EFFECTS OF CAREER GUIDANCE STRATEGIES
FOR FEMALES ON CAREER MATURITY AND
LOCUS OF CONTROL OF HIGH-ACHIEVING
TWELFTH-GRADE FEMALES

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ABSTRACT

This study was designed to examine the effectiveness of the following career guidance strategies: career information investigating, job information interviewing, shadowing, panel of positive female role models, parental involvement and group counseling on career maturity and locus of control of high-achieving twelfth-grade females. Participants in this study were thirty-two high-achieving twelfth-grade females currently enrolled in advanced placement English classes, who were currently taking advanced mathematics, advanced science, and advanced foreign language courses; or who had completed three years of advanced mathematics, advanced science, and advanced foreign language courses.

The design of this experiment was a pretest-posttest, experimental/control group design. The participants in the treatment group participated in a ten-week career guidance program involving strategies to increase career maturity and improve internal locus of control utilizing the results of the Career Maturity Inventory, Counseling Form B-1 and the Different Situations Inventory.
Statistical analysis included descriptive statistics to measure four questions that were investigated: 1. Is there a relationship between the career maturity scores and the locus of control scores of high-achieving twelfth-grade females prior to the treatment of the career guidance strategies for females? 2. Is there an increase in the career maturity scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females? 3. Is there an increase in the internal locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females? 4. Is there a relationship between the career maturity scores and the locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females? A correlation analysis was conducted for questions (1) and (4) and an analysis of covariance was conducted for questions (2) and (3).

Significant correlations were not identified between career maturity scores and locus of control scores before treatment; however, significant correlations were identified between career maturity scores and locus of control scores subsequent to treatment. The analyses of covariances showed that the treatment had no effect on the career maturity and locus of control scores. Qualitative analysis indicated that the treatment had positive results on the career decision process of the participants.
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CHAPTER I
INTRODUCTION

Today, as adolescent females engage in the exploration stage of career development, they face the continuing dilemma of the optimism of the future against the traditions of the past. The future is optimistic for young females because of the accomplishments of the women's movement and because the federal and state legislation have created many and varied career opportunities for women. In contrast, females still must encounter traditions, such as the challenges of old stereotypes, the resistance against advancement in many fields, the pressure to choose a non-traditional career even if a traditional career is preferred, the lack of positive female role models in the world of work, the difficult decisions related to career and family and, often times, career guidance and counseling that is non-existent or inappropriate for the female population at the high school level.

As a result of the dilemma young women face today, pressures have been placed on high school guidance and career counselors to implement strategies that will
encourage young women to explore wider career options (Brooks, 1987). However, career-choice literature provides counselors with little or no definitive direction regarding identification of strategies that will effectively stimulate women to explore more widely the available career options and opportunities.

The classical career development theories have been criticized by many as being inadequate in regard to women (Fitzgerald and Crites, 1980; Hansen, 1977; Harmon, 1978; Osipow, 1975; Patterson, 1973; Vetter, 1973). Existing theories were developed to explain the career development of men; however, since women have different socialization, development, characteristics, issues and options from men, the current theories are inadequate for establishing strategies for the career counseling of young females.

Theoretical statements by Super (1957), Anastasi (1969) and Ginsberg and others (1966) indicate that the homemaker role is primary in a woman's life. In reality, the homemaker theory may be viewed as significant in that there is acknowledgement that women are different and could have different life patterns (Hansen, 1978). Super, Krumboltz, Roe, Hotchkiss, Borow and other theorists have attempted to take into account gender, social, cultural and economic factors that influence women; however, none has yet developed propositions that specify the effects of these
factors (Brooks, 1987). Nevertheless, the theories do provide useful concepts for counseling women because they assume that the career development process for women is not fundamentally different from the process for men, rather that it is more complex because of the different socialization of women (Fitzgerald and Crites, 1980).

The socialization process creates both internal and external barriers which restrict female career development and career choices. Females are socialized to give primary consideration to homemaking or nurturing roles and career roles often assume a secondary position. The internal or psychological obstacles of career options are home-career conflict, lack of serious career planning, restriction of options to sex-stereotyped occupations and fear of success. In addition to internal barriers, females face external variables, such as discrimination in the workplace and the attitudes of significant others (Farmer, 1976; Gold, 1978; Hansen, 1977; Mishler, 1975; and O'Leary, 1974).

The members of the counseling profession have been criticized for further restricting female career choices. Counselors have been blamed for imposing gender-role stereotypes on clients (Gardner, 1971; Schlossberg and Pietrofesa, 1973; Thomas and Stewart, 1971). In addition, counselors have been charged with bias in both occupational information (Birk, Tanny and Cooper, 1979; Heskusius-
Gilsdorf and Gilsdorf, 1975; Lauver, Gastellum and Sheehey, 1975) and interest inventories (Diamond, 1975).

A review of literature indicates that counselors need to develop an awareness of biases and passiveness in regard to dealing with gender-related issues. Harmon (1978) discusses the conflict felt by women between fulfilling their own needs versus fulfilling those of others and between behaviors that promote personal-esteem versus the self-esteem of others. It is the counselor's responsibility to bring the awareness of the conflict to the client so that she can overcome the problem created by the socialization process.

The results of many studies support group counseling as a strategy which increases both understanding and acceptance of values and goals, as well as attitudes and behaviors of females concerning their roles in the investigation and decision making process of career and lifestyle options (Brooks, 1987). Many career counseling approaches involve the use of group counseling (Borchard, Kelly and Weaver, 1980; Harren, Daniels and Buck, 1981; Shertzer, 1981; Healy, 1982). Keller, Briggs, and Gysbers (1982) show how the use of rational emotive therapy in career counseling could be effective in helping clients become aware of irrational career beliefs, substitute more rational beliefs, and apply these beliefs to their career development.
The literature affords the members of guidance and counseling staffs with many techniques designed to help women expand their career options. Three theorists, Ginsberg, Bordin and Krumboltz, give special attention to the importance of role models (Brooks, 1987). Mitchell and Krumboltz (1987) have summarized research that supports the theory that were women exposed more frequently to successful role models, they would be more receptive to exploring a wider range of career options and would be provided with guidelines for the important components of role-modeling intervention. It is important to keep in mind the observation that women need two kinds of models - occupational models (women in non-traditional occupations) and life-style models (women successfully integrating family and work) (Laws, 1978).

Research shows that parents play a primary role in children's career development and that school counseling programs can benefit from tapping into this resource (Birk and Blimline, 1984; Daniels, Karmos and Presley, 1983; Noeth, Engen and Noeth, 1984; Otto, 1984; Otto and Call, 1985; Prediger and Sawyer, 1985). Two basic assumptions that underlie this theoretical approach are: the family is the primary and, except in rare instances, the most powerful emotional system individuals ever belong to, the one which shapes and continues to determine the course and outcome of
our lives, and family relationships tend to be highly reciprocal, patterned and repetitive and to have circular rather than linear motion (Carter and Orfanidis, 1977). For the indecisive individual, career decisions imply movement away from family, friends and the familiar, not movement toward goals, aspirations and the unfamiliar future (Bowen, 1978).

High achieving females need different career guidance opportunities because of female career issues, as well as multiple aptitudes. Multiple aptitudes provoke the adolescent female student to have less direction for future career decisions than the vocational or average female student. Superior ability in one area will encourage the high-achieving female student to narrow career choices and life goals. The multipotential high school female student, as a result, needs to focus on more subtle and subjective aspects of a future career and life style development than would be necessary for the general population in her age range (Rodensteinstein, Pflegar and Colangelo, 1977).

Problem Statement

The purpose of this study is to investigate the effectiveness of career guidance strategies for females on the career maturity and the locus of control of high-achieving twelfth-grade females.
Research Questions

The following questions of interest regarding the effectiveness of career guidance strategies for females on career maturity and locus of control of high-achieving twelfth-grade females will be investigated:

1. Is there a relationship between the career maturity scores and the locus of control scores of high-achieving twelfth-grade females prior to the treatment of the career guidance strategies for females?

2. Is there an increase in the career maturity scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females?

3. Is there an increase in the internal locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females?

4. Is there a relationship between the career maturity scores and the locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females?
Significance of Study

There appears to be no conclusive evidence that supports career guidance strategies for females which include role modeling, shadowing, career information investigating, job information interviewing, group counseling and family involvement as a viable component of a comprehensive guidance and counseling program. In the literature, a few studies support some but not all of the strategies as having a significant difference in a female adolescent's life.

Guidance and career counselors are concerned with the issues of female career development and are willing to implement strategies outlined in a comprehensive career guidance program for females. Counselors have experience in group counseling techniques and with the involvement of parents to continue the role modeling procedures, a career guidance program for females could be easily implemented each year.

This study investigated the effectiveness of the following career guidance strategies for females on career maturity and locus of control; a career information investigation, a job information interview, a role model panel, a shadowing experience, parental involvement and group counseling. Career maturity is the construct which seeks to assess at what stage an individual is in his or her
career development; as well as, how the individual compares in the process of career development with other individuals of the same chronological age (Crites, 1978). Locus of control is the degree to which an individual accepts responsibility for the outcomes of his or her own behavior (Gardner and Warren, 1977).

Previous research indicates significant correlations between locus of control and career maturity. An internal locus of control, which is the belief that consequences are contingent upon one's own behavior, has been shown to be more conducive to career maturity than an external locus of control which is the belief that fate, luck or other people are responsible for what happens (Bernadelli, de Stefano and Dumont, 1983; Blevins, 1984; Lokan, Boss and Patsula, 1982).

Both the personnel involved in guidance and the materials utilized need significant modification. New legislation and changing societal expectations can change such situations as under-utilization of woman power, underpayment of women, sex labeling of jobs and prejudice against women in the world of work; however, the educational systems must help by being cognizant of and responsive to such change. The intent of this study was to provide a wide range of options, with accurate information about current and future trends in occupations. Each person, whether male or female, should be able to make career decisions as an
individual, based on individual abilities, interests, aspirations and values.

Job information interviewing, the observation and interaction with positive female role models on a panel and the shadowing experience provided high-achieving females the opportunity to have a more direct and relevant involvement with role models than is provided through traditional sources such as printed materials, microfiche and videos. In addition, parental involvement and group counseling enabled the high achieving females to have the opportunity to discuss career information with others. This process provided support, encouragement and an increase in self-esteem. It seemed likely that these strategies would have a positive effect on career maturity and internal locus of control.

With the increased awareness that the true resources of a nation are its human resources, career education programs are considered a form of investment in human capital, an investment which provides comparatively high returns to both the individual and the society. From a competitive, world economy point of view, our society can ill afford to lose approximately half of our gifted pool of future scientists, mathematicians, economists, lawmakers and political leaders. In addition, for a society faced with a plethora of problems that are of a personal and interpersonal, not a
technological nature, we may be even less able to afford the repression of the different voice that gifted women possess (Hollinger, 1983).

Definition of Terms

Definitions of the terms used in this study are:

**Career Guidance:** Career guidance, which includes counseling as a specialized service, encompasses all of the services which help pupils make occupational and educational plans and decisions. Career guidance is an organized program to help youth develop self-understanding, to learn about the world of work and to gain experiences that will help in the decision-making process (Sears, 1982).

**Career Maturity:** Career maturity is a construct which seeks to assess at what stage an individual is in his or her career development, as well as how the individual compares in the process of career development with other individuals of the same chronological age (Crites, 1961).

**Locus of Control:** Locus of control is the degree to which an individual accepts responsibility for the outcomes of his or her own behavior (Gardner and Warren, 1977).

**High-Achieving Females:** High-achieving females for the study are defined as females, who are currently enrolled in an advanced placement twelfth-grade English class and are currently enrolled in advanced science, advanced mathematics
and advanced foreign language courses or have completed three years of advanced science, advanced mathematics, and advanced foreign language courses.

**Career Information Investigation:** Career information investigation, as defined for this study, consists of the exploration and acquisition of information available in a school career center. The information is available through printed sources, such as the *Dictionary of Occupational Titles*, *Occupational Outlook Handbook*, *Chronicle Guidance Publications* and other varied books and brochures; computer programs, such as the *Guidance Information System*, *Virginia View* and *Major/Minor Finder*; and interest inventories, such as the *Self Directed Search*.

**Job Information Interview:** A job information interview is a method of obtaining first-hand information from individuals working in a specific career of interest to the interviewer (Bolles, 1991).

**Role Model:** A role model acts as a stimulus for thoughts, attitudes or behaviors of another individual who observes the model's performance.

**Shadowing:** Shadowing is defined as the time one spends with the employee while he or she is on the job (Kelly and Moore, 1979).

**Parental Involvement:** Parental involvement is defined as including or making an awareness of the career guidance
strategies for females to the parents in order to stimulate discussions between parents and the females in the study.

**Group Counseling:** Group counseling is defined as the development of an interpersonal network characterized by trust, acceptance, respect, warmth, communication and understanding through which a counselor and clients come in to contact in order to help each other confront unsatisfactory or problem areas in the clients' lives and discover, understand and implement ways of resolving these problems and/or dissatisfactions (Trotzer, 1989).

**Organization of Study**

Chapter I consists of the introduction, the problem statement, the research questions, the significance of study and the definition of terms. Chapter II includes a review and summary of the literature which is divided into the following categories: career concerns of high-achieving and gifted female students, functions of role models, influence of parental involvement, concepts of group counseling, construct of career maturity and construct of locus of control. Chapter III addresses the methods utilized in the study which include: problem statement, research questions, sample, population, treatment, hypotheses, research design, dependent variables, data collection, instrumentation, data analysis and limitations to the study. Chapter IV presents
the results of statistical analyses used to test the research questions, as well as information gathered through qualitative research. The final chapter, chapter V, includes a summary of the study, conclusions drawn from the findings, a discussion of the results and the recommendations for further research.

Following the chapters, a complete list of references are compiled and an appendices of forms, questionnaires and letters which were used in the study are included.
CHAPTER II
REVIEW OF LITERATURE

A discussion of the literature review will be presented under the following topics: career concerns of high-achieving and gifted females, functions of role models, influence of parental involvement, concepts of group counseling, construct of career maturity and construct of locus of control. The review of relevant research articles and dissertations encompasses a three decade period published through 1992.

Career Concerns of High-Achieving and Gifted Females

The last three decades represent a period of rapid societal changes for women. Female career choices considered novel in the 1960s became common in the 1970s producing a guilt for being only a wife and mother and the dilemma of having both a career and family in the 1980s brought many stresses to females (Bardwick, 1990). The career exploration of high-achieving and gifted female adolescents in the 1990s may be even more of a challenge than was evident in the preceding three decades.
Over three decades ago, Terman's longitudinal study of gifted individuals found that gifted women chose from a narrow range of occupational options (Terman and Oden, 1959). A follow-up study of National Merit Scholars found gifted women were more frequently in the homemaker category than in any other career (Nichols and Astin, 1966). In the John Hopkins Talent Search for Mathematically Precocious Youth, only 46% of the junior high school girls indicated a choice for a full-time career as compared with 98% of the boys (Fox, Brody and Tobin, 1979). The conflict between family and career resulted in young, gifted females deciding against an occupation that required personal commitment to education and work that led to a high salary and status. Females who leave college or a career for relationships never catch up with males of the same age in earnings or advancements for the rest of their working lives (Card, Steele and Abeles, 1980).

Studies indicate gifted females do not find as much satisfaction from homemaking as having a career or combining career and family. A follow-up study of Terman's gifted women at age sixty-two found that these women valued a professional occupation more than homemaking and that they strove for excellence in their field (Sears and Barbee, 1977). In addition, high satisfaction was observed in combining family and career. In a follow-up study of
superior women ages 24-35, Rodenstein and Glickauf-Hughes (1979) found that a third of the group were integrating career and family, placing the same importance on family relationships as the homemaker-only group and the same importance on careers as the career-only group. Therefore, many gifted girls may be excluding themselves from a lifestyle of a higher prestige and income combined with the satisfaction of having family relationships (Kerr, 1983). Regarding the earlier female career assumption that the women's place is in the home is no longer viable due to the ever increasing number of women combining career and family pursuits in becoming a significant and critical part of the labor force (Fitzgerald and Betz, 1983).

