by counselor)9. PHYSICAL LIMITATIONS (Notes made by counselor)

G	V	N	S	P	Q	K	F	M

10. TEST RESULTS

GATB Date \_\_\_\_\_

OAP's 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

OTHER TEST RESULTS \_\_\_\_\_

SIGNIFICANCE OF TEST RESULTS

## APPENDIX B

OCCUPATIONAL AND TRAINING CHOICES OF SUBJECTS BEFORE AND AFTER  
GROUP COUNSELING OBTAINED FROM THE  
COUNSELING RECORD AND CONTROL  
(CONDITION II)

<u>Occupation or training</u>	<u>Number of Students Choosing the Occupation</u>	
	<u>Before counseling</u>	<u>After counseling</u>
accountant. . . . .	6	9
airline hostess . . . . .	6	
airplane mechanic . . . . .	1	1
auto mechanic . . . . .	15	5
auto parts clerk. . . . .		2
bank teller . . . . .	3	1
bank work . . . . .	6	
barber. . . . .	7	2
beautician. . . . .	21	4
billing clerk . . . . .	1	3
bookkeeper. . . . .	6	9
bus driver. . . . .	3	1
business administration school. . .	3	9
business school . . . . .	15	12
butcher . . . . .	1	1
cigarette factory . . . . .	6	1
clerk typist. . . . .	11	2
clerical worker . . . . .	9	15
college commercial course . . . . .	12	11
commercial art school . . . . .	2	6
data processing . . . . .	3	12
dental or medical assistant . . . . .	9	13
department store sales. . . . .	2	4
dock worker . . . . .	2	2
drafting school . . . . .		5
drug store sales. . . . .	2	2
electronics school. . . . .	1	9
farming . . . . .	9	3
file clerk. . . . .	7	4
gas station attendant . . . . .	1	
go into service . . . . .	18	12
heavy equipment school. . . . .	2	2
hosiery and textile work. . . . .	13	10



OCCUPATIONAL AND TRAINING CHOICES OF SUBJECTS BEFORE AND AFTER  
GROUP COUNSELING OBTAINED FROM THE  
COUNSELING RECORD AND CONTROL  
(CONDITION II)

<u>Occupation or training</u>	<u>Number of Students Choosing the Occupation</u>	
	<u>Before counseling</u>	<u>After counseling</u>
IBM . . . . .	22	2
industrial and technical school . .	11	23
insurance office. . . . .	9	2
medical technician. . . . .	1	9
motel business. . . . .	1	1
nurse . . . . .	3	5
office work . . . . .	9	4
post office . . . . .	3	3
practical nurse . . . . .	4	2
prefer not working. . . . .	2	1
printer . . . . .	1	1
psychologist. . . . .	1	
race car driver . . . . .	1	
sales--general. . . . .	2	9
secretarial school. . . . .		11
secretary . . . . .	16	3
sewing machine and garment worker .	5	2
sheet metal worker. . . . .		5
shipping clerk. . . . .		3
social worker . . . . .	2	
stock clerk . . . . .		3
take care of children . . . . .	2	1
teacher . . . . .	5	
telephone company . . . . .	9	6
tool and die maker. . . . .		3
truck driver. . . . .	6	1
upholstery and furniture. . . . .	3	3
waitress. . . . .	2	1
welder. . . . .		6
wildlife worker for government. . .	1	1
work at Sears . . . . .	7	3
work with animals . . . . .	1	1
work with helping people. . . . .	16	10
working in home economics . . . . .	3	

## APPENDIX C

EDUCATIONAL AND OCCUPATIONAL PLANS QUESTIONNAIRE ADMINISTERED BEFORE  
AND AFTER GROUP COUNSELING TO ALL SUBJECTS  
IN CONDITION III OF THE PRESENT STUDY

Name \_\_\_\_\_  
                    (Last)                                      (First)                                      (Middle)

## STUDENT VOCATIONAL QUESTIONNAIRE FOR GIRLS

INSTRUCTIONS: Read each question carefully. Then answer it according to the instructions given with the question itself.

1. How far do you expect to go in school? (Check one)

This will probably be my last year  
 Another year or two  
 I intend to finish high school  
 I expect to start to college but probably won't finish  
 I expect to graduate from a four-year college  
 I expect to continue professional study after college graduation

2. If you are not planning to attend college, what are your plans?  
Check one statement below that best fits your plans. (If you are planning to attend college, do not answer this question.)