Two career education programs attempted to change the attitudes of gifted girls toward future career decisions. Project CHOICE (Creating Her Options in Career Education) was a program designed at Case Western Reserve University to encourage eleventh-grade talented females to broaden career options by identifying barriers to the realization of potential (Fleming and Hollinger, 1979). The students received counseling strategies, such as interviews with role models, referrals to groups and career information workshops; however, follow-up reactions to the program were not assessed. Fox (1976) developed a program to change junior high girls' attitude toward careers in science and
mathematics. Strategies included a 3-month course taught by women emphasizing the ways in which mathematics could solve social programs and individual and family counseling to help the girls perceive themselves as competent. Immediate results showed the girls to have a greater interest in mathematics careers; however, by the tenth grade, the participants showed less interest.

The lack of evaluation data to career aspirations of the first program and the disappointing long-term results of the second program led to the following study which evaluated the effects of strategies designed to raise the career aspirations of gifted eleventh grade girls within the context of the Guidance Laboratory for Gifted and Talented Students (Kerr, 1983). The participants took the Self-Directed Search (Holland, 1977) before the one-day career guidance workshop at the Guidance Laboratory at the University of Nebraska. During the workshop, the participants took a variety of questionnaires related to interests, achievements and values, attended a university class related to their career interest and met in group counseling sessions. The counselor in the groups attempted to raise the student's aspirations if a student named a career goal that was clearly below the student's abilities, was a sex-role stereotyped choice for females based on lack of awareness, or was a low-paying, low-status occupation.
The finding that gifted girls raised their career aspirations is encouraging evidence that a brief, intensive career guidance experience can change girls' attitudes toward their future careers. Guidance interventions that utilize Holland's types of personalities should involve a more complete, long-term treatment combining explanation, role modeling and persuasion as strategies because they involve changing characteristics and value systems (Kerr, 1983).

By adolescence, the young, talented female has experienced over a decade of sex-role socialization and societal stereotypes (Hollinger, 1991). As a result, internal barriers have developed as young females have learned to: fear success (Noble, 1987; Reis, 1987); avoid mathematics and sciences (Fox, Brody and Tobin, 1979); refuse to assert themselves (Bell, 1989); lower their expectations for academic and career achievement (Arnold and Denny, 1985; Olshen and Matthews, 1987); attribute their success to hard work rather than ability (Eccles, 1985); and perceive themselves as lacking the attributes essential for controlling their own destinies (Hollinger, 1983; Post-Kramer and Smith, 1985).

Compounding the internal barriers faced by young women are external barriers, such as disproportionate representation by sex in nontraditional careers, wage and
salary inequities and inadequate availability of child care. These are only a few indicators suggesting societal change has been minimal and that gifted and talented young women still face many of the same external and internal barriers of two decades ago (Reis and Callahan, 1989). In working with female adolescents to heighten their awareness of barriers, didactic presentation of facts and statistics is less effective than the discoveries that occur when they interview women representing diverse careers and encounter concrete realities (Hollinger, 1991).

Of all the existing barriers of young females, the sex-role socialization's impact on the adolescent's developing self-belief system is the most pervasive and limiting (Hollinger, 1991). During adolescence, students devote much of their time and energy to the definition of self and the refinement of the self-belief system into a consistent and integrated whole. Exploring the impact of sex-role socialization on the adolescent's self-belief system can be facilitated through a self-assessment process followed by comparison of identified self-perceptions with objective data and identified discrepancies (Fleming and Hollinger, 1979).

Failure to realize one's potential has been attributed to a variety of internal and external barriers (Hollinger and Fleming, 1984; Reis, 1987). Longitudinal research
reveals a consistent pattern of lowering aspiration levels and declining achievements (Arnold and Denny, 1985; Card, Steele and Abeles, 1980; Kerr, 1985; Rodenstein and Glickhaus-Hughes, 1979). Many gifted women look over their lives and perceive numerous missed opportunities (Sears and Barbee, 1977; White, 1984).

A young female's failure to realize potential represents a loss to society, as well as the individual's loss of satisfaction with one's own life. A study measuring socio-affective traits and social self-esteem of 108 gifted and talented young women was obtained across three points in time: sophomores and juniors in high school and in young adulthood. The results of the longitudinal analysis supported the predicted centrality of self-perceptions or self-beliefs, not only to social self-esteem but also to occupational confidence and general life satisfaction (Fleming and Hollinger, 1979). The results suggest that understanding the gifted female adolescent's self-belief system, particularly her self beliefs regarding personal traits, is central to understanding the career development needs of young females.

In addition to sex-role socialization societal stereotypes, the high-achieving and/or gifted adolescent female faces the issue of multipotentiality. Career choices can be a difficult problem for young women who possess many
interests and competencies (Rodenstein, Pfleger and Colangelo; 1977). Frustration is a phenomenon among gifted students as they consider the many and varied career options (Post-Kammer and Smith, 1985). Having significant potential for many areas makes it more likely that someone will be disappointed by the direction chosen; this possible consequence may contribute to a lowered self image, to fear of failure, or to avoidance of challenges (Delisle, 1982). Recognition of multipotentiality as both an asset and a handicap is important in providing career guidance strategies for female gifted students (Delisle, 1982).

Current models of women's career development incorporate dimensions that reflect the needs of women, such as the phenomenon of multipotentiality, the consequences of sex role socialization, the influence of societal stereotypes, the relationship between career and other life roles and the importance of connections with and expectations of significant others. The works of Astin (1985), Eccles (1985), Farmer (1985), Gottfredson (1981) and Tittle (1983), reflect the complexity of female's career needs in a broader, more psychosocial orientation than traditional career development theories. Gilligan (1982) and Bardwick (1990) suggest in order to understand women's lives, one must recognize that in comparison to men, women
have a different world view, one that is relational in nature.

In a review of the literature concerning high-achieving and gifted adolescents' career development, the findings have significant implications for an emergence of interventions and strategies that address the needs of young female adolescents as they prepare to enter the work force in the decade of the 1990s.

Functions of Role Models

Role models may be used as a counseling component that can effectively emphasize the occupational potential of girls (Zunker, 1986). Furthermore, examples of women who have enjoyed successful careers provide young females with concrete evidence that women do have opportunities to develop a career in a working world thought dominated by men. Bandura (1977) has emphasized the role of modeling in the development and the modification of much of human behavior. Because of the effects on developing behavior, increased attention is being given to the development and use of social modeling with youth to accelerate career maturity (Gysbers, et al. 1984).

Since literature suggests that role models have a significant influence on career and achievement (Almquist and Angrist, 1971; Andberg, Follett and Hendel, 1979;
Krumboltz, 1976; Tidball, 1980), it would appear using women role models in nontraditional careers would be a strategy to bring an awareness to young females. Unfortunately, few studies have investigated the effects of role-modeling intervention on career orientation. Minimal effects were found in a study of undergraduate women by Kennedy-Swergel (1981) who compared a printed information group with a videotape modeling group. The modeling group was more likely to identify nontraditional occupations as a second choice for a career. It would seem that live models would have more of an effect on young females.

In similar studies, Greene, Sullivan and Beyard-Tyler (1982) and Savenge (1983) provided subjects with exposure in written or slide form to show role models successful in nontraditional careers. Results of the two studies showed significant positive change in student attitudes about the appropriateness of careers not traditional for each sex. Angrist and Almqquist (1971) found that women who chose nontraditional careers were twice as likely as women who chose traditional careers to state that occupational role models were the major factor influencing their choice.

Results of a study of thirty middle school girls and twenty-five high school girls showed no significant effects of a nontraditional role-modeling intervention on the sex typing of occupational or career salience of middle and high
school girls (Brooks, Holahan and Galligan, 1985); however, the findings indicated career issues are of more immediate concern to high school girls than middle school girls.

The strength of modeling techniques in the acquisition of new behaviors is confirmed by several studies (Krumboltz and Thoresen, 1964; Krumboltz and Schroeder, 1965; Krumboltz, Varenhorst and Thoresen, 1967). The more similar the model is to the subject, the greater the likelihood of the acquisition of the new behavior. Model reinforcement appears to be an effective means of promoting information-seeking behavior on the part of students. Other studies have supported the relevance of model reinforcement in increasing information seeking behavior, which is an important component of the exploration stage of career development (Fisher, Reardon and Burck, 1976; Hollandsworth, Dressler and Stevens, 1977; Hollandsworth and Sandifer, 1979; Motsch, 1980).

The sparse literature provides little direction for further research on the effects of nontraditional role-modeling interventions on occupational and career attitudes of young females; nevertheless, recent critiques of career intervention research suggest some methodological avenues to explore in designing future interventions (Brooks, Holahan and Galligan, 1985). Holland, Magoon and Spokane (1981) observed that minimal effects frequently found for role
modeling interventions may be a result of their short-term nature.

A criticism that career interventions for females in research fails to include women's experiences raises a concern (Tittle, 1983). In reviewing the literature, "the most consistent predictor of women's career orientation and innovation is their adult marital, familial status, or, among young girls, their plans for a marriage and family" (Fitzgerald and Betz, 1983, p. 89). Young girls need both occupational and life style role models (Laws, 1978). If young women's aspirations are closely connected to marriage and family goals, then it only makes sense that the content of role-modeling interventions should address life-style variables, as well as job information.

Perhaps it is true, as Gottfredson (1981) suggests, that by adolescence, occupational choices have been limited to what is perceived as appropriate for one's own sex. A variety of activities, including hands-on experience, observing and talking with role models, site visits, assessment of interests and abilities, and a relating of skills and values to job responsibilities, may be required on an ongoing basis to promote positive and stable attitudes toward the full range of occupational opportunities available today for young females.
It seems if high school girls would be involved in an intervention in which they chose the occupation to model, nontraditional or traditional, based on the results of an interest inventory (SDS), the results would be more favorable. Also, incorporating different strategies of role modeling, such as a job information interview, shadowing and a panel of positive female role models would strengthen the results.

Influence of Parental Involvement

Research shows that parents play a primary role in children's career development and that school counseling programs can benefit from tapping into this resource (Birk and Blimline, 1984; Daniels, Karmos and Presley, 1983; Noeth, Engen and Noeth, 1984; Otto, 1984; Otto and Call, 1985; Prediger and Sawyer, 1985). Counselors can help parents understand their role in children's career development, the general growth and development of their children and the relationship between the career guidance program and the total school program. Specifically, parents need up-to-date, accurate information about the following: changing career choices and broadened options for males and females, educational opportunities, wage and salary statistics, the importance and stages of career planning, barriers to the career development process, career resources
in the school and community, myths in sex-role stereotyping, sex equity laws and ways to improve communication skills (Birk and Blimline, 1984). In addition, Delisle (1982) suggests that parents permit their children to shadow them for a day or more on the job. Furthermore, interventions involving parents can benefit the parent's own career development, which will result in their becoming better career counselors for their children, as well as provide a role model of adaptability and flexibility in a rapidly changing world of work (Amatea and Cross, 1980).

A relatively large consistent group of studies support the important role of parental involvement, encouragement and support in females' career development. Family encouragement was reported as a major component by high school girls planning careers in science (McLure and Piel, 1978), by female medical students (Cartwright, 1972) and by women pursuing male-dominated occupations (Haber, 1980; Houser and Garvey, 1985; Standley and Soule, 1974). Women in nontraditional careers reported higher expectations from their parents in terms of educational attainments and occupational involvement (Patrick, 1973; and O'Donnell and Anderson, 1978). However, females in traditional careers perceived their parents as less supportive than females in nontraditional careers in a study by Trigg and Perlman (1976). Parental support was one of the strongest
predictors of young women's career aspirations and motivation in Farmer's (1985) study. While studies indicate parental involvement appears to be an important variable in females' career development, no studies were found in the literature about females raised in single-parent, adoptive or non-family member homes.

Family decisions concerning the social placement of children are probably influenced by sex-role attitudes which permeate the larger society and family setting (Chavetz, 1974; Fine-Davis, 1979; Scanzoni and Szinovacz, 1980). In many cases, families are adherents of traditional sex-role assignments (Scanzoni and Szinovacz, 1980). By contrast, other families have egalitarian attitudes concerning role placement of their children (Bernard, 1975; Scanzoni and Szinovacz, 1980). Parents with high levels of education and occupational attainment tend to have attitudes that support daughter's occupational goals (Rosenfeld, 1978; Scanzoni, 1979; Treiman and Terrel, 1975, Weitz, 1977). Employed mothers and highly educated parents serve as role models and convey values to daughters contrary to sex-role stereotypes (Bernard, 1975; Bruce, 1974; Scanzoni, 1979; Weitz, 1977).

A study conducted involving 183 families investigated evidence of traditional sex-role attitudes reflected in family decisions regarding the career goals of teenagers (Peterson, Rollins, Thomas and Heaps, 1982). Special
attention was focused upon 96 of the families, each having a female and a male adolescent. Results indicated that family decisions favored the career goals of adolescent males over adolescent females by a four to one ratio. These findings illustrate a pervasive and persistent character of sex-role expectations which challenges counselors to involve families in the career exploration process for young female students.

Concepts of Group Counseling

Groups have become an integral part of career counseling for young adults (Cochran, 1984). Available publications on career counseling include career planning manuals which employ the small groups (Borchard, Kelly and Weaver, 1980; Harren, Daniels and Buck, 1981; and Shertzer, 1981). Yalom (1970) has listed a number of factors that therapy groups or counseling groups provide, which exist in focused theme groups, such as career counseling groups. Yalom's list of positive factors that groups provide members includes the opportunity to impart information, appreciate the universality of concerns, be stimulated by group cohesiveness, develop social skills through imitation and interpersonal learning and instill hope. Bowen and Hall (1977) believe that group format places the person in an experimental situation where participants can rehearse new skills (such as job interviewing), can find models to
imitate and can be motivated by the stimulus of other participants. Keller, Biggs and Gysbers (1982) discuss how the use of rational emotive therapy in career counseling could be effective in helping clients become aware of irrational career beliefs, substitute more rational beliefs and apply these beliefs to their career situations.

Rational-emotive therapy (RET) (Ellis, 1962; Ellis and Harper, 1975), with its emphasis on assisting clients to modify their nonproductive beliefs about uncontrollable negative external events in their work and personal lives, enables psychotherapists, career counselors and organizational consultants to directly address the cognitive barriers that impede their clients' goal attainment.

While career counseling has incorporated client-centered techniques (Freeman, 1990; Rogers, 1951) and problem-solving and skills acquisition strategies (Azrin, Flores and Kaplan, 1975; Keil and Barbee, 1973; Stevenson and McKavanagh, 1992) which respectively address the emotive and behavioral components, and cognitions have been acknowledged as important in the career development process (Holland, 1985; Richman, 1982, 1988; Sampson, Peterson, Lenz and Reardon, 1992; Schein, 1978; Super, 1957; Super, Osborne, Walsh, 1992), the application of cognitive techniques as an integral part of career counseling is minimal (Richman, 1988; Stevenson and McKavanagh, 1992;
Thompson, 1976). In addition, the RET and cognitive-behavior therapy literature has neglected to give much attention to the direct role cognitions play in helping individuals to develop vocationally (Mallary and Conner, 1975; Richman, 1982; Thompson, 1976) and practitioners to develop professionally (Weinrach, 1987). However, an increasing number of counselors have been directly exposed to RET and cognitive-behavioral techniques appropriate for career counseling through workshops and training programs available throughout the United States.

Soon after Ellis originated his system of rational-emotive therapy, he realized it was ideally designed for classroom application. It is uniquely oriented toward cognitive, dramatic-evocative and didactic methodology (Ellis, 1962); and, it so naturally inclines toward educative and re-educative procedures with adolescent and adult clients that these can easily be adapted to other kinds of teaching situations (Ellis, 1971). Non-disturbed youngsters can benefit from RET that is specifically employed (Ellis, 1969, 1972).

In 1970, the Institute of Rational Emotive Therapy, headed by Albert Ellis, opened the Living School, a private grade school in New York. The purpose of this school was to present RET concepts in addition to the typical elementary-level curriculum. During the course of the school's
operation, it became evident that teachers could successfully help children improve their emotional health. Currently, RET is used extensively with children and adolescents, either on an individual basis, in the classroom or in small group counseling (Vernon, 1989). Publications are now available to provide educators, counselors, school psychologists and social workers in the school with a comprehensive curriculum based on RET to help young people develop positive mental concepts (Gerald and Eyman, 1981; Vernon, 1989). Issues faced by high-achieving females in the exploratory stage of career development are addressed in these publications.

Young high school age women seeking to develop careers can come to understand the influence of their culture's attitudes on their own personal belief systems and behaviors. Modifying internal beliefs which interfere with achieving career goals at all stages of the career cycle is an essential part of the process. However, the exploratory stage is considered to occur between ages 14-24 (Super, 1957) and is important to the career development of young females. The actual exploration of work takes place at first mainly through thinking, gathering information and observing others in work styles that seem desirable (Richman, 1982). The influence of cognitive themes in completing the tasks necessary to progress from the
exploration stage to the next stage of the career cycle can be evidenced by examining some of the role conflicts experienced by young women (Richman, 1988, p. 3).

Typical Role Conflicts of Women in the Exploration Stage:

1. Non-ambition vs. Ambition
2. Social Life vs. Education and Training
3. Dependence vs. Independence

Typical Self-Defeating Beliefs and Cognitive Themes:

1. I shouldn't strive for too high a career goal or I'll never find a husband. (Approval, achievement)
2. My social life should come first since desirable, feminine women do not have to work. (Approval)
3. I will always need to have my parents or a husband take care of me. (Confidence, certainty)

Many intelligent, talented women view ambition as negative and therefore do not prepare themselves for a profession or a satisfying career during this stage.

Cramer, Wise and Colburn (1977) demonstrated the effectiveness of stereotype debunking. Two groups of eighth grade girls received counseling which included alternative options, information about women at work and future trends.
Post-treatment comparisons showed participants to have a better appreciation of the negative aspects of stereotypes and women's work potential. One of the groups chose significantly more nontraditional occupations.

Since young women cannot control the views of men and society, they would benefit from challenging the view that high ambitions will lead to never marrying. This, of course, is worked on after the deep-rooted irrational belief of many women, "I can't survive without a man," is changed. More productive beliefs to help them successfully complete the exploration stage would be: "I will develop my potential and choose a job accordingly. I am willing to put in effort to meet a man who is not threatened by my ambitions, and I know I am acceptable even if I do not meet the right person for me" (Richman, 1988, p. 3).

As adolescent females are taught to recognize their societal reinforced irrational beliefs about the world of work and the career development process, they may more readily gain awareness and accept the reality that establishing and maintaining a career requires planning, hard work, taking risks and experiencing discomfort without any guarantees about the future. A cognitive-behavioral approach to career counseling can be well integrated into group counseling approaches.
Construct of Career Maturity

At a time when there is a growing interest in planning career education for high school students, it is desirable to continue efforts aimed at achieving a better understanding of the construct career maturity (Khan and Alvi, 1983). Career maturity is a construct which seeks to assess at what stage an individual is in his or her career development, as well as how the individual compares in the process of career development with other individuals of the same chronological age (Crites, 1961). Super elaborated upon the theory of career development and introduced the concept of career maturity to denote "the place reached on the continuum of vocational development from exploration to decline" (Super, 1955, p. 155). Super (1980) identified five dimensions of the career maturation process, two of which he labeled information and planning. An individual's career maturity can be defined by his or her standing along a dimension in relation to either chronological age and expected life stage or the behavior of others coping with the same developmental tasks (Super, Crites, Hummel, Moser, Overstreet and Warnath, 1957).

The literature on the career maturity theory and development identifies a number of correlates of career maturity, involving social, educational and psychological variables, such as socioeconomic status, childhood
experiences, educational and vocational aspirations, needs and interests, self-concept, locus of control and cognitive styles (Osipow, 1975). Anisef (1975) studied the educational and occupational intentions of twelfth grade students and found parental support to be one of the crucial factors in determining their career plans.

A psychological variable in which an increasing interest is being shown as a correlate of vocational maturity is locus of control (Khan and Alvi, 1983). This construct is also an integral part of the cognitive-developmental theory proposed by Kniefelkamp and Slepitzer (1976). In the study of the career maturity of women in relation to internal-external locus of control and traditional versus non-traditional occupational choice, Gable, Thompson and Glanstein (1976) found that internally controlled women had significantly higher career maturity than externally controlled women.

The reason most often cited for measuring career maturity is to obtain an understanding of what to expect from individuals of various ages and groups (Harmon, 1974). Crites (1981) suggested that the Career Maturity Inventory can be used to determine the efficacy of intervention programs, including pre-test/post-test guidance studies. Hilton (1974) noted two career maturity inventories that have been commonly used for assessing career development.
The Career Development Inventory (Super, Thompson, Lindeman, Jordaan and Myers, 1979) and the Career Maturity Inventory (Crites, 1978) are the two inventories which have adequate research to support their reliability and validity, normative sampling information for interpretive purposes and flexibility for either individual or group administration (Hilton, 1974).

The Attitude Scale of the Career Maturity Inventory has been used for almost twenty-five years in research on career development, in evaluation studies of career education programs and in career counseling (Stowe, 1985). During this period the inventory has been revised several times and is currently available in two forms - the Screening Form A-2 (Crites, 1978) and the Counseling Form B-1 (Crites, 1978). The Counseling Form is intended specifically for career counseling. It consists of seventy-five true-false items and yields five subscores, one for each of the variables which comprise the attitudes group factor in Crites' (1978) theoretical model of career maturity. The Counseling Form has subscales assessing decisiveness, involvement, independence, orientation and compromise.

Construct of Locus of Control

Locus of control of personality refers to a person's belief about the contingency relationship between an
individual's actions and resulting reinforcements (Gardner, Beatty and Bigelow, 1981). Internal control refers to the perception of an event as contingent upon one's own behavior or one's relatively permanent characteristics. External control indicates that a positive or negative reinforcement following some action of the individual is perceived as not being entirely contingent upon his or her own action but the result of chance, fate or luck; or it may be perceived as under the control of powerful others and unpredictable because of the complexity of forces surrounding the individual (Anastasi, 1988).

The literature is consistent in demonstrating that persons with an internal locus of control orientation are better performers (Lefcourt, 1966, 1972) and workers (Gardner and Beatty, 1980; Tseng, 1971). There is considerable evidence that locus of control is positively related and shares common variance with various measures of career maturity, such as skill in choosing a job, planning ahead for career options, knowledge of jobs, knowledge of self and general work attitudes (Gardner, Beatty and Bigelow, 1981). The sum total of these skills, attitudes and behaviors, then, represents the students' "work personality". There are a number of techniques for changing locus of control from external to internal (Gardner and Beatty, 1980). These same techniques have been found to
have a positive impact on career maturity (Curry, 1980; Gardner, Beatty and Gardner, in press).

Counselors seek to increase internal locus of control because internals seem to have achieved a more healthy psychological adjustment than externals (Joe, 1971; Lefcourt, 1966; Phares, Ritchier and Davis, 1968; Rotter, 1966), are less likely to seek counseling (McDonald, 1971) and are more likely to be able to cope with situational problems when they occur (Lefcourt, 1966; Rotter, 1966).

The literature suggests that females are more externally oriented than males (Nowicki and Duke, 1974), particularly in achievement situations (Feather, 1969). There is also evidence that an external orientation is part of the female sex-role stereotype (Hochereich, 1975). The work of Broverman (1972) and her colleagues on sex-role stereotyping identified characteristics commonly attributed to women, such as dependence, passivity and submissiveness implying limited personal control over events. In a study on the effects of locus of control and college women's role expectations, subjects with external orientations expected to have less commitment to their careers, to work for a smaller portion of their life and to feel more discomfort due to violating sex-role stereotypes (Maracek and Frasch, 1977). In addition, subjects with a more external orientation reported less career planning activity, less
positive feelings about their future careers and more conservative views on women's liberation ideology.

Procedures for changing locus of control toward an internal orientation have been developed by social learning theorists (Gardner and Gardner, 1974; Lefcourt, 1966, 1972; Rotter, Chance and Phares, 1972). Other investigators (Dua, 1970; Gaa, 1973) have reported on behavioral-oriented programs on the locus of control variable. Dua (1970) used three experimental methods, one of which involved helping college freshmen plan specific courses of action to improve their interpersonal relationships. Compared to the control group, the behavioral-oriented group increased significantly in an internal orientation of locus of control. The results supported the premise that goal-striving behavior in terms of planning a course of action is positively related to internal locus of control. Gaa (1973) also found that goal-setting conferences with high school students were conducive to increasing perceptions of control over reinforcements in an academic environment.

Several investigators have attempted to modify locus of control toward the internal direction by using counseling techniques (Felton, 1973; Felton and Biggs, 1972; Felton and Davidson, 1973; Majumber, Greever, Holt and Friedland, 1973; Reimanis and Schaefer, 1970). Reimanis and Schaefer (1970) investigated the implications of verbal strategies on
strengthening the perception of behavior-reinforcement contingency relationship. By using these strategies in group counseling sessions with college freshmen an increase in internal locus of control scores resulted.

Summary

According to this review of literature, high-achieving adolescent females require differentiated career guidance strategies for females to address career concerns such as multipotentiality, sex-role socialization, societal stereotypes, internal and external barriers and failure to realize potentiality. To emphasize the occupational potentiality of girls, role models may be used as a counseling component. Since research shows that parents play a primary role in student's career development, school counseling programs can benefit from tapping into this resource. Group counseling strategies utilizing rational-emotive therapy would help young high school age females seeking to make career decisions come to understand the influence of their culture's attitudes on their own personal belief systems and behaviors.

Since there is a growing interest in planning career guidance for high school females, there are continuing efforts aimed at achieving a better understanding of career
maturity and locus of control as measures to gain knowledge of what to expect from high-achieving adolescent females.
CHAPTER III

METHODOLOGY

A description of the procedures implemented in the investigation of the effects of career guidance strategies for females on career maturity and locus of control of high-achieving twelfth grade females will appear under the following headings: problem statement, research questions, sample, population, treatment, hypotheses, research design, dependent variables, data collection, instrumentation, data analysis and limitations to the study.

Problem Statement

The purpose of this study was to investigate the effectiveness of career guidance strategies for females on career maturity and locus of control of high-achieving twelfth grade females.

Research Questions

The following questions of interest regarding the effectiveness of career guidance strategies for females on career maturity and locus of control of high-achieving twelfth grade females will be investigated:
1. Is there a relationship between the career maturity scores and the locus of control scores of high-achieving twelfth-grade females prior to the treatment of the career guidance strategies for females?

2. Is there an increase in the career maturity scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females?

3. Is there an increase in the internal locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females?

4. Is there a relationship between the career maturity scores and the locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females?

Sample

The participants participating in this study were twelfth grade females enrolled in a comprehensive public senior high school. From a pool of high-achieving females, sixteen participants were drawn and assigned at random to a treatment group and sixteen participants to a control group.
The participants comprising the pool were students from several advanced placement English classes who were also enrolled in advanced science, advanced mathematics and advanced foreign language classes or had previously been enrolled in three years of advanced science, advanced mathematics and advanced foreign language classes.

Population

This study was conducted in a comprehensive senior high school which has a population of approximately 2,000 students and which is located in suburban Northern Virginia. Opened in 1991, the state-of-the-art facility comprises a fully equipped television studio, spacious academic classrooms and laboratories, computer networked library and a media center, an acoustically designed music and drama area, a technically advanced planetarium, a fully operated career center and outstanding athletic facilities. The school is located on 74.8 acres and has 269,014 square feet of space in addition to 5,160 square feet of outside support buildings. The support of the community in building a $26.5 million facility resulted in an excellent environment for parental and community involvement, which is an important aspect in the successful implementation of strategies in this study.
The student population was composed of 4% native American, 4.4% Asian, 12.8% African-American, 78.5% Caucasian non-Hispanic and 3.8% Hispanic (Prince William County Schools, 1991). In 1990, 73% of the seniors county-wide continued their education at a two or four year college (Virginia Department of Education, 1991). A senior class did not exist the year before this study was conducted at the facility; therefore, no statistics were available that pertained to seniors school wide.

In 1990, the total county population was estimated to be 230,000. The highly diversified suburban community outside Washington, D.C. has a wide range of income levels. A large number of the parents are employed by the military and over half are employed by the federal government. Many of the parents are in professional or managerial positions in a variety of occupations. A survey of the community revealed that between 60% and 70% of the parents completed education beyond high school (Prince William County, 1985).

Treatment

The researcher, a director of guidance and counseling, implemented her knowledge and skills as a former career counselor, guidance counselor and program developer in creating a treatment program of career guidance strategies for females which included a career information
investigation, job information interview, panel of positive female role models, shadowing, parental involvement and group counseling.

Career Information Investigation

A career information investigation for the participants consisted of the exploration and acquisition of information available in the school career center which is operated by a full-time certified counselor. Information was available through printed sources such as the Dictionary of Occupational Titles, the Occupational Outlook Handbook, the Chronicle Guidance publications and other varied books and brochures; computer programs such as the Guidance Information System, the Virginia View and the Major/Minor Finder; and interest inventories such as the U.S. Labor Check List and the Self Directed Search.

The participants were administered the Self Directed Search before their visit to the career center which enabled them to investigate occupations they matched. The Self Directed Search, a Guide to Educational and Vocational Planning, an un-timed, self-scored paper and pencil inventory developed by John Holland, is based on his system of organizing people and occupations according to six group categories: realistic, investigative, artistic, social, enterprising and conventional. The group categories become
letter codes R, I, A, S, E and C utilized in the inventory for grouping and scoring purposes. The **Self Directed Search** is divided into five sections:

- **occupational daydreams**: a list is made by the individuals of the careers they have dreamed about as well as those they have discussed with others;

- **activities**: activities, grouped by code letters, individuals would like doing, dislike doing or be indifferent to are indicated by "L" or "D";

- **competencies**: activities, grouped by code letters, which individuals perform competently or have never performed are indicate by "Y" or "N";

- **occupations**: an inventory of feelings and attitudes about many kinds of work is measured by "Y" for an interest of appeal or "N" for a dislike or uninterested appeal to occupations listed by code letters;

- **self-estimates**: traits, listed by code letters, are rated high, average or low by the individual.

Scoring produces a three letter summary code which can be used to discover how the individual's special pattern of interests, self-estimates and competencies resemble the patterns of interests and competencies that many occupations demand. The **Occupations Finder**, a booklet used with the **Self Directed Search**, classifies 1,156 occupations according
to Holland's occupational categories (Realistic, Investigative, Artistic, Social, Enterprising, Conventional). Information is provided in the Occupations Finder concerning the educational requirements of each occupation as well as a nine digit number identifying each occupation in the Dictionary of Occupational Titles. The individual is instructed to match summary codes with occupations in the Occupations Finder. Follow-up activities are suggested by Holland which include seeking more information about occupations from counseling centers, talking to people in these occupations and meeting with a counselor to discuss career choices (Holland, 1977).

Job Information Interview

A job information interview was conducted by each participant to gather information about a specific career which she was interested in pursuing. The participant followed guidelines for setting up the interview, conducting the interview and evaluating the interview. The interviews consisted of one hour to one and one half hours. The participants interviewed volunteers who were recruited from parents, school staff members, members of the local chamber of commerce and business persons in the community. A committee of parents of the participants in the treatment
group were instrumental in obtaining names of persons to be interviewed.

Panel of Positive Female Role Models

A panel of positive female role models was arranged to represent a variety of occupational fields and lifestyles, who served as sources of information and modeling in promoting the adolescent female's consideration of a wide range of career and life role options. Occupations of the successful females included the various careers chosen to be investigated by the participants in the treatment group. The members of the panel represented single females, married females without children, married females with children, divorced females without children and divorced females with children.

Topics discussed included reasons for choosing their occupation, education and previous experiences necessary in obtaining their present job, the responsibilities and details of their present work, problems encountered in the work place, methods utilized in dealing with problems and stereotypical behaviors, management of home responsibilities and work, integration of a single life and work, maintenance of responsibilities as a single parent and work responsibilities, reconciliation of family life and work,
management of the home without a full-time job and self-beliefs about present and future career goals.