Take training courses before working (such as beauty school, business college, practical nursing school, evening vocational classes at high school, correspondence courses)  
 Take apprentice or on-the-job training, such as for nursing aide, receptionist, etc.  
 Go to work immediately without further job training  
 Marriage as soon as I leave school  
 Help my family at home  
 Undecided

3. The occupation I would like most is:

\_\_\_\_\_

4. What do you actually expect to do?

Occupation only  
 Occupation and marriage  
 Marriage only

\_\_\_\_\_ Name of occupation, if checked above

APPENDIX D  
 COMPILATION OF THE DATA OBTAINED FROM THE COUNSELING  
 RECORD AND CONTROL (CONDITION II)\*

Dependency status

both parents. . . . .	146
mother. . . . .	14
father. . . . .	3
grandmother . . . . .	2
guardian. . . . .	2
husband . . . . .	6
wife. . . . .	1
no response . . . . .	<u>16</u>
Total . . . . .	190

Work experience

boys. . . . .	80
girls . . . . .	<u>59</u>
Total . . . . .	139

Number of siblings in subject's family

one . . . . .	22
two . . . . .	34
three . . . . .	48
four. . . . .	31
five. . . . .	16
six . . . . .	7
seven . . . . .	7
eight . . . . .	3
above eight . . . . .	14
not replying. . . . .	<u>8</u>
Total . . . . .	190

\*Subjects were 190 twelfth-grade boys and girls.

COMPILATION OF THE DATA OBTAINED FROM THE COUNSELING  
RECORD AND CONTROL (CONDITION II)\*

Family income

<u>Amount of income</u>	<u>One parent working</u>	<u>Both parents working</u>
Student did not know. . . . .	43	19
\$ 3 - \$4,900.00 . . . . .	20	6
5 - 6,900.00 . . . . .	22	13
7 - 8,900.00 . . . . .	9	13
9 - 10,900.00 . . . . .	8	6
11 - 14,900.00 . . . . .	5	3
15,000 and over. . . . .	<u>2</u>	<u>2</u>
Totals. . . . .	109	62
No response for family income items . . . . .		19

\*Subjects were 190 twelfth-grade boys and girls.

## APPENDIX E

GROUP COUNSELING ITEMS PRESENTED BY THE COUNSELOR  
IN CONDITION III OF THE STUDYIntroduction

You have all taken the General Aptitude Test Battery and have answered some questions about your educational, marital, and occupational plans. We are meeting in these groups so that you can find out more about what your job hopes and expectations are like and what some of the ways are that other people look at problems about jobs. Many of the jobs you wish to have can be reached only in the future. One of the things that you can do now is to talk with each other about your plans and ideas related to your job choices. I'm going to let you lead the discussion yourselves and will only contribute if I think I can mention items which might give the discussion direction. Later on, you may want to know more about the specific results of the aptitude tests that you took.

Items

1. Many young women will be employed in the next few years in fields of work in which few women have been employed before. The "household engineer" of today may be tomorrow's city planner (High G or N).

2. Women may find the exploration of outer space very interesting and challenging. Weightlessness in space makes body size and weight less important in mastering the environment. Women's finger dexterity becomes more important as so many tasks in today's world are reduced to the process of turning dials (High F, S, M).

GROUP COUNSELING ITEMS PRESENTED BY THE COUNSELOR  
IN CONDITION III OF THE STUDY

Items

3. As everyone begins to have more leisure time with the increase of automation, women's flair for planning family recreation and the traditionally feminine roles for homemaking may be valuable in new ways (even, low, distribution of scores).

4. As working hours become even shorter, women will have greater freedom to be employed without making a choice between home-making or working (High over-all scores, High K).

5. The family today is no longer an economic unit. Women are not called upon for actual labor at home, as much as to give nurturance and warmth within the family. It may be that how a woman feels about going to work is more important to her family than whether she goes out to work (High G, V, N).

6. As the human life span increases, so does our need for medical care and facilities. We are a nation preoccupied with health; there is a continuously increasing need for workers in technical areas of the health professions--for doctors, nurses, and many helpers in related fields (High F, M, N).

7. When girls are asked what they "want to be," they often say "wife" or "wife and mother." Boys seldom reply to this same question by first saying "husband" or "husband and father" (High G).