The members of the panel were provided a list of the topics to be discussed. The participants in the treatment collaborated with the group leader in developing an outline of topics for the panel members. Parents of the members of the treatment group were invited to the evening program featuring the panel of positive female role models in order to promote an awareness of the career guidance strategy for females, as well as to encourage follow-up discussions between parents and children. Female members of the faculty were invited to attend which provided positive female role models for the audience. A reception was held at the end of the panel discussion which enabled panel members, students, parents and faculty members to interact and discuss informally the topics presented.

Shadowing

Shadowing, defined as the time one spends with an employee while he or she is on the job (Kelly and Moore, 1979), was conducted by each participant with a female she chose to follow on the job for one-half of a day or a full day. The parents were involved by providing names of individuals in certain occupations in the surrounding community. The objectives of the shadowing experience were
to give the participants the opportunity to observe the tasks performed on the job, witness the interaction of the worker with others on the job, notice any stereotypical behaviors of men and women on the job and learn from the worker important lifestyle and career information. A specified form of guidelines was discussed and given to each participants before the shadowing experience.

Parental Involvement

Parental involvement included an involvement and/or awareness of the career guidance strategies for females offered to the participants. This strategy was integrated with the other career guidance strategies for females in order to promote interaction between the parents and the participants in discussing career options for females. Studies indicate parents to be the greatest influence on children's choices of occupations. A letter and a questionnaire were sent home to the parents inviting them to participate in the career guidance strategies. A meeting for parents was held at the beginning of the study for the purpose of explaining the nature of the career guidance strategies, to solicit volunteers in planning the job information interview and shadowing experiences and to issue an invitation to the evening program featuring the panel of positive female role models.
Group Counseling

Ten group counseling sessions of forty-five minutes duration were conducted as a strategy which gave the participants the opportunity to increase understanding and acceptance of their values and goals as well as attitudes and behaviors concerning their roles as a female in the investigative and decision-making process of career choices. The development of decision-making skills including the processes of introspection, communication and relationship formation were a necessity because only through self-exploration and feedback from others can a person become fully aware of those options and consequences that must be considered in making the best decision possible (Trotzer, 1989). The group counseling process, if properly constituted and led, meets the demands of an effective learning environment because it is safe, understanding, participating and approving (Ohlsen, 1978).

Groups have become an integral part of career counseling for young adults and many career counseling approaches involve the use of groups (Borchard, Kelly and Weaver, 1980; Harren, Daniels and Buck, 1981; Shertzer, 1981; Healy, 1982).

Rational emotive therapy (RET), a cognitive, action-oriented model of therapy that stresses the importance of the role of thinking and belief systems in an individual's
life was the method of therapy used in ten group sessions of eight females each. Research indicates RET is an appropriate method of therapy for group career counseling for females (Richman, 1988). The group counseling sessions were led by two counselors on the guidance and counseling staff of the school in which the study was conducted. Both group leaders were females who had experience as guidance counselors and as career counselors and were specifically trained in the principles of rational emotive therapy and its application to career counseling. The educator trainer, who trained the two group leaders, is a practicing psychologist of RET, a director of a RET training center and an author of publications on RET.

Rational emotive therapy is suitable for group therapy, for all the members are taught to apply RET principles to one another in the group setting. The participants in the study had the opportunity to practice new behaviors, to discuss homework assignments and to observe positive language. By design, RET is appropriate as a brief therapy. The A-B-C approach to both understanding and starting to work on changing basic attitudes can be completed in one to ten sessions (Corey, 1986).

The major goal of RET is minimizing the client's self-defeating outlook and acquiring a more realistic, tolerant philosophy of life (Ellis and Harper, 1975). The focus of
RET is on working with thinking and acting rather than primarily with expressing feelings. Therapy is seen as an educational process; the therapist functions like a teacher, especially in giving homework assignments and in teaching strategies for straight thinking; and the client is a learner, who is willing to practice in everyday life what is being acquired in therapy (Corey, 1986).

The basic tenet of RET is that emotional disturbances are largely the product of irrational thinking. The irrational thoughts come from demanding that the universe "should", "ought to" and "must" be different. In RET, the therapist and client work together to dispute the irrational beliefs that are causing negative emotional consequences. They work toward transforming an unrealistic, immature, demanding and absolute style of thinking into a realistic, mature, logical and empirical approach to thinking and behaving (Corey, 1986).

The A-B-C-D-E theory of personality is central to the RET theory and practice. The following diagram will clarify the interaction of components of the A-B-C-D-E theory to be discussed:

\[ A \text{ (activating event)} \rightarrow B \text{ (belief)} \rightarrow C \text{ (emotional and behavioral consequence)} \]

\[ D \text{ (disputing intervention)} \rightarrow E \text{ (effect)} \]
The diagram indicates (A) is the existence of a fact, an event or the behavior or attitude of an individual. The (B), which is the person's belief about (A), causes (C), the emotional or behavioral reaction or consequence, which can be either appropriate or inappropriate. After A-B-C follows D, the disputing intervention, which is the application of the scientific method to help clients challenge their irrational beliefs. Lastly, E, the effect of disputing and relinquishing self-defeating and irrational beliefs, enables an individual to acquire a more rational and realistic philosophy of life and a greater acceptance of one's self, of others and of the inevitable frustrations of everyday life (Ellis and Harper, 1975).

An example of how the A-B-C-D-E theory of personality can be used in the exploratory stage of career development at the high school level is demonstrated in an activating event (A) of a female student receiving a rejection letter from the college which was her first choice in which to prepare for her intended career. She tends to believe (B) that "it is awful", "she cannot stand it", "she should not, must not have been rejected", "she will never be accepted at a college as good" and "she is a worthless person because one college rejected her". Consequently, she is distressed, frustrated and upset (C). The role of the counselor practicing RET is to help the student (D) identify her
irrational beliefs, dispute the unrealistic beliefs and (E) replace them with rational, mature and realistic thoughts about the college rejection. Ellis (1984) repeatedly makes the point that you feel the way you think. The quickest way to eliminate (C) frustrations and distressing feelings is to (D) dispute the (B) irrational beliefs. The counselor quickly challenges these irrational beliefs by asking questions such as "Where is the evidence for your beliefs? Why is it "awful" if life is not the way you want it to be? Who says you "should not", "must not" have been rejected? Where is it written or proven that you "cannot" stand a situation? Why do you assume you will not be accepted at a good college? and Why do you conclude you are a "worthless" person because an admission committee at one college decided not to admit you?"

A homework assignment appropriate for this situation could be for the student to review the advantages of attending other colleges instead of the college from which she was rejected and report back to the group her findings. Also, the counselor must remind the student of how to change one's language by replacing "must, ought and should" with preferables. Replacing the negative irrational statement, "I should not and must not be rejected by a college and I will never be accepted by a college as good" with "I would like to have gone to that college; however, I can attend
another college that offers me challenges and opportunities" demonstrates to the student the effect (E) of a new philosophy of life with a practical approach.

The practice of rational emotive therapy involves the use of a variety of cognitive, affective and behavioral techniques summarized from a detailed description by Ellis (1979). In addition, examples of how each technique can be applied to the participants in this study are given.

Cognitive Methods: From the cognitive perspective, RET practitioners demonstrate to clients in a direct manner what it is that they are continuing to tell themselves to keep themselves emotionally disturbed or frustrated. Then, the clients are taught how to deal with these self-statements so they no longer believe them which encourages them to acquire a reality-based philosophy. Techniques used are:

1. Disputing irrational beliefs. The most common cognitive method of RET consists of the therapist actively disputing the client's irrational beliefs. The therapist shows clients that they are disturbed not because of certain events but because of their perceptions of these events and because of the nature of self statements. The therapist quickly challenges irrational beliefs by asking questions such as "where is the evidence or your beliefs?" A female participant who has irrational thoughts because she was late for the job information interview could be challenged. "Why
do you assume you are a "horrible" person because you were late for your job information interview which made you anxious?" Through a series of refutations, therapists are instrumental in raising the consciousness of their clients to a more rational level.

2. Cognitive homework. RET clients are given homework assignments, which is a way of challenging their perceptions of events and their self-statements. For example, a female student who has the qualifications and wants to study engineering but is "afraid" to try it because of "fear of success" may be asked to contact a current female engineering student to gather facts that will refute her beliefs about the major and future career. Clients are encouraged to carry out specific assignments during the sessions and, especially, in everyday situations between sessions. In this treatment, the participants were given a pocket size card with the major RET principles to review at home between sessions.

3. Changing one's language. RET contends that incorrect language is one of the causes of distorted or irrational thinking processes. Clients are taught that "musts", "oughts" and "shoulds" can be replaced with "hopes", "prefers" and "wishes". Through the process of changing language patterns and making new self statements, clients will think and behave differently, consequently,
they will feel differently. A high-achieving female student can replace the statement "I must make all A's" with "I prefer to make A's and I will try hard to succeed; however, I don't absolutely have to do that well".

Emotive Techniques: Clients are taught the value of unconditional acceptance. Even though their behavior may be difficult to accept, they as persons do have intrinsic worth. They are taught how destructive it is to engage in "putting one's self down" for perceived deficiencies. Techniques used are:

1. **Role playing.** Clients can rehearse certain behaviors to bring out what they feel in a situation. The focus is on working through the underlying irrational beliefs that are related to an uncomfortable feeling. For example, the females in the treatment group were asked to role play asking questions of the females on the panel of role models. This role play will empower the students to feel more comfortable during the panel discussion, consequently allowing them the opportunity to learn from and interact more readily with the panelists.

2. **Modeling.** In RET, the therapist and others act as models in demonstrating RET principles. Human personality is strongly determined by an individual's ability to acquire new responses by watching someone else perform an activity and then doing it. Persons tend to learn what to do and
what not to do by observing positive and negative consequences experienced by others. In this study, the group leaders acted as role models by demonstrating positive language and actions, as well as the positive female role models the participants encountered in the job information interview, the shadowing experience, and the panel of presenters.

**Behavioral Techniques:** RET practitioners use most of the regular behavior therapy techniques, such as biofeedback, relaxation techniques and homework.

1. **Behavioral Homework:** Behavioral homework assignments to be carried in real-life situations are particularly important. After a discussion on assertiveness, the participants in the group counseling sessions were asked to speak out their opinions and desires in a class meeting, classroom environment or a work situation.

**Hypotheses**

In reviewing the research questions, the following null hypotheses will be tested.

1. There is no relationship between career maturity scores and locus of control scores of high-achieving twelfth-grade females prior to the
treatment of career guidance strategies for females.

2. There is no difference between the experimental and control groups of high-achieving twelfth-grade females on career maturity scores subsequent to the treatment of career guidance strategies for females.

3. There is no difference between experimental and control groups of high-achieving twelfth-grade females on locus of control scores subsequent to the treatment of career guidance strategies for females.

4. There is no relationship between career maturity scores and locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females.

Research Design

The design of this experiment is a pretest-posttest, experimental/control group design (Figure 12.1 in Huck, Cormier and Bounds, 1974, p. 245) as illustrated:

<table>
<thead>
<tr>
<th>Diagram</th>
<th>R</th>
<th>O</th>
<th>X</th>
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</tr>
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<tbody>
<tr>
<td>R</td>
<td>O</td>
<td></td>
<td></td>
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<tr>
<td>R</td>
<td>O</td>
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</tbody>
</table>
The diagram shows that: (1) two groups were involved in the design; (2) each group was measured at the same time before the treatment was applied to one group; (3) each group was measured at the same time after the treatment had been implemented; (4) the participants were randomly assigned to the two groups; and, (5) the first group received the experimental treatment whereas the second group did not (Huck, Cormier and Bounds, 1974). This design was utilized to provide data analysis for this study.

The first design was a simple correlation model used to test the first hypothesis and the fourth hypothesis involving the relationship between locus of control and career maturity of high-achieving twelfth grade females. It was suggested that high-achieving twelfth grade females with an internal locus of control, prior to treatment, would score higher on a measure of career maturity than high-achieving twelfth grade females with an external locus of control. In addition, it was suggested that high achieving twelfth grade females with an internal locus of control, subsequent to treatment, would score higher on a measure of career maturity than high-achieving twelfth grade females with an external locus of control. To determine the relationship between locus of control and career maturity, the Pearson Product-Moment correlation coefficient was computed.
The second design, analysis of covariance, was used to test the second hypothesis and the third hypothesis involving the effectiveness of the career guidance strategies for females on the career maturity scores and the locus of control scores of high-achieving twelfth-grade females.

The level of significance was set for each hypothesis at 0.05.

Dependent Variables

The two dependent variables in this study were career maturity and locus of control. The first dependant variable, career maturity, was measured by Crites' Career Maturity Inventory, Counseling Form B-1. The analysis of this variable was the testing of the hypotheses regarding the effect of career guidance strategies for females on career maturity scores.

The second dependent variable, locus of control, was measured by Gardner and Warren's (1977) Different Situation's Inventory, Self Report Form. The analysis of this variable was the testing of the hypotheses regarding the effect of career guidance strategies for females on locus of control.
Data Collection

The inventories utilized to measure the two dependent variables in this study were administered to the participants in the experimental and control groups approximately two weeks before the start of the intervention. The administration of the inventories occurred in the advanced placement English classroom setting without notification to the participants who would be randomly selected for the experimental or control group to insure that all females took the inventories seriously. The participants were informed that career guidance strategies for females would be implemented for an experimental group for the purpose of studying the effects of the treatment. The participants of the experimental and control groups were informed prior to implementation of the treatment. The participants in the control group were informed of an opportunity to participate in career guidance strategies for females after the ten weeks of the experimental treatment.

The second administration of both inventories took place approximately thirteen weeks after the first administration. The inventories were administered in the following order:

1. The Career Maturity Inventory (Counseling Form B-1) (Crites, 1978).
2. The Different Situation's Inventory (Self Report Form) (Gardner and Warren, 1977).

Instrumentation

Career Maturity Inventory Counseling Form B-1

To assess the effectiveness of career guidance strategies for females on career maturity of high-achieving twelfth grade females, the scores from the Career Maturity Inventory were utilized (Crites, 1978). When planning guidance programs and career education curricula, counselors may use the CMI Counseling Form B-1 because it measures five variables and this provides multidimensional data as a basis for intervention design (Savickas, 1989).

To increase the reliability of scores for use with individuals in career counseling, the Career Maturity Inventory Scale, Counseling Form (Crites, 1978) was recommended in place of the Attitude Scale, Screening Form (Blevins, 1984). Since this instrument yields a separate score for each of the five attitudinal variables of career maturity, pre-testing with this instrument can be more effective for gaining insight into the career attitude maturity of individuals than pre-testing with the Screening Form.

The CMI consists of a 75 item instrument which employs a forced choice, True False response format, and yields
scores for the Total Career Maturity Scale and for five sub-scales: Decisiveness in Career Decision-Making, Involvement in Career Decision-Making, Independence in Career Decision-Making, Orientation to Career Decision-Making, and Compromise in Career Decision-Making. For the purpose of this study the instrument is referred to as the Total Career Maturity Scale and the five sub-scales. The Total Career Maturity Scale and the five sub-scales are described below.

The Total Career Maturity Scale consists of 50 items from the CMI and is designed to produce an index of an individual's career maturity: the degree and rate of career development, and the level of an individual's attitudes to the career choice process as compared with other individuals in the same grade. The highest score is 50; higher scores reflect a higher degree of career development than do lower scores. The 50 items are 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 34, 35, 36, 37, 38, 40, 41, 42, 47, 49, 50, 51, 55, 57, 59, 60, 64, 65, 68, 71, 74.

The five sub-scales measure the underlying attitudinal dimensions of career maturity. Sub-scales one, two, three, and four each consist of ten items. Sub-scale five consists of seven items.

Sub-scale 1 is the Decisiveness in Career Decision-Making Sub-Scale yielding a measure of the extent to which
an individual is definite about his or her career choice. Possible scores on this sub-scale range from 0 to 10. The ten items from the CMI which constitute this sub-scale are 1, 3, 16, 18, 31, 33, 46, 48, 61, 63. A sample item for sub-scale 1 is: "I'd rather work than play."