GROUP COUNSELING ITEMS PRESENTED BY THE COUNSELOR  
IN CONDITION III OF THE STUDY

Items

8. Many girls want to be (vocational choice) what someone in their family has been (the job they held). However, jobs of yesterday are not guaranteed to exist tomorrow. Competition for jobs is growing. It is important to think about new fields of work which might be "won" and "kept" by women.

Note: The information within the parentheses following each item was a guide for the counselor in choosing items to respond to comments of particular girls. The items were paraphrased by the counselor when they were mentioned in group meetings.

APPENDIX F  
CONDITION III

Instructions for Students Who Rated the Occupational Preferences Cited by Subjects Before and After Group Counseling for the Relative Prestige of These Occupations\*

These instructions were read from a card to the group of twenty students and then each subject responded individually.

Now I am going to ask you how you would judge a number of occupations. For example, a railroad brakeman--which statement on this card (HAND RESPONDENT CARD) best gives your own personal opinion of the general standing of a railroad brakeman? (PAUSE) What number on that card would you pick out for him? (RECORD ANSWER).

1 2 3 4 5 X RAILROAD BRAKEMAN

Try not to judge a job according to your opinion of some one person you know who has such a job. . . Now how would you judge a \_\_\_\_\_? (PROCEED THROUGH LIST OF OCCUPATIONS).

\*Found in Occupations and Social Status. Albert J. Reiss, New York: The Free Press of Glencoe, 1961. Page 262.



RANK SCALE OF THE RATINGS FOR PRESTIGE OF THE OCCUPATIONS  
EXPRESSED AS VOCATIONAL ASPIRATIONS  
AND VOCATIONAL EXPECTATIONS  
(CONDITION III)\*

---

airline stewardess. . . . .	55	nurse's aide. . . . .	59
anesthetist . . . . .	51	ob-gyn. . . . .	64
auto mechanic . . . . .	49	office clerical worker. . . . .	49
beautician. . . . .	65	office worker . . . . .	61
biology teacher . . . . .	61	owner of ranch. . . . .	46
brain surgeon . . . . .	52	Peace Corp. . . . .	62
chemist . . . . .	49	pediatrician. . . . .	71
commercial artist-artist. . . . .	52	physical therapist. . . . .	67
concert pianist . . . . .	34	professional dancer . . . . .	54
correspondent-reporter. . . . .	56	psychologist. . . . .	62
dental assistant. . . . .	55	race car driver . . . . .	48
doctor. . . . .	67	recreational director . . . . .	69
elementary school teacher . . . . .	68	registered nurse. . . . .	62
english teacher . . . . .	54	seamstress. . . . .	51
factory machine worker. . . . .	33	secretary . . . . .	71
fashion designer. . . . .	63	serve in the armed forces . . . . .	55
general office work . . . . .	62	singer-actress. . . . .	63
government worker . . . . .	57	social worker . . . . .	69
helping people. . . . .	83	teacher . . . . .	73
home economics teacher. . . . .	57	training horses . . . . .	56
IBM work. . . . .	53	translator-travel . . . . .	51
interior decorator. . . . .	55	typist. . . . .	61
key punch operator. . . . .	50	veterinarian. . . . .	58
marine biologist. . . . .	55	vet's assistant . . . . .	54
marriage counselor. . . . .	55	work in U. N. . . . .	51
math teacher. . . . .	56	work with crippled children . . . . .	76
medical research. . . . .	50	work with retarded children . . . . .	75
medical technician. . . . .	62	work with young children. . . . .	83
missionary. . . . .	67	X-ray technician. . . . .	61
model . . . . .	56		

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\*The rank-order of this scale was obtained from the ratings of twenty noncounseled students in the manner in which the NORC scale was derived.

This scale was not used as a measurement device in the present study.

APPENDIX G

SCORES OF SUBJECTS' VOCATIONAL ASPIRATIONS AND EXPECTATIONS AS MEASURED BY THE  
NORC--SOCIOECONOMIC INDEX INDEX OF OCCUPATIONS (CONDITION III)