Sub-scale 2 is the Involvement in Career Decision-Making Sub-Scale, measuring the extent to which an individual perceives himself or herself as an active participant in the career choice process. Possible scores on this sub-scale range from 0 to 10. The ten items from the CMI which constitute this sub-scale are 4, 6, 19, 21, 34, 36, 49, 51, 64, 66. A sample item for sub-scale 2 is: "There is only occupation for each person."

Sub-scale 3 is the Independence in Career Decision-Making Sub-Scale and assesses the extent to which an individual is dependent upon others in the career choice process. Possible scores on this sub-scale range from 0 to 10. The ten items from the CMI which constitute this sub-scale are 7, 9, 22, 24, 37, 39, 52, 56, 67, 69. A sample item for sub-scale 3 is: "Parents usually can choose the most appropriate jobs for their children."

Sub-scale 4 is the Orientation to Career Decision-Making Sub-Scale and yields a measure of the value the individual assigns to work. Possible scores on this sub-scale range from 0 to 10. The ten items from the CMI which
constitute this sub-scale are 10, 12, 25, 27, 40, 42, 55, 57, 70, 72. A sample item for sub-scale 4 is: "I know very little about the requirements of the jobs."

Sub-scale 5 is the Compromise in Career Decision-Making Sub-Scale, assessing the degree to which the individual is willing to compromise between needs and reality. Possible scores on this sub-scale range from 0 to 7. The seven items from the CMI which constitute this sub-scale are 13, 15, 28, 30, 43, 58, 73. A sample item for sub-scale 5 is: "I'm not going to give up anything to get the job I want."

High scores on the sub-scales indicate a high degree of the specific attitudinal dimension of career maturity assessed by the sub-scale, while low scores indicate a low degree of the specific attitudinal dimension of career maturity.

An area of concern in the use of the Career Maturity Inventory has been the sensitivity or lack of sensitivity to issues of sex. Herr and Enderlein (1976) found that females scored higher than males, regardless of academic course of studies. They suggested that this greater level of career maturity reflected the different general maturation rates of males and females, and suggested the need for differential counseling for females and males about career issues.

Reported internal consistency coefficient for the Counseling Scale is .67 for decisiveness, .62 for
involvement, .71 for independence, .72 for orientation and .50 for compromise. For non-intellectual scales, these values for career choice attitude variables are desirable. Internal consistency coefficient for Total Career Maturity scale is .77.

Following the rational-empirical method of test construction, items for the Counseling Form were first selected by expert judges to substantively define the five variables. The items from Form A-1 of the Attitude Scale, which had already been published, were classified independently by three judges – two doctoral students in Counseling Psychology at the University of Maryland and the author – into the five variables and a miscellaneous category. The interjudge agreement was relatively high, being approximately 85%. Next, to test these classifications empirically, proportional samples of students in grades seven through twelve, stratified by male/female and decided/undecided in career choice, were selected from the population of students in Cedar Rapids, Iowa, who took the Attitude Scale, Form A-1, in May 1964.

Different Situation's Inventory

To assess the effectiveness of career guidance strategies for females on locus of control of high-achieving twelfth grade females, the scores from the Different
Situation's Inventory developed by Gardner and Warren (1977) were utilized. The Self Report Form of the Different Situation's Inventory consists of twenty behavioral situations, each followed by two different reactions in a forced choice paper and pencil format. A sample item is: If another person says critical things about me, my most likely reaction might be to think: A. "I wonder if others think the same thing about me." B. "Well, I'm not so sure I agree with that opinion." Possible scores range from 0 to 20. The higher the score, the higher the internal orientation of locus of control. The 20 items from the DSI with the correct responses in parentheses are the following: 1(A), 2(B), 3(A), 4(A), 5(A), 6(B), 7(A), 8(B), 9(B), 10(A), 11(B), 12(B), 13(B), 14(B), 15(B), 16(B), 17(B), 18(B), 19(B), 20(A).

Ifenwanta (1978) reported a test-retest reliability coefficient of 0.90. Reporting on item analysis, Ifenwanta indicated that the DSI strongly discriminates between upper and lower median groups. It is considered a very reliable instrument with about 85% of the test items significantly correlated to the total score.

With regard to validity of the DSI, Ifenwanta (1978) reported a significant correlation between the Rotter's internal-external scale and the DSI, Self-Report Form (r=0.66, p .01, N=40). Gardner, Beatty and Bigelow (1981)
reported a significant correlation between the DSI and the Work Situations Inventory (WSI) \((r=0.56, p .001, N=48)\). The WSI is a locus of control instrument designed to measure locus of control orientation at work.

The selection of the items was determined by comparison of items to items in locus of control measures currently available. These items were submitted to three judges who had done research in the field of locus of control. Each judge was asked to determine whether an item conveyed an internal or an external response. There was 100% agreement among the three judges and the authors of this instrument.

Data Analysis

The pretests and posttests measures of the Career Maturity Inventory and the Different Situation's Inventory were obtained from both the experimental and control groups. The answer sheets were coded to protect the confidentiality of the participants.

The Number Cruncher Statistical System computer package was utilized to facilitate data analysis (Hintze, 1987). The Pearson Product correlation was used to test the first hypothesis and the fourth hypothesis. An analysis of covariance was utilized to test the second and third hypotheses. Analysis of covariance was utilized to evaluate whether or not there were any significant differences in the
dependent variables when the means were adjusted using the corresponding pre-treatment variable as a covariate. This procedure removes the variance that can be attributed to the pre-test score (the covariate) allowing the researcher to have a clearer test of hypothesis. The analysis of covariance then tests whether these adjusted means differ significantly (Howell, 1987, p. 531). Another function of this test is to reduce the error term and remove any bias in the dependent variables means caused by change group differences on the covariate (p. 539).

Group means of the scores the two instruments were calculated for the experimental group and the control group before and after the treatment.

Qualitative research refers to any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification (Glaser and Strauss, 1990, p. 17). A qualitative method is a way to obtain data on many areas of social life not amenable to the techniques for collecting quantitative data (p. 17).

In addition to the statistical data, the following qualitative information was collected for this study:
1. A record of student participation was maintained.
2. A record of parent participation was maintained.
3. Student information was collected from a questionnaire and individual interview.

4. Information was collected from a group counseling session topic on problems of high-achieving female seniors in everyday life.

5. A list of irrational beliefs was generated in a group counseling session.

6. Student evaluations of the treatment were collected from a student evaluation form and discussed in individual interviews.

7. Parent evaluations were sent to the home address of each parent or parents and returned to the researcher.

The qualitative data was evaluated in addition to the statistical data to arrive at the conclusions and recommendations for this study. Glaser and Strauss (1990) believe that each form, quantitative and qualitative, is useful for both verification and generation of theory.

Limitations of the Study

Since the sample of the proposed study was drawn from a single high school, it was possible the results have limited generalizability. However, the sample represented in the study was representative of the population of high-achieving twelfth-grade female students in the community, therefore
producing results which may have had an acceptable level of generalizability.

A second limitation was the size of the sample (N=32). Due to the criteria set for the population of high-achieving twelfth grade females, only a limited number of participants are available in a small senior class of 240 students. In addition, to disrupt classes in a school in which time on task is stressed, it was recommended the researcher involve as few classes as possible; therefore, all three of the advanced placement English classes were chosen because of the high enrollment of high-achieving females.

A third limitation was the high socio-economic level and high educational level of the parents in the community which may limit the generalizability of this study. However, since the participants in the study were drawn randomly, many socio-economic levels were represented, as well as varied family background.

A fourth limitation was the state-of-the-art school in which the study was conducted. The facilities offer many and varied opportunities such as an informational computerized career center maintained by a full time career counselor, a computerized library with current materials on careers and career programs in television production, speech and drama, printing, cosmetology, drafting and journalism.
A fifth limitation concerned the supportive political community to the causes of all citizens. Females have many advantages in the surrounding community which are not evident in all areas of the country.
CHAPTER IV

RESULTS

This chapter provides the results of the research methods described in the previous chapter. Statistical results will be presented as they apply to each of the research questions. At the core of this study was the objective to determine the effectiveness of career guidance strategies for females on the career maturity and locus of control of high-achieving twelfth-grade females. This objective was accomplished by examining the pretreatment and the posttreatment testing findings. In addition, qualitative data was evaluated by categorizing interview material and observational data. A discussion of the results are presented in Chapter V.

The following questions were proposed for investigation:

1. Is there a relationship between the career maturity scores and the locus of control scores of high-achieving twelfth-grade females prior to the treatment of the career guidance strategies for females?
2. Is there an increase in the career maturity scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females?

3. Is there an increase in the internal locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females?

4. Is there a relationship between the career maturity scores and the locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females?

The intervention involved career guidance strategies for females which included: a career information investigation, a job information interview, a shadowing experience, a panel of positive female role models, group counseling sessions, and a parental involvement component.

The females receiving the treatment over a ten-week period attended ten group counseling sessions utilizing rational-emotive therapy. During the group sessions, techniques of RET were incorporated in discussions evolving around career issues. Homework was assigned each session which included conducting a career information investigation in the high school career center, interviewing a successful female, shadowing a successful female in a career which matched the students Self-Directed Search choices and
attending a night program of a panel of positive female role models. Parents were invited to attend a meeting before the experiment began to obtain information about the career guidance strategies and to learn how they could be involved in the experiment. In addition, parents attended the program of a panel of positive female role models for the purpose of interacting and discussing issues with their daughters.

Participants in this study were 32 females drawn from the student population of the senior class of a comprehensive public senior high school. The participants were students from several advanced placement English classes who were also enrolled in advanced science, advanced mathematics and advanced foreign language classes or had previously been enrolled in three years of advanced science, advanced mathematics and advanced foreign language classes.

Sixteen participants were drawn and assigned at random to a treatment group and sixteen participants to a control group. The procedure of randomization was an attempt to provide statistical equivalence of the two groups. If the effects of history or maturation were present to influence the members of the treatment group, then these factors should have similarly affected members of the control group. The similarity of the demographics included age, race, grade point average, Scholastic Aptitude Test mathematics scores,
and Scholastic Aptitude Test verbal scores. Presented in Table 1 are the demographic data for the 32 participants prior to treatment. Visual inspection revealed little difference between the treatment and control groups.

The instruments used in this study were the Career Maturity Inventory, Counseling Form B-1 (Crites, 1978) and the Different Situations Inventory (Gardner and Warren, 1977). The CMI, Counseling Form B-1, comprises 75 attitudinal statements with a true or false response format; whereas, the DSI consists of twenty behavioral situations with a forced choice or negative response format.

Mean scores for the Career Maturity Inventory, Counseling Form B for males and females in the twelfth grade were reported by normative samples. A normative sample (N = 7737) produced a mean score of 34.78 for the Total Career Maturity Scale. A normative sample (N = 330) produced the following mean scores for each subscale: Decisiveness in Career Decision Making (5.77), Involvement in Career Decision Making (8.80), Independence in Career Decision Making (9.01), Orientation in Career Decision Making (8.14) and Compromise in Career Decision Making (5.69).

For this study, a series of paired T-tests were run to determine if there were statistically significant increases in the mean scores of the control group and the treatment group after treatment. The alpha level was set at .05.
Table 1: Demographic Information of Participants

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Control Group</th>
<th>Treatment Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Age (yrs)</td>
<td>17.78</td>
<td>17.93</td>
<td>17.85</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>13</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>Asian</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>African American</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Grade Point Average</td>
<td>3.37</td>
<td>3.63</td>
<td>3.50</td>
</tr>
<tr>
<td>Math SAT Average</td>
<td>513</td>
<td>541</td>
<td>527</td>
</tr>
<tr>
<td>Verbal SAT Average</td>
<td>478</td>
<td>501</td>
<td>490</td>
</tr>
</tbody>
</table>
Scores obtained on the **Total Career Maturity** scale indicate mean scores for the treatment group of 34.13 before treatment and 36.69 after treatment which is a statistically significant (p.002) increase. Scores obtained on the **Decisiveness in Career Decision Making** subscale indicate mean scores for the treatment group of 4.38 before treatment and 6.00 after treatment which is a statistically significant (p.007) increase. Scores obtained on the **Involvement in Career Decision Making** subscale indicate mean scores for the treatment group of 9.31 before treatment and 9.63 after treatment which is a statistically significant (p.0197) increase. Scores obtained on the **Orientation to Career Decision Making** subscale indicate mean scores for the treatment group of 7.50 before treatment and 8.63 after treatment which is a statistically significant (p.0125) increase. Finally, scores obtained on the **Compromise in Career Decision Making** subscale indicate mean scores for the control group of 5.19 before treatment and 6.25 after treatment which is a statistically significant (p.011) increase over time. In addition, scores obtained on the **Compromise in Career Decision Making** subscale indicate mean scores for the treatment group of 5.56 before treatment and 6.31 after treatment which is a statistically significant (p.0346) increase. The means of the participants in the sample are found in tabular form in Table 2.
Table 2:
Summary Results Showing the Effects of Treatment on Measures of Locus of Control and Career Maturity

<table>
<thead>
<tr>
<th>Measure</th>
<th>Control Group</th>
<th>Treatment Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before Strategies Mean</td>
<td>After Strategies Mean</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>16.13</td>
<td>15.50</td>
</tr>
<tr>
<td>Total Career Maturity</td>
<td>37.13</td>
<td>37.38</td>
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<tr>
<td>Decisiveness in Career Decision Making</td>
<td>5.94</td>
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<tr>
<td>Involvement in Career Decision Making</td>
<td>9.50</td>
<td>9.63</td>
</tr>
<tr>
<td>Orientation to Career Decision Making</td>
<td>8.25</td>
<td>8.63</td>
</tr>
<tr>
<td>Compromise in Career Decision Making</td>
<td>5.19</td>
<td>6.25*</td>
</tr>
</tbody>
</table>

* p < .05  
** p < .01
Research Questions

In order to understand and increase the career maturity and locus of control of high-achieving twelfth-grade females, the researcher sought to answer the following questions and hypotheses.

Question 1. Is there a relationship between the career maturity scores and the locus of control scores of high-achieving twelfth-grade females prior to the treatment of the career guidance strategies for females? This question was answered by testing the following statistical hypothesis: There is no relationship between career maturity scores and locus of control scores of high-achieving twelfth-grade females prior to the treatment of the career guidance strategies for females.

The Pearson-Product Moment coefficient of correlation was computed on the pretest scores of the career maturity measures on Total Career Maturity and the five subscales of the Career Maturity Inventory and the locus of control measures of the Different Situation's Inventory. The alpha level was set at .05.

The decision based on findings was failure to reject the statistical hypothesis for question 1. However, it should be noted that on the subscale of Orientation to
Career Decision Making on the Career Maturity Inventory, a statistically significant correlation \( r = 0.76, \ p<0.001 \) between career maturity and locus of control was found for the control group. This means that no statistically significant correlations were found between career maturity scores and locus of control scores on Total Career Maturity scores and the five subscales of the Career Maturity Inventory except on the Orientation to Career Decision Making subscale for the control group. A summary of the results are provided in tabular form in Table 3.

Question 2. Is there an increase in the career maturity scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females? This question was answered by testing the following statistical hypothesis: There is no difference between the experimental and control groups of high-achieving twelfth-grade females on career maturity scores subsequent to the treatment of career guidance strategies for females.

The analyses of covariance were computed showing the effects of the treatment on career maturity. The alpha level was set at .05. The independent variable was the treatment. The dependent variable was the career maturity
Table 3: Correlation Between Locus of Control and Measures of Career Maturity Before Receiving Career Guidance Strategies for Females

<table>
<thead>
<tr>
<th>Measure</th>
<th>Control Group n=16</th>
<th>Treatment Group n=16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>Signif. Level</td>
</tr>
<tr>
<td>Total Career Maturity</td>
<td>0.31</td>
<td>0.25</td>
</tr>
<tr>
<td>Decisiveness in Career Decision Making</td>
<td>0.37</td>
<td>0.15</td>
</tr>
<tr>
<td>Involvement in Career Decision Making</td>
<td>-0.04</td>
<td>0.88</td>
</tr>
<tr>
<td>Independence in Career Decision Making</td>
<td>0.27</td>
<td>0.31</td>
</tr>
<tr>
<td>Orientation to Career Decision Making</td>
<td>0.76</td>
<td>&lt; 0.001**</td>
</tr>
<tr>
<td>Compromise in Career Decision Making</td>
<td>0.40</td>
<td>0.13</td>
</tr>
</tbody>
</table>

** p < .01
scores and the covariate was the pre-test scores of the Total Career Maturity and the five subscales of the Career Maturity Inventory.

The career guidance strategies for females had no significant difference (F df=1,29=0.44, p .51) in the covariate-adjusted means between the two groups on career maturity scores on the Total Career Maturity of the Career Maturity Inventory. A summary of the results are provided in tabular form in Table 4.

The career guidance strategies for females had no significant difference (F df=1,29=1.05, p .31) in the covariate-adjusted means between the two groups on career maturity scores on the Decisiveness in Career Decision Making subscale of the Career Maturity Inventory. A summary of the results are provided in tabular form in Table 5.

The career guidance strategies for females had no significant difference (F df=1,29=0.16, p .69) in the covariate-adjusted means between the two groups on career maturity scores on the Involvement in Career Decision Making subscale Career Maturity Inventory. A summary of the results are provided in tabular form in Table 6.

The career guidance strategies for females had no significant difference (F df=1,29=0.18, p .68) in the covariate-adjusted means between the two groups on career
Table 4:
ANCova Results Showing the Effects of Treatment on Total Career Maturity while using Before Strategies Total Career Maturity as a Covariate

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F-Ratio</th>
<th>Prob Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Career Maturity Before Strategies</td>
<td>1</td>
<td>153.11</td>
<td>153.11</td>
<td>12.83</td>
<td>.0012</td>
</tr>
<tr>
<td>Group</td>
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<td>5.20</td>
<td>5.20</td>
<td>0.44</td>
<td>.5145</td>
</tr>
<tr>
<td>Error</td>
<td>29</td>
<td>346.07</td>
<td>11.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>502.97</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5:  
ANCOVA Results Showing the Effects of Treatment on Decisiveness in Career Decision Making while using Before Strategies Decisiveness in Career Decision Making as a Covariate

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F-Ratio</th>
<th>Prob Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decisiveness in Career Decision Making Before Strategies</td>
<td>1</td>
<td>88.03</td>
<td>88.03</td>
<td>20.43</td>
<td>.0001</td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>4.55</td>
<td>4.55</td>
<td>1.05</td>
<td>.3129</td>
</tr>
<tr>
<td>Error</td>
<td>29</td>
<td>124.97</td>
<td>4.31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>213.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 6:
ANCOVA Results Showing the Effects of Treatment on Involvement in Career Decision Making while using Before Strategies Involvement in Career Decision Making as a Covariate

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F-Ratio</th>
<th>Prob Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement in Career Decision Making Before Strategies</td>
<td>1</td>
<td>3.56</td>
<td>3.56</td>
<td>10.37</td>
<td>.0031</td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>0.06</td>
<td>0.06</td>
<td>0.16</td>
<td>.6879</td>
</tr>
<tr>
<td>Error</td>
<td>29</td>
<td>9.94</td>
<td>0.34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>13.50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
maturity scores on the Independence in Career Decision Making subscale of the Career Maturity Inventory. A summary of results are provided in tabular form in Table 7.

The career guidance strategies for females had no significant difference ($F$ df=1,29=0.23, $p$ .63) in the covariate-adjusted means between the two groups on career maturity scores on the Orientation to Career Decision Making subscale of the Career Maturity Inventory. A summary of results are provided in tabular form in Table 8.

The career guidance strategies for females had no significant difference ($F$ df=1,29=0.00, $p$ .96) in the covariate-adjusted means between the two groups on career maturity scores on the Compromise in Career Decision Making subscale of the Career Maturity Inventory. A summary of results are provided in tabular form in Table 9.

The decision based on findings was failure to reject the statistical hypothesis for question 2. This means that no statistical significant increase was found in the career maturity scores of high-achieving females who received the treatment of the career guidance strategies for females.

Question 3. Is there an increase in the internal locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance
Table 7:
ANCOVA Results Showing the Effects of Treatment
on Independence in Career Decision Making
while using Before Strategies Independence in Career Decision
Making as a Covariate

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F-Ratio</th>
<th>Prob Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independence in Career Decision Making Before Strategies</td>
<td>1</td>
<td>13.73</td>
<td>13.73</td>
<td>15.91</td>
<td>.0004</td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>0.15</td>
<td>0.15</td>
<td>0.18</td>
<td>.6768</td>
</tr>
<tr>
<td>Error</td>
<td>29</td>
<td>25.02</td>
<td>0.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>38.88</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 8:
ANCOVA Results Showing the Effects of Treatment on Orientation to Career Decision Making while using Before Strategies Orientation to Career Decision Making as a Covariate

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F-Ratio</th>
<th>Prob Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation to Career Decision Making Before Strategies</td>
<td>1</td>
<td>40.30</td>
<td>40.30</td>
<td>9.19</td>
<td>.0051</td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>1.02</td>
<td>1.02</td>
<td>0.23</td>
<td>.6330</td>
</tr>
<tr>
<td>Error</td>
<td>29</td>
<td>127.20</td>
<td>4.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>167.50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 9:
ANCOVA Results Showing the Effects of Treatment on Compromise in Career Decision Making while using Before Strategies Compromise in Career Decision Making as a Covariate

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F-Ratio</th>
<th>Prob Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compromise in Career Decision Making Before Strategies</td>
<td>1</td>
<td>2.65</td>
<td>2.65</td>
<td>3.53</td>
<td>.0705</td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>0.002</td>
<td>0.002</td>
<td>9.00</td>
<td>.9550</td>
</tr>
<tr>
<td>Error</td>
<td>29</td>
<td>21.79</td>
<td>0.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>24.47</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
strategies for females? This question was answered by testing the following statistical hypothesis: There is no difference between the experimental and control groups of high-achieving twelfth-grade females on locus of control scores subsequent to the treatment of career guidance strategies for females.

The analysis of covariance was computed showing the effects of the treatment on locus of control. The independent variable was the treatment. The dependent variable was the locus of control scores and the covariate was the pre-test scores of the Different Situations Inventory.

Results indicate there is no significant difference (F df=1,29=0.33, p.57) in the covariate-adjusted means between the two groups on locus of control scores on the Different Situations Inventory. A summary of the results are provided in tabular form in Table 10.

The decision was failure to reject the statistical hypothesis for question 3. This means that no statistical significant increase was found in the locus of control scores, which would indicate an increase in internal orientation of high-achieving females who received the treatment of the career guidance strategies for females.
Table 10:
ANCOVA Results Showing the Effects of Treatment on Locus of Control while using Before Strategies
Locus of Control as a Covariate

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F-Ratio</th>
<th>Prob Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locus of Control Before Strategies</td>
<td>1</td>
<td>67.56</td>
<td>67.56</td>
<td>11.93</td>
<td>.0017</td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>1.87</td>
<td>1.87</td>
<td>0.33</td>
<td>.5697</td>
</tr>
<tr>
<td>Error</td>
<td>29</td>
<td>164.19</td>
<td>5.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>232.88</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Question 4. Is there a relationship between the career maturity scores and the locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females? This question was answered by testing the following statistical hypothesis: There is no relationship between career maturity scores and locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females.

The Pearson-Product Moment coefficient of correlation was computed on the posttest scores of the career maturity measure of the Total Career Maturity and the five subscales of the Career Maturity Inventory and the locus of control measures of the Different Situations Inventory. The alpha level was set at .05.

A statistically significant correlation ($r=0.78$, $p < .0005$) for the treatment group was found between the sample's performance on measures of career maturity and locus of control on the Total Career Maturity scale of The Career Maturity Inventory after treatment. On the Decisiveness in Career Decision Making subscale of the Career Maturity Inventory, a statistically significant correlation ($r=0.54$, $p < .04$) for the control group and the
treatment group was found between the samples performance on measures of career maturity and locus of control after treatment. A statistically significant correlation ($r=0.51$, $p < .05$) for the control group and for the treatment group ($r=0.60$, $p < .02$) was found between the sample's performance on measures of career maturity and locus of control on the Orientation to Career Decision Making subscale of the Career Maturity Inventory after treatment. On the Compromise in Career Decision Making subscale, a significant correlation ($r=0.60$, $p < .02$) for the treatment group was found between the sample's performance on measures of career maturity and locus of control after treatment.

The decision based on findings was to accept the statistical hypothesis for question 4. Statistically significant correlations were found between career maturity scores and locus of control scores of the treatment group on the Total Career Maturity scale and the Decisiveness in Career Decision Making, the Orientation to Career Decision Making, and the Compromise in Career Decision Making subscales of the Career Maturity Inventory. A summary of results are provided in tabular form in Table 11.
Table 11: 
Correlation Between Locus of Control and Measures of Career Maturity After Receiving Career Guidance Strategies for Females

<table>
<thead>
<tr>
<th>Measure</th>
<th>Control Group n=16</th>
<th>Treatment Group n=16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
<td>Signif. Level</td>
</tr>
<tr>
<td>Total Career Maturity</td>
<td>0.35</td>
<td>0.19</td>
</tr>
<tr>
<td>Decisiveness in Career Decision Making</td>
<td>0.54</td>
<td>&lt; 0.04*</td>
</tr>
<tr>
<td>Involvement in Career Decision Making</td>
<td>-0.42</td>
<td>0.11</td>
</tr>
<tr>
<td>Independence in Career Decision Making</td>
<td>0.16</td>
<td>0.55</td>
</tr>
<tr>
<td>Orientation to Career Decision Making</td>
<td>0.51</td>
<td>&lt; 0.05*</td>
</tr>
<tr>
<td>Compromise in Career Decision Making</td>
<td>0.11</td>
<td>0.69</td>
</tr>
</tbody>
</table>

* p < .05  
** p < .01
Qualitative Data

In order to further understand the effectiveness of the career guidance strategies on career maturity and locus of control of high-achieving females, the researcher sought to gather information that was categorized into qualitative data to evaluate the impact of social variables on this study.

Record of Student Participation

A record of student participation was kept for each career guidance strategy which follows:

1. Career information investigation (16)
2. Job information interview (16)
3. Shadowing (15)
4. Panel of positive female role models (13)
5. 10 Sessions of group counseling: 100% (6), 90% (6), 80% (2), 70% (2).

Record of Parent Participation

A parental meeting was held at the beginning of this study for the purpose of explaining the career guidance strategies, to solicit volunteers in planning interviews and shadowing experiences, and to issue an invitation to attend the panel of positive female role models program. Twelve mothers and two fathers attended the meeting and six mothers
expressed an interest in volunteering. Ten mothers and one father attended the night program featuring the panel of positive female role models. The researcher in a telephone conversation spoke to either the mother or father of 15 girls in the experimental group about the career guidance program for females to bring awareness to all parents. One girl in the experiment group lived with friends and her parents were not in the area when the study was conducted.

Student Information

Before the treatment began, the students were asked to complete a student information questionnaire on school, community, and family. This student information was utilized to gain more knowledge about the influences, activities, and attitudes that would have an impact on the career decision process of a high achieving adolescent female. These impacts were discussed with each student in a posttreatment interview. The following list identifies some of the information gathered:

1. Enrollment in advanced placement courses: 1 AP course (3), 2 AP courses (7), 3 AP courses (2), 4 AP courses (4).

2. Enrollment in advanced accelerated courses: 1 AA course (8), 2 AA courses (4), 0 AA courses (4).
3. Extra-curricular activities in school:
   2 activities (2), 3 activities (4), 4 activities (3), 5 activities (4), 6 activities (3).

4. Activities in the community: 1 activity (9),
   2 activities (5), 0 activities (2).

5. Part-time workers: (7).

6. Fathers' education: High school (3), Bachelor's Degree (9), Master's Degree (3), Ph.D. (1).

7. Mother's education: Eighth Grade (1), High School (3), Bachelor's Degree (9), Master's Degree (3).

8. Live with: Both Natural Parents (10),
   Stepfather/Natural Mother (2), Stepmother/Natural Father (1), Single Mother (2), Friends (1).

9. Relationship with parents: good (10), average (6), poor (0).

10. The most influential family member in helping students to make career plans: Father (2), Mother (6), Sibling (3), No family member (5)

11. Occupation of mother is homemaker (4)

Problems in Everyday Life

Information and comments were gathered from a group counseling session topic on problems of high-achieving female seniors in everyday life. The following is a list of what the students indicated as major problems.
1. Waiting for college acceptance.
2. Competing for scholarships.
3. Vying for class rank.
4. Academic competition from other students.
5. Fear of the future.
6. Balancing school, home, friends, and work.
7. Conflict with parents about leaving home.
8. Pressures of AP classes, seven forty-five minute class periods, extra-curricular activities.
10. Too much information to assimilate.

Irrational Beliefs

Irrational beliefs were discussed in each of the group counseling sessions and RET techniques were implemented to change the irrational beliefs to rational beliefs. The participants were asked to identify irrational beliefs in a brainstorming session and the group counselors identified irrational beliefs and irrational language in all group sessions. A list of some of the irrational beliefs follow:

1. I must make all A's.
2. Everything I do must be perfect.
3. As a school leader, I feel I must be in control of all activities because if I delegate no one will do as well as I will.
4. I cannot make a mistake.

5. I must be accepted at the college I want to attend.

6. I cannot go to college if I don't get a scholarship.

7. My parents, teachers, counselors, and friends should be understanding of my demands in all areas of my life.

8. I must be successful in a career to provide I can do it.

9. School shouldn't be this way.

10. These pressures should not be happening to me.

11. I am a failure if I don't win in track.

12. I will be a failure if I don't succeed in college or in a career.

Student Evaluation of Strategies

After the treatment, the 16 participants in the experiment group completed an evaluation of the career guidance strategies for females and these were discussed with each participant in an individual interview with the researcher. A summary of answers and comments follow:

1. Which of the career guidance strategies benefitted you the most in the career decision process? Career information investigation (1), Panel of positive female role
models (8), Shadowing (2), Group counseling (2), Parent involvement (0).

2. Which person influenced you the most in becoming aware of sex-role stereotypes, career opportunities and future goals? Individual shadowed (2), Member of the positive female role model panel (8), Group counselor (6).

3. Which career guidance strategy was the most enjoyable? Career information investigation (1), Job information interview (1), Panel of positive female role models (4), Shadowing (3), Group counseling (7).

4. What would you like to have done differently during the treatment? Longer group sessions (6), Longer than 10 weeks (3), Have personal counseling (1), Shadow more careers (2), Perfect the way it was (2), Don't know (2).

5. Advantages of receiving the career guidance strategies for females: Awareness of issues (12), Feel more positive about self (1), Certain of career choice (1), Built confidence (1), Attention was given to females when usually males receive a majority of the focus (1).

6. Disadvantages of receiving the career guidance strategies for females: No disadvantage (7), Created more fear (4), Could heighten the conflict between the sexes (1).

7. Other comments: "I really enjoyed this program and it truly helped me decide on a career. I really enjoyed the group. It was informational, beneficial, and fun. Made
we want to try harder. I enjoyed the counseling the most because it gave me the chance to discuss my experiences and fears with others with similar situations and fears. I really had a good time and I am looking forward to graduating and moving on to bigger and better things. I enjoyed the group and I learned what it will be like to be a female professional. This was enjoyable for me and it gave me a better view of which jobs are right for me. It was fun and I figured out who I want to be when I am older. I really enjoyed the shadowing experience. It was extremely helpful. I loved the group activities of 'Baby X' and the 'lemon game.' Thank you! Thank you!"

Parent Evaluation

After the participants received the career guidance strategies for females an evaluation form was sent to the parents. Fifteen evaluations were returned with positive responses to all questions, which included how the strategies helped the females understand the many and the varied careers available, the issues of sex-role stereotyping, the problems of balancing a lifestyle and a career, the dilemma of the decision making process in choosing a college and a career and the importance of replacing irrational beliefs with rational beliefs. Some of the parental comments were: "I wish my older daughter could
have had this experience," "Please continue this program for all senior girls in the future," and "This has really built my daughter's confidence in herself."