<u>Level I</u>				<u>Level II</u>				<u>Level III</u>				<u>Level IV</u>			
Before		After		Before		After		Before		After		Before		After	
Asp.	Exp.	Asp.	Exp.	Asp.	Exp.	Asp.	Exp.	Asp.	Exp.	Asp.	Exp.	Asp.	Exp.	Asp.	Exp.
79	74	79	74	74	74	74	74	74	69	74	69	78	74	78	78
60	60	70	60	61	59	61	59	78	74	74	74	78	57	57	57
70	74	70	70	74	74	74	74	78	74	74	74	76	74	76	76
71	56	71	56	69	69	57	57	70	70	70	70	69	57	76	76
56	56	75	56	76	74	74	74	78	78	78	78	78	74	74	74
72	72	70	72	57	57	57	57	74	74	75	74	74	73	73	73
82	82	72	72	89	76	76	76	89	89	89	89	70	70	70	70
57	57	74	57	74	69	69	69	79	79	79	79	72	72	72	72
75	74	75	74	71	71	57	57	78	74	74	74	71	71	71	71
78	74	78	74	76	70	70	70	70	76	70	70	57	57	74	74
78	78	78	78	70	70	70	70	74	57	74	74	82	57	82	74
70	69	69	74	60	70	70	70	76	70	78	78	57	57	57	57
74	74	74	70	89	70	89	70	71	71	71	71	79	56	56	56
57	56	57	56	80	69	80	70	89	74	69	69	75	70	60	60
75	74	75	74	75	75	75	75	74	70	70	70	78	56	56	56
70	57	70	57	89	74	74	74	68	67	74	67	75	78	75	75
70	57	89	70	69	74	64	74	71	70	70	70	70	56	75	75
83	83	89	78	75	74	74	74	70	70	70	70	78	78	78	78
70	74	70	74	74	70	74	70	74	74	70	74	75	78	79	78
60	60	70	60	75	75	75	75	89	89	89	89	75	67	67	67

Note: Asp. = Aspirations; Exp. = Expectations  
 Level I - No counseling  
 Level II - 1 hour counseling  
 Level III - 2 hours counseling  
 Level IV - 3 hours counseling

n = 20  
 N = 80

## APPENDIX H

## DATA USED IN THE ADJUSTED ANALYSIS (CONDITION III)

<u>Level I</u>		<u>Level II</u>		<u>Level III</u>		<u>Level IV</u>	
X	Y	X	Y	X	Y	X	Y
5.0	5.0	0.0	0.0	5.0	5.0	4.0	0.0
0.0	10.0	2.0	2.0	4.0	0.0	2.0	0.0
-4.0	0.0	0.0	0.0	4.0	0.0	2.0	0.0
15.0	15.0	0.0	0.0	0.0	0.0	12.0	0.0
0.0	19.0	2.0	0.0	0.0	0.0	5.0	0.0
0.0	-2.0	0.0	0.0	0.0	1.0	1.0	0.0
0.0	0.0	13.0	0.0	0.0	0.0	0.0	0.0
0.0	17.0	5.0	0.0	4.0	0.0	0.0	0.0
1.0	1.0	0.0	0.0	-6.0	0.0	0.0	0.0
4.0	4.0	6.0	0.0	17.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	6.0	0.0	25.0	8.0
1.0	-5.0	-10.0	0.0	0.0	0.0	0.0	0.0
0.0	4.0	19.0	19.0	15.0	0.0	23.0	0.0
1.0	1.0	17.0	10.0	4.0	0.0	5.0	0.0
1.0	1.0	0.0	0.0	1.0	7.0	22.0	0.0
13.0	13.0	15.0	0.0	1.0	0.0	-3.0	1.0
13.0	19.0	-5.0	-10.0	0.0	0.0	14.0	0.0
0.0	11.0	1.0	0.0	0.0	-4.0	0.0	0.0
-4.0	4.0	4.0	4.0	0.0	0.0	-3.0	1.0
0.0	10.0	0.0	0.0	0.0	0.0	8.0	0.0
TOTALS:							
46.0	127.0	69.0	25.0	55.0	9.0	117.0	10.0
MEAN:							
2.30	6.35	3.45	1.25	2.75	0.45	5.85	0.50

APPENDIX I

GATB AND WORKER TRAIT REQUIREMENTS USED TO DESCRIBE HIGH REALISM OR LOW REALISM OF SUBJECTS' EXPRESSED OCCUPATIONAL CHOICES BEFORE AND AFTER GROUP COUNSELING (CONDITION III)