The qualitative findings have identified variables which impacted this study, which were not disclosed by the quantitative findings. Based on the findings in the record of parent participation, the parent participation was an important component of this study. The record of student participation produced findings to indicate there was an interest and desire of the females to receive the career guidance strategies for females. The findings from the student information surveys indicate that school, community, and family life have an impact on career maturity and locus of control. In addition, problems and irrational beliefs impacted upon the career decision process of high-achieving females. The findings from the student and parent evaluations indicate a positive response to the strategies, a focus for future strategies, and a support for continuing the career guidance strategies for females.
CHAPTER V
DISCUSSION

The purpose of this chapter is to provide a summary of the findings to make them more meaningful. Included in this chapter are a summary, conclusions, discussions, and recommendations based on the information presented in the previous chapters.

Summary

The purpose of this study was to determine the effectiveness of the following career guidance strategies for females: a career information investigation, a job information interview, a shadowing experience, a panel of positive female role models, group counseling sessions, and a parental involvement component on career maturity and locus of control of high-achieving twelfth-grade females. Career maturity was defined as a construct which seeks to assess at what stage an individual is in his or her career development, as well as how the individual compares in the process of career development with other individuals of the same chronological age (Crites, 1961). Locus of control was defined as the degree to which an individual accepts
responsibility for his or her own behavior (Gardner and Warren, 1977).

The literature review provided no conclusive evidence that supported all of the strategies for females in this study; however, a few studies supported role modeling as a viable strategy as having a significant difference in a female's adolescent life. Despite the emphasis on the need for differentiated career guidance programs for high-achieving females necessitated by female career issues and multiple aptitudes (Rodenstein, Pflegar and Colangelo, 1977), there are no empirical studies investigating the nature and effectiveness of a program with three or more strategies. Counselors and parents need information which provides empirical data for the effectiveness of a career guidance program for high-achieving females.

Research indicates significant correlations between career maturity and locus of control. An internal locus of control has been shown to be more conducive to career maturity than an external locus of control (Bernadelli, de Stefano and Dumont, 1983; Blevins, 1984; Lokan, Boss and Patsula, 1982).

The literature review substantiated the rationale for this study which provided career strategies for high-achieving adolescent females, who will compose half of our future scientists, mathematicians, lawmakers and politicians
and will bring a different voice to the workplaces of our nation.

Conclusions

The following research questions were proposed for investigation and serve as the framework for the conclusions of this study. In addition, conclusions were drawn from qualitative data.

1. Is there a relationship between the career maturity scores and the locus of control scores of high-achieving twelfth-grade females prior to the treatment of the career guidance strategies for females?

In an attempt to ascertain the relationship between career maturity and locus of control variables before treatment, a correlation coefficient was computed using the pretest scores. The result of the Pearson Product-Moment coefficient of correlation showed no statistically significant correlations between career maturity and locus of control scores. However, it should be noted that on the subscale of Orientation to Career Decision Making on the Career Maturity Inventory a statistically significant correlation between career maturity and locus of control was found for the control group. Therefore, it was concluded that females with an internal locus of control do not score
significantly higher on a measure of career maturity than those with an external locus of control.

2. Is there an increase in the career-maturity scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females?

The analysis of covariance was computed to show the effects of the treatment on career maturity. The results showed the treatment to have no statistically significant effect on the career maturity of the participants in the experimental group. Therefore, it was concluded that the career guidance strategies for females had no significant effect on the career maturity scores of high-achieving twelfth-grade females.

3. Is there an increase in the internal locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females?

The analysis of covariance was computed to show the effects of the treatment on locus of control. The results showed the treatment to have no statistically significant effect on the locus of control of the participants in the experimental group. Therefore, it was concluded that the career guidance strategies for females had no significant effect on the locus of control scores of high-achieving twelfth-grade females.
4. Is there a relationship between the career maturity scores and the locus of control scores of high-achieving twelfth-grade females subsequent to the treatment of the career guidance strategies for females?

In an attempt to ascertain the relationship between career maturity and locus of control after treatment, a correlation coefficient was computed using the posttest scores. The result of the Pearson Product-moment coefficient of correlation showed statistically significant correlations between career maturity and locus of control scores. A statistically significant correlation between career maturity and locus of control scores was found for the treatment group on the scale of the Total Career Maturity and the subscales of Decisiveness in Career Decision Making, Orientation to Career Decision Making and Compromise in Career Decision Making of the Career Maturity Inventory. It was concluded that females with higher locus of control scores indicating an internal orientation scored significantly higher on a measure of career maturity than females with lower locus of control scores indicating an external orientation.

Qualitative Data

In an attempt to produce findings not arrived at by statistical procedures, qualitative information was
collected to identify undisclosed variables which impacted upon the study. The following paragraphs are a summary of this information.

A record of student participation was maintained for each career guidance strategy to evaluate the interest and involvement of the participants in the experimental group. The number of students who participated in each strategy follows: career information (16), job information interview (16), shadowing (15), panel of positive female role models (13), and 10 sessions of group counseling: 100% (6), 90% (6), 80% (2), 70% (2). Therefore, it was concluded since all 16 participants began and completed the treatment with high participation, there was an interest and desire of the high-achieving senior girls to receive career guidance strategies for females.

A record of parent participation was maintained for each parental activity to evaluate the interests and involvement of the parents in their daughters activities in the career guidance strategies for females. The number of parents who participated in the following activities follow: parental meeting (12 mothers, 2 fathers), panel of positive female roles (10 mothers, 1 father), volunteers (6 mothers), and telephone conversation with the researcher (14 mothers, 1 father). One female in the treatment group did not live
with her parents. Therefore, it was concluded parent participation was an important component of this study.

Student information on school, community and family was gathered to gain knowledge about the activities, influences, and attitudes that had an impact on this study. In school, the participants were enrolled in the following number of advanced placement courses: 1 AP course (3), 2 AP courses (7), 3 AP courses (2), 4 AP courses (4) and in the following number of advanced accelerated courses: 0 AA courses (4), 1 AA course (8) and 2 AA courses (4). The participants participated in the following number of extra curricular activities: 2 activities (2), 3 activities (4), 4 activities (3), 5 activities (4) and 6 activities (3). In the community, the participants were involved in the following number of activities: 0 activities (2), 1 activity (9) and 2 activities (5); and seven participants worked part-time. In the family, ten participants lived with both natural parents, two lived with a stepfather and natural mother, one lived with a stepmother and natural father, two lived with a single mother, and one lived with friends. Ten reported relationships with their parent or parents were good and six reported it was average. The father's education was reported as the following: high school (3), bachelor's degree (9), master's degree (3), and Ph.D. (1). The mother's education was reported as the
following: eighth grade (1), high school (3), bachelor's degree (9), and master's degree (3). Four mothers were homemakers and the remainder worked in various careers. One father who had recently retired from the military worked in the home, and the remainder of the fathers worked in various careers. The participants reported the following family member to be the most influential in helping them make career decisions: father (2), mother (6), older sibling (3), and no family member (5). It was concluded that the school, community, and family life of the females in this study have an impact upon the career maturity and locus of control of high-achieving adolescent females.

Problems in everyday life was a topic in a group counseling session and the students compiled a list of problems that the researcher categorized as academic, family, information overload, and fear of the future. The student's academic problems were waiting for college acceptances, competing for scholarships, vying for class rank, competition from other students and pressures of advanced placement classes, and extra-curricular activities. The students expressed concern of high-expectations from parents, the issue of leaving home, information overload and fear of the future. In conclusion, these problems impacted upon the career decision process of high-achieving twelfth grade females.
Irrational beliefs were discussed in each of the group counseling sessions and the students identified irrational beliefs that the researcher categorized as perfectionistic or controlling attitudes. Irrational language of "must," "cannot," and "should" were expressed in the irrational beliefs. The perfectionistic statements included: "I must make all A's. Everything I do must be perfect. I cannot make a mistake. I am a failure if I don't succeed in college or in a career." The controlling attitudes were expressed as follows: "I must be accepted at the college I want to attend. These pressures shouldn't be happening to me. As a school leader, I must be in control of all activities because if I delegate no one will do as well as I will. School shouldn't be this way." In conclusion, an awareness of the irrational beliefs of the students allowed them the opportunity to change these irrational beliefs to rational beliefs which the researcher promoted as a method to increase internal locus of control and career maturity.

The student's evaluation of the treatment was conducted by an individual interview after the posttests were administered. The girls felt the advantages of the career guidance strategies were becoming aware of the barriers, sex-role stereotypes and the other career issues females face, increasing confidence and self-esteem, and receiving differentiated treatment. Most of the girls felt there were
no disadvantages of the strategies; however, four girls felt it created more fear of the future and one girl felt it could heighten the conflict between the sexes. A majority of females felt the panel of female role models strategy benefitted them the most in the career decision process. The individuals who influenced them the most in becoming aware of stereotypes and career opportunities are as follows: individual shadowed (2), member of panel of positive female role models (8), and group counselor (6). In response to a question on what would you like to have done differently during the treatment, the students requested longer group counseling sessions, longer treatment period, more shadowing experiences, personal counseling and two females felt the program was perfect. In conclusion, the evaluative information provided a focus for future career guidance programs for females.

The parent evaluation of the treatment was collected from evaluation forms that each participant's parent or parents received except for the student who lived with friends. All of the forms were returned with positive responses to all questions, which included how the strategies helped the females understand the varied careers available, the issues of sex-role stereotyping, the problems of balancing a lifestyle and a career, the dilemma of the career decision making process, and the phenomenon of
replacing irrational beliefs with rational beliefs. A parent commented, "Please continue this program for all senior girls in the future." Therefore, it was concluded that the available parent responses support future career guidance strategies for females.

Discussion

The findings of this study were organized around four statistical research questions and qualitative information gathered to identify undisclosed variables which impacted upon the results. Presented in this section is a discussion on the implications of the findings.

Relationship of Locus of Control Orientation to Career Maturity

There is considerable evidence that locus of control shares a common variance with various measures of career maturity (Gardner, Beatty and Bigelow, 1981). The populations selected for these studies were groups combined with males and females in college and high school settings. The findings from these studies indicated a low correlation between locus of control and career maturity; however, they were statistically significant. The literature suggests that females are more externally oriented than males (Nowicki and Duke, 1974). There is also evidence that an
external orientation is part of the female sex-role stereotype (Hochereich, 1975). Counselors seek to increase internal locus of control because internals seem to have achieved a more healthy psychological adjustment than externals (Joe, 1971; Lefcourt, 1966; Phares, Ritchier and Davis, 1968; Rotter, 1966), are less likely to seek counseling (McDonald, 1971) and are more likely to be able to cope with situational problems when they occur (Lefcourt, 1966; Rotter, 1966).

Procedures for changing locus of control toward an internal orientation have been reported by behavioral-oriented theorists (Dua, 1970) and by social learning theorists (Gardner and Gardner, 1974; Lefcourt, 1966, 1972; Rotter, Chance and Phares, 1972). A study (Dua, 1970) which implemented behavioral-oriented strategies increased locus of control scores toward the internal direction by using counseling techniques (Felton, 1972; Felton and Biggs, 1972; Felton and Davidson, 1973; Majumber, Grever, Holt and Friedland, 1973) and verbal strategies (Reimanis and Schaefer, 1970).

The findings of this study indicated that there were statistically significant correlations between locus of control and career maturity scores subsequent to treatment.

It was concluded that, subsequent to the treatment, females with an internal locus of control scored
significantly higher on measures of career maturity than females with an external locus of control. A statistically significant correlation between career maturity and locus of control scores was found for the treatment group on the scale of Total Career Maturity which indicates the degree and rate of career development and the level of an individual's attitudes to the career choice process as compared with other individuals in the same grade. A statistically significant correlation between career maturity and locus of control scores was found for the treatment group on the subscales: Decisiveness in Career Decision Making yielding a measure of the extent to which an individual is definite about his or her career choice, Orientation to Career Decision Making yielding a measure of the value the individual assigns to work, and Compromise in Career Decision Making assessing the degree to which the individual is willing to compromise between needs and reality.

It should be noted that a statistically significant correlation between career maturity and locus of control was not found for the treatment group on the subscales: Involvement in Career Decision Making measuring the extent to which an individual perceives himself or herself as an active participant in the career choice process and Independence in Career Decision Making assessing the extent
to which an individual is dependent upon others in the career choice process. Therefore, it appears there is a relevant need to develop strategies designed to further modify locus of control toward an internal direction that would address the dependency issues of adolescent females.

Effect of Intervention on Locus of Control

The findings indicated that there was no statistically significant increase in the locus of control scores after the treatment. This could be attributed to the short treatment time of ten weeks and to the implementation of five career guidance strategies which introduced to the participants many and varied issues they would face in making responsible decisions of a personal nature. These strategies could have brought more of a complexity to the females orientation of locus of control. In addition, the students mentioned in their evaluations of the program that there was too much information to assimilate, not enough time in the group counseling session and not a long enough time period for treatment. Students also reported that the strategies increased their fear of the future which could have had an effect on how they would respond in the different situations on the Different Situation's Inventory which measures locus of control orientation.
As previously mentioned, investigators have attempted to modify locus of control toward the internal orientation by the implementation of behavioral-oriented counseling techniques and verbal strategies, therefore, this study implemented rational-emotive therapy which emphasizes language modification. The students were aware of irrational beliefs and statements as noted in the list of irrational beliefs they formulated; however, in order to change irrational language and beliefs to rational language and beliefs requires a commitment that was difficult to assume because of the information and issues surrounding all of the strategies. This single strategy could be used in future studies concerning female attitudes and behaviors of the career decision making process.

The problems of everyday life discussed in a group counseling session coupled with the school, community and family pressures mentioned by the participants could have impacted the results of the study. Problems and pressures seem to increase as seniors reach the end of their twelfth grade year; therefore, this study could have been conducted during first semester which could have had a more positive effect on the findings concerning locus of control.

In addition, the limited size available for this study, the time limitations and the instruments used for testing
may not have been appropriate for this study to show a statistically significant effect on locus of control.

Although no statistically significant increase in the mean scores of the treatment group on the locus of control measure was found, the treatment group's locus of control mean scores increased; whereas, the control group's locus of control mean scores decreased. The females in the treatment group may have exhibited a greater degree of sensitivity to the situations on the Different Situations Inventory than the control group due to the exposure to the career guidance strategies for females.

Effect of Intervention on Career Maturity

In a review of the literature concerning the career development of high-achieving females, the findings have significant implications for an emergence of strategies that address the needs of young female adolescents. An attempt was made in this study to implement strategies that would increase career maturity scores. The findings indicated there was no statistically significant increase in the career maturity scores after treatment. This could be attributed to the limited size available for this study, the time limitations, the number of strategies implemented, the inappropriateness of the instruments used for the study, and to other issues that impacted the study.
The number of career guidance strategies for females, which included a career information investigation using the results of the Self-Directed Search, a job information interview, shadowing, a program featuring a panel of positive female role models, ten group counseling sessions and parental involvement, may have introduced too much information to be processed by the females in the treatment group. The students commented on their evaluations of the program that there was too much information to assimilate, not enough time for processing and interacting during group counseling sessions and not a long enough time period to implement all the strategies effectively. The students felt the strategies increased their fear of the future which could have an effect on their scores in career decision making, of decisiveness, involvement, independence, orientation, and compromise. In addition, the senior students' problems of everyday life coupled with the pressures of their school, community, and family life could have impacted upon their attitudes toward career maturity.

Although no statistically significant effect was found between the two groups which could be attributed to the career guidance strategies for females, the career maturity mean scores of the treatment group increased significantly on all scores of the career maturity measures except on the scores of involvement and independence in career decision
making. The participants may have been influenced by increased sensitization to the instrument used in this study.

Recommendations

Recommendations for Future Research

1. Replication of this study with a larger sample size is essential to determine if statistically significant effects can be found.

2. Since the qualitative results produced more valuable information than the quantitative methods, future researchers may want to consider the case management approach when evaluating locus of control and career maturity.

3. An increase in the length of treatment could result in statistically significant effects of this study in future research.

4. An awareness of the time of year when implementing career guidance strategies for senior females in future studies is recommended in future research.

5. A possible problem identified by the qualitative information inferred that five strategies resulted in issues and information that could not be processed. It is recommended that researchers consider less than five strategies in future studies.
6. Future research could be conducted to investigate the locus of control orientation and how it applies to the different voice of females concerning dependency issues.

7. It is recommended that future researchers investigate more sensitive instruments for the measuring of results of counseling studies.

Recommendations for the Profession

Although the quantitative data of this study indicated there was no statistically significant effect of the treatment on increasing career maturity and locus of control scores, the qualitative information produced a positive reaction from the participants and their parents. Based on the feedback from the participants and their parents, it appeared the career guidance strategies had a positive impact on high-achieving females' career decision process and the comments of both students and parents indicated the need and desire for future career guidance strategies for females. Therefore, it is recommended that future differentiated career guidance programs be implemented to meet the needs of specific populations.

The lack of empirical studies of effective and efficient career guidance programs for adolescent females deserves serious attention. Counselors and school systems need objective data to help in the designing of future
career guidance programs for females. The absence from instruction time to participate in the strategies of this study requires the support of empirical findings in order for school principals and superintendents to give permission for future career guidance programs.

If the objective data does not produce findings necessary for the support of school officials, researchers should educate others of the importance of subjective data gathered by qualitative research in counseling studies. If school officials rely solely on quantitative information, current counseling programs and future counseling studies may be jeopardized.
REFERENCES


Reis, S.M. & Callahan, C.M. (1989). *Gifted females: They've come a long way - or have they?* *Journal for the Education of the Gifted, 12*(2), 99-117.

Reis, S.M. (1987). *We can't change what we don't recognize: Understanding the special needs of gifted females.* *Gifted Child Quarterly, 31*(2), 83-89.


APPENDIX A

PARENT LETTERS
Dear Parent(s) of__________________,

In order to develop and implement career guidance strategies for specific groups at C. D. Hylton Senior High School, Mrs. McKay Borden, Director of Guidance and Counseling and a doctoral student at Virginia Polytechnic Institute and State University, is conducting a study on "The Effects of Career Guidance Strategies for High-Achieving Twelfth Grade Females".

Mrs. Borden has applied and implemented her knowledge and skills as a former career counselor, guidance counselor and program developer in creating a program of career guidance strategies for females which include the administration of an interest inventory, a career information investigation, a job information interview, a panel of positive female role models, a shadowing experience, parental involvement and group counseling.

During the evaluation process of this program, information will be collected to monitor the effects of the strategies on the individual students selected for the program. Information on individual students will be computer coded in such a way that no student can be identified by any information. Analysis will be done on the group and will be reported in that manner. This information will be summarized in Mrs. Borden's Doctoral Dissertation submitted to Virginia Polytechnic Institute and State University. Please be aware that specific information about a particular student will only be available to Mrs. Borden and to the parents who request the information about their child.

Mr. Wayne Mallard, Principal, fully supports this study because he feels it will benefit the students and will enhance the career guidance program at C. D. Hylton Senior High School.

I am looking forward to working with your student. Please sign and return this form indicating that you understand the above information. If you have any questions, please call me or Mr. Mallard at 670-5198.

Sincerely,

McKay Borden

_____________________________  ___________________________
Student Signature               Date

_____________________________  ___________________________
Parent Signature               Date
Dear Parent(s) of_____________________

In order to develop and implement career guidance strategies for specific groups at C. D. Hylton Senior High School, Mrs. McKay Borden, Director of Guidance and Counseling and a doctoral student at Virginia Polytechnic Institute and State University, is conducting a study on "The Effects of Career Guidance Strategies for High-Achieving Twelfth Grade Females".

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Sincerely,

McKay Borden

_________________________  ____________________
Student Signature          Date

_________________________  ____________________
Parent Signature           Date
APPENDIX B

PARENT QUESTIONNAIRE
PARENT QUESTIONNAIRE

1. Name

   Address

   Phone Number

2. I am interested in participating in the "Career Program for High-Achieving Females". _______ yes _______ no

3. I am willing to be interviewed by a student about my career. _______ yes _______ no

4. I am willing to be to have a student shadow (visit) me for a day on my job. _______ yes _______ no

   ________________________________ Occupation

   ________________________________ Address

5. I am willing to recommend an outstanding positive female role model for a panel. _______ yes _______ no

   Name

   Address

   Phone

6. I am willing to coordinate tasks involving job information interviewing, shadowing, and a night program presenting a panel of positive female role models. ____ yes ____ no

7. It is only necessary that you are aware of career guidance program for your daughter and your participation is not necessary for your daughter to benefit from the program.

   Thank you,

   McKay Borden
APPENDIX C

STUDENT INFORMATION
STUDENT INFORMATION

The information given on this questionnaire is confidential.

1. Name ____________________________
2. Address __________________________
3. Phone Number _________________
4. Age ____ year ____ month, Date of Birth _____________
5. GPA (Grade Point Average) ______
6. SAT, Math ______ Verbal ______
7. Extra-curricular activities in school
   ________________________________
   ________________________________
   ________________________________
8. Activities in the community
   ________________________________
   ________________________________
   ________________________________
9. Do you like school? Never ______ Most of the time Occasionally

WORK:

1. Do you work part time? Yes____ No____ Where _______________
2. How has the opportunity to work helped you make career plans?_________________________
   ________________________________
   ________________________________
3. What career(s) are you interested in pursuing? ________________________________
   ________________________________
4. What would prohibit you from attaining your career goals?_________________________
   ________________________________
   ________________________________
5. Is there someone you know in an occupation you are interested in pursuing who would be willing to let you shadow her for a day? If yes, list name, occupation and telephone number below.
   Name__________________________Telephone Number__________
   Occupation________________________

FAMILY

1. Father or guardian's name ________________________________
2. Father or guardian's occupation ________________________________
3. Father or guardian's level of education __________________________
4. Mother or guardian's name ________________________________
5. Mother or guardian's occupation ________________________________
6. Mother or guardian's level of education


   __ stepmother/natural father? __ single parent mother?
   __ other?

8. List brothers and sisters by age, occupation


9. Relationship with parent or guardian
   __ good __ average __ poor

10. Do your parents encourage you to do well in school?
    __ Yes __ No

11. Are your parents too busy with their own lives to pay close attention to your needs as a high school senior?
    __ Yes __ No

12. What family member has influenced you the most in helping you make career plans?


13. Which is more important to you? The opinions of __ parents __ peers __ close friends __ a boyfriend
APPENDIX D

OUTLINE OF GROUP SESSIONS
## Outline of Group Sessions

<table>
<thead>
<tr>
<th>Session</th>
<th>Activities</th>
</tr>
</thead>
</table>
| 1       | Discussion of group purpose, RET, career concerns of females, confidentiality and ground rules and agendas.  
**Homework:** Read X: A Fabulous Child Story. |
| 2       | Discussion of Holland codes and work environments, administer Self-Directed Search, distribute brochures on career center.  
**Homework:** Visit career center for career information investigation. |
| 3       | Discussion of results of SDS, review self-beliefs, sex-role stereotypes and life-styles of career choices, review job information interview form.  
**Homework:** Job information interview. |
| 4       | Discussion of findings on job information interview, replace irrational beliefs with rational beliefs, discuss hand out on society’s influence in the workplace.  
**Homework:** Keep record of irrational beliefs and disputing thoughts and actions concerning future events (A-B-C-D-E). |
| 5       | Discussion of changing attitudes and behaviors concerning decisions, goals and aspirations, review Ellis’s language control, discuss the influence of role models.  
**Homework:** Practice using positive language and positive affirmations in front of a mirror. |
| 6       | Discussion of the influence of role models on life-styles and career choices, formulate topics and questions for panel of female role models, role-play asking questions.  
**Homework:** Practice modeling by asking a question of a panelist in front of a mirror. Attend role-model panel. |
| 7       | Discussion of issues presented at the panel of positive female role models, review interactions with parents, finalize plans for shadowing experience, distribute shadowing form.  
**Homework:** Shadow experience. |
| 8       | Discussion of results of the shadowing experience, replace irrational beliefs with rational beliefs concerning careers, review observations of sex-role stereotyping, bias and lifestyles.  
**Homework:** Keep record of A-B-C-D-E for one day. |
| 9       | Discussion on information gathered, decision-making, goals and aspirations and the importance of cognitive behaviors to enhance lifestyles and career development.  
**Homework:** Discuss with your parents, parent or guardian your dreams, aspirations and future career goals. |
| 10      | Closure activities. |
APPENDIX E

JOB INFORMATION INTERVIEW FORM
JOB INFORMATION INTERVIEW

Name of student:______________________________

Date of interview:____________________________

Name of person interviewed:____________________

Place visited:_______________________________

Title or occupation of interviewee:______________

Lifestyle of interviewee:_______________________

Sex-role stereotypes on job:____________________

Education and training:_______________________

Advantages of job:____________________________

Disadvantages of job:_________________________

Key to success of interviewee:__________________

Person who influenced their career choice:__________

Would interviewee welcome shadowing?___________

Important notes:______________________________
APPENDIX F

SHADOWING DAY FORM
SHADOWING DAY

Students:

Please call the contact person for your shadowing assignment as soon as possible, but no later than March 12th.

Introduce yourself and tell the contact person that you are a student at C. D. Hylton Senior High School and you are interested in shadowing a position. Thank the contact person for allowing you to shadow them for a day.

During the course of the conversation, find out the essentials:

1. What are the hours you should be there?
2. Where should you report?
3. What are the directions?
4. Who should you ask for?
5. What should you wear?
6. If you'll be there all day, should you bring lunch or is there somewhere you can buy it?
7. Is there anything special you should bring?
8. Ask for a brief explanation of what your day will entail.

SHADOWING DAY
Evaluation Form

1. Name of Student ____________________________

2. Date of visit ______________________________

3. Hours of visit __________ o'clock to __________ o'clock

4. Name of person shadowed __________________

5. Did your day's experience give you any knowledge you didn't have already about the position? ________________________________

6. Did it help you decide on a career or course of study? ______

7. What would you have liked to have done differently or in addition which the shadowing day didn't offer? ________________________________

8. List any sex role behaviors observed. ________________________________

9. List the highlights of what you learned. ________________________________
APPENDIX G

PANEL OF POSITIVE FEMALE ROLE MODELS INVITATION
You are invited
to attend a
Panel of Positive Female Role Models
Wednesday, March 24, 1993
7:30 p.m.
C. D. Hylton Senior High School Library
APPENDIX H

PANEL OF POSITIVE FEMALE ROLE MODELS PROGRAM
Panel of Positive Female Role Models
C.D. Hylton High School Library

Wednesday, March 24, 1993
7:30 p.m.
Career education for females needs to be a joint effort of the parents, the educational system, and the broader community aimed at helping females acquire and utilize the knowledge, skills, and attitudes necessary for each to make work a meaningful, productive, and satisfying part of her way of living.

Welcome..................................................McKay Borden
Director of Guidance & Counseling

Panel Members

Jean Broyowski.................................Homemaker
Valeria Carter.................................Physician
Sarah Humphreys..............................Attorney
Rosemary Luckett..............................Artist
Joan Nguyen.................................Engineer
Faye Patterson.................................Educator
Jean Wardell.................................Veterinarian

Questions and Answers

Closing Comments..............................McKay Borden

You are cordially invited to enjoy refreshments.
APPENDIX I

SUGGESTED TOPICS FOR CAREER SPEAKERS
Introduction:
Current position and lifestyle
Previous jobs and learning experiences
Why you chose your occupation?
Who influenced your occupational choice?

Nature of Work:
Brief description of job
Advantages and disadvantages of job

Education and training:
Degree required
Additional training or course work
On the job experience

Working Conditions:
Office environment
Travel
Hours

Job Outlook:
Supply and demand of the occupation
Opportunities in the career-field
Future trends

Earnings and Benefits:
Starting salary to highest salary
Individual salaries not discussed
Benefits of retirement, insurance, etc.

Personal Motivation:
Motivated by setting career goals
Motivated by external factors: luck, right place at right time
Motivated by significant others

Sex-role Stereotypes on Job:
Examples of sex-role behavior
Methods for dealing with sex-role behaviors

Success in Career:
Goals for success
Tips for success
Skills for success
Person who has influenced your success

Success with Career and Lifestyles:
Balance of roles
APPENDIX J

EVALUATION OF PANEL OF POSITIVE FEMALE ROLE MODELS
PANEL OF POSITIVE FEMALE ROLE MODELS

Parent Evaluation

1. Do you feel the information presented by the panel members will benefit your daughter as she makes future career decisions?
   
   yes
   
   no

2. Did you learn information that will help you discuss future career plans with your daughter?
   
   yes
   
   no

3. Would you like for your daughter to be exposed to more programs on decision making, goal setting, and career planning?
   
   yes
   
   no

4. What did you like most about the presentation of the panel of positive female role models?

   ________________________________.

5. What did you like least about the presentation of the panel of positive female role models?

   ________________________________.

Thank you for attending tonight's program and the support you have given to your daughter as she has participated in the career guidance strategies for females.
PANEL OF POSITIVE FEMALE ROLE MODELS

Student Evaluation

1. List the highlights of what you learned from the information presented by the panel members.

_____________________________________________________________________.

_____________________________________________________________________.

_____________________________________________________________________.

_____________________________________________________________________.

2. List the most important information you learned about being successful in a career?

_____________________________________________________________________.

3. List the most important information you learned about setting goals.

_____________________________________________________________________.

4. List the most important information you learned that was inspirational to you.

_____________________________________________________________________.

5. Did you feel the information presented by the panel members was beneficial to you?
   yes
   no

6. Would you have liked to have attended career programs during your 9th, 10th, and 11th grade years in high school?
   yes
   no

7. Which grade in high school would career programs be of the most benefit to female students? Check only one of the following.

   9th    10th    11th    12th

8. What would you have liked to have been presented differently by the members of the panel of positive female role models?

_____________________________________________________________________.

APPENDIX K

EVALUATIONS OF THE CAREER GUIDANCE STRATEGIES FOR FEMALES
STUDENT EVALUATION OF CAREER GUIDANCE STRATEGIES for FEMALES

1. Which of the following career guidance strategies benefitted you the most in the career decision process?
   ___ career information investigation (Career Center)
   ___ job information interview
   ___ panel of positive female role models
   ___ shadowing
   ___ group counseling
   ___ parental involvement

2. During the twelve weeks you were in the treatment group, which of the following persons influenced you the most in becoming aware of sex-role stereotypes, career opportunities and goal.
   individual interviewed _____________
   individual shadowed _______________
   individual member of the positive female career panel ______________
   group leader _______________
   career counselor _______________
   parent _______________
   friend _______________
   teacher _______________

3. Which of the following career guidance strategies for females did you enjoy the most?
   ___ career information investigation
   ___ job information interview
   ___ panel of positive female role models
   ___ shadowing
   ___ group counseling
   ___ parental involvement

4. What would you like to have done differently during the twelve weeks of treatment?
   __________________________________________

5. List the advantages of receiving the career strategies for females.
   __________________________________________

6. List the disadvantages of receiving the career strategies for females.
   __________________________________________

7. A free comment!
   __________________________________________
Parent Evaluation of Career Guidance Strategies for Females

1. Do you feel the career guidance strategies for females helped your daughter understand the varied and many careers available to her which matched her abilities, interests, and lifestyle.
   
   _____ yes  _____ no

   In what ways? __________________________________________

2. Do you feel the career guidance strategy for females of exposing your daughter to positive female role models increased her awareness of the issues of sex-role stereotyping in the workplace and the balancing of a personal life with a professional life.

   _____ yes  _____ no

   In what ways? __________________________________________

3. Do you feel your awareness of or participation in the career guidance strategies for females has increased your understanding of the dilemma faced by high-achieving females as they become involved in the decision making process of planning for future education and future careers.

   _____ yes  _____ no

   In what ways? __________________________________________

4. Do you feel the career guidance strategies for females increased your daughter's understanding of the importance of replacing irrational beliefs with rational beliefs concerning her attitudes about herself and the situations that surrounded her during her last semester in high school?

   _____ yes  _____ no

   In what ways? __________________________________________

5. Do you feel the career guidance strategies meetings you attended have been beneficial to you and your daughter?

   _____ yes  _____ no

   In what way? __________________________________________

6. Do you feel as a result of your awareness of the career guidance strategies for females you will continue to follow with more interest and concern your daughter's progress of her education connected with a career goal?

   _____ yes  _____ no

   In what way? __________________________________________
VITA

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