Level I		Level II		Level III		Level IV									
Before	After	Before	After	Before	After	Before	After								
Asp.	Exp.	Asp.	Exp.	Asp.	Exp.	Asp.	Exp.								
1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1
0	0	0	0	0	1	1	1	0	1	1	1	1	0	0	1
0	0	0	0	0	1	1	1	0	1	1	1	1	0	1	1
0	0	0	0	1	1	0	0	1	0	0	0	0	0	1	1
0	1	0	0	0	1	1	1	1	1	1	1	1	0	0	0
1	0	1	0	0	0	0	0	0	0	1	0	0	1	1	1
0	1	0	1	0	1	1	1	1	1	1	1	1	0	0	0
1	0	1	1	1	1	1	1	0	0	1	0	1	1	1	1
1	0	1	0	0	1	0	1	0	0	1	1	0	1	1	1
0	0	1	1	1	0	1	0	1	0	0	0	0	0	1	1
1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	1
0	1	0	1	0	1	1	1	0	1	0	0	0	0	0	0
1	1	1	1	0	1	0	1	1	0	1	1	0	0	1	1
1	0	1	0	1	0	1	0	1	1	1	1	1	0	0	0
1	0	1	0	1	1	1	1	1	0	0	0	0	1	1	1
0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0
0	0	0	0	1	1	0	1	0	0	1	1	1	1	1	1
1	1	0	1	0	0	0	0	0	1	1	1	0	0	1	1
0	0	0	0	1	0	1	0	1	1	1	1	0	0	0	0
1	1	1	1	0	0	0	0	0	1	0	0	0	1	1	1
n=10	9	10	10	8	13	12	12	11	10	14	12	7	6	12	14

Note: Asp. = Aspirations; Exp. = Expectations

Total N = 80

Level I - No counseling

Level II - 1 hour counseling

Level III - 2 hours counseling

Level IV - 3 hours counseling

0 = Low realism

1 = High realism

## APPENDIX J

The variables and the manner of scoring them for Condition III of the present study are presented below.

<u>Variable</u>	<u>Manner of scoring</u>
Group	<u>1, 2, 3, 4</u>
Subject	<u>01 - 20</u>
<u>Length of Schooling</u>	
BEFORE COUNSELING	
No response	<u>0</u>
Probably last year	<u>1</u>
Another year or two	<u>2</u>
Finished high school	<u>3</u>
Some college	<u>4</u>
Graduate 4-year college	<u>5</u>
Continued professional study	<u>6</u>
AFTER COUNSELING	
No response	<u>0</u>
Probably last year	<u>1</u>
Another year or two	<u>2</u>
Finished high school	<u>3</u>
Some college	<u>4</u>
Graduate 4-year college	<u>5</u>
Continued professional study	<u>6</u>
<u>After school Plans</u>	
BEFORE COUNSELING	
No response	<u>0</u>
Take training course	<u>1</u>
Take apprenticeship	<u>2</u>
Go to work immediately	<u>3</u>
Marriage	<u>4</u>
Help family	<u>5</u>
Undecided	<u>6</u>
AFTER COUNSELING	
No response	<u>0</u>
Take training course	<u>1</u>
Take apprenticeship	<u>2</u>
Go to work immediately	<u>3</u>
Marriage	<u>4</u>
Help family	<u>5</u>
Undecided	<u>6</u>

<u>Variable</u>	<u>Manner of scoring</u>
<u>Occupation and Marriage</u>	
BEFORE COUNSELING	
No response	<u>0</u>
Occupation only	<u>1</u>
Occupation and marriage	<u>2</u>
Marriage only	<u>3</u>
AFTER COUNSELING	
No response	<u>0</u>
Occupation only	<u>1</u>
Occupation and marriage	<u>2</u>
Marriage only	<u>3</u>
<u>Expressed choices by GATB and worker traits</u>	
BEFORE COUNSELING Aspiration	
High realism	<u>0</u>
Low realism	<u>1</u>
BEFORE COUNSELING Expectation	
High realism	<u>0</u>
Low realism	<u>1</u>
AFTER COUNSELING Aspiration	
High realism	<u>0</u>
Low realism	<u>1</u>
AFTER COUNSELING Expectation	
High realism	<u>0</u>
Low realism	<u>1</u>
<u>Expressed vocational choices measured by NORC Scale</u>	
BEFORE COUNSELING	
Vocational Aspiration	<u>0 - 93</u>
BEFORE COUNSELING	
Vocational Expectation	<u>0 - 93</u>
AFTER COUNSELING	
Vocational Aspiration	<u>0 - 93</u>
AFTER COUNSELING	
Vocational Expectation	<u>0 - 93</u